



## **Rural Adaptation in Yemen**

### **Part I: Project Information**

**GEF ID**

5174

**Project Type**

FSP

**Type of Trust Fund**

LDCF

**Project Title**

Rural Adaptation in Yemen

**Countries**

Yemen

**Agency(ies)**

IFAD

**Other Executing Partner(s)**

Social Fund for Development (SFD), Food and Agriculture Organization of the United Nations (FAO)

**Executing Partner Type**

Multilateral

**GEF Focal Area**

Climate Change

**Taxonomy**

Focal Areas, Climate Change, Climate Change Adaptation, National Adaptation Programme of Action, Community-based adaptation, Innovation, Mainstreaming adaptation, Climate resilience, Complementarity, Least Developed Countries, Livelihoods, Adaptation Tech Transfer, Ecosystem-based Adaptation, Land Degradation, Sustainable Land Management, Sustainable Agriculture, Drought Mitigation, Sustainable Livelihoods, Improved Soil and Water Management Techniques, Community-Based Natural Resource

Management, Biodiversity, Protected Areas and Landscapes, Community Based Natural Resource Mngt, Mainstreaming, Infrastructure, Influencing models, Demonstrate innovative approache, Stakeholders, Communications, Awareness Raising, Education, Behavior change, Beneficiaries, Local Communities, Civil Society, Non-Governmental Organization, Type of Engagement, Participation, Information Dissemination, Consultation, Gender Equality, Gender Mainstreaming, Gender-sensitive indicators, Sex-disaggregated indicators, Women groups, Gender results areas, Participation and leadership, Capacity Development, Access to benefits and services, Integrated Programs, Food Systems, Land Use and Restoration, Smallholder Farming, Sustainable Food Systems, Capacity, Knowledge and Research, Learning, Adaptive management, Theory of change, Indicators to measure change, Enabling Activities, Knowledge Generation, Knowledge Exchange

**Sector**

Mixed & Others

**Rio Markers**

**Climate Change Mitigation**

Climate Change Mitigation 0

**Climate Change Adaptation**

Climate Change Adaptation 2

**Duration**

60In Months

**Agency Fee(\$)**

957,600.00

**A. Focal Area Strategy Framework and Program**

<b>Objectives/Programs</b>	<b>Focal Area Outcomes</b>	<b>Trust Fund</b>	<b>GEF Amount(\$)</b>	<b>Co-Fin Amount(\$)</b>
CCA-1	Outcome 1.2: Reduce vulnerability in development sectors	LDC F	4,114,246.00	5,580,681.00
CCA-2	Outcome 2.3: Strengthened awareness and ownership of adaptation and climate risk reduction processes at local level	LDC F	1,662,759.00	2,155,177.00
CCA-3	Outcome 3.1: Successful demonstration deployment and transfer of relevant adaptation technology in targeted areas	LDC F	2,271,604.00	184,439.00
CCA-3	Outcome 3.3: Enhanced enabling environment to support adaptation-related technology transfer	LDC F	1,717,969.00	1,180,050.00
Project Management		LDC F	233,422.00	2,320,718.00
<b>Total Project Cost(\$)</b>			<b>10,000,000.00</b>	<b>11,421,065.00</b>

**B. Project description summary**

**Project Objective**

Improve farmland and rangeland productivity, food security, and soil and water conservation through the rehabilitation and sustainable management of climate-proof agriculture

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing(\$ )	Confirmed Co-Financing(\$ )
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Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing(\$)	Confirmed Co-Financing(\$)
1. Community Empowerment and Knowledge for Resilience	Technical Assistance	<p>1.1: Community Development , Water User Associations (WUAs) and Village Council (VCs) in the project Village Units (VUs) empowered on adaptive management of natural resources, with a focus on climate-smart water and soil conservation .</p> <p>1.2: Farmers and other agricultural practitioners empowered on climate-resilient agriculture production.</p>	<p>1.1.1 A training programme is designed and implemented to build the capacity of water and soil conservation service providers</p> <p>1.2.1 A training of trainers programme is designed and implemented to build the capacity of key agriculture practitioners on climate-resilient agriculture production.</p> <p>1.2.2 Gender and youth literacy training of trainers programme developed to build entrepreneurial skills, natural resource management and awareness of climate change impacts</p>	LDC F	1,269,682.00	1,802,071.00

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing(\$)	Confirmed Co-Financing(\$)
2. Climate-Resilient Investments in Natural Resources Management	Investment	2.1: Natural resource management improved and focusing on climate resilience	<p>2.1.1. Climate-resilient domestic water supply improved in target areas.</p> <p>2.1.2. Small-scale irrigation schemes and flood-based agriculture implemented.</p> <p>2.1.3 Soil and water conservation measures implemented.</p>	LDC F	4,114,246.00	5,580,681.00
3. Climate-Resilient Investments for Improved Agricultural livelihoods	Technical Assistance	<p>3.1: Improved climate resilient agricultural production</p> <p>3.2: Improved resilient value-added livelihoods</p>	<p>3.1.1. Farmer field school programme implemented</p> <p>3.1.2 New climate-resilient technologies tested and demonstrated.</p> <p>3.2.1. Resilient value-added livelihood packages and matching grants</p>	LDC F	3,989,573.00	1,364,489.00

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing(\$)	Confirmed Co-Financing(\$)
Knowledge Management, Monitoring and Evaluation	Technical Assistance	Monitoring and evaluation informs knowledge management with best practices upscaled	Project knowledge management and lessons and practices captured and disseminated	LDCF	393,077.00	353,106.00
Sub Total (\$)					9,766,578.00	9,100,347.00

#### Project Management Cost (PMC)

LDCF	233,422.00	2,320,718.00
<b>Sub Total(\$)</b>	<b>233,422.00</b>	<b>2,320,718.00</b>
<b>Total Project Cost(\$)</b>	<b>10,000,000.00</b>	<b>11,421,065.00</b>

Please provide justification

C. Sources of Co-financing for the Project by name and by type

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Amount(\$)
GEF Agency	IFAD	Grant	10,000,000.00
Beneficiaries	Beneficiaries	In-kind	1,421,065.00
Total Co-Financing(\$)			11,421,065.00

D. Trust Fund Resources Requested by Agency(ies), Country(ies), Focal Area and the Programming of Funds

Agency	Trust Fund	Country	Focal Area	Programming of Funds	Net GI	Amount(\$)	Fee(\$)	Total(\$)
IFAD	LD CF	Yemen	Climate Change		No	10,000,000	957,600	10,957,600.00
Total Grant Resources(\$)						10,000,000.00	957,600.00	10,957,600.00

**E. Non Grant Instrument**

NON-GRANT INSTRUMENT at CEO Endorsement

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Includes Non grant instruments? **No**

Includes reflow to GEF? **No**

F. Project Preparation Grant (PPG)  
PPG Required **true**

PPG Amount (\$)  
80,000

PPG Agency Fee (\$)  
7,600

Agency	Trust Fund	Country	Focal Area	Programming of Funds	NGI	Amount(\$)	Fee(\$)	Total(\$)
IFAD	LDCF	Yemen	Climate Change		No	80,000		80,000.00
IFAD	LDCF	Yemen	Climate Change		No		7,600	7,600.00
Total Project Costs(\$)						80,000.00	7,600.00	87,600.00

Meta Information - LDCF

LDCF true  
SCCF-B (Window B) on technology transfer false  
SCCF-A (Window-A) on climate Change adaptation false

Is this project LDCF SCCF challenge program?  
false

This Project involves at least one small island developing State(SIDS). false

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This Project involves at least one fragile and conflict affected state. true

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This Project will provide direct adaptation benefits to the private sector. false

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This Project is explicitly related to the formulation and/or implementation of national adaptation plans (NAPs). false

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This Project has an urban focus. false

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This Project covers the following sector(s)[the total should be 100%]:\*

Agriculture	<b>56.00%</b>
Natural resources management	<b>44.00%</b>
Climate information Services	<b>0.00%</b>
Costal zone management	<b>0.00%</b>
Water resources Management	<b>0.00%</b>
Disaster risk Management	<b>0.00%</b>
Other infrastructure	<b>0.00%</b>
Health	<b>0.00%</b>
Other (Please specify:)	<b>0.00%</b>
Total	<b>100%</b>

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This Project targets the following Climate change Exacerbated/introduced challenges:\*

Sea level rise false

Change in mean temperature true

Increased Climatic Variability true

Natural hazards true

Land degradation true

Costal and/or Coral reef degradation false

GroundWater quality/quantity false

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To calculate the core indicators, please refer to Results Guidance

## Core Indicators - LDCF

CORE INDICATOR 1	Total	Male	Female	% for Women
Total number of direct beneficiaries	32,096	15,896	16,200	50.47%

CORE INDICATOR 2	
Area of land managed for climate resilience (ha)	3,253.00

CORE INDICATOR 3	
Total no. of policies/plans that will mainstream climate resilience	0

CORE INDICATOR 4		Male	Female	% for Women
Total number of people trained	7,970	4,610	3,360	42.16%

### OUTPUT 1.1.1

## Physical and natural assets made more resilient to climate variability and change

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		Male	Female
Total number of direct beneficiaries from more resilient physical assets	<b>29,750</b>	<b>14,450</b>	<b>15,300</b>
Ha of agriculture land	Ha of urban landscape	Ha of rural landscape	No. of residential houses
<b>3,253.00</b>			<b>0</b>
No. of public buildings	No. of irrigation or water structures	No. of fishery or aquaculture ponds	No. of ports or landing sites
<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Km of road	Km of riverban	Km of coast	Km of storm water drainage
<b>20.00</b>			
Other	Other(unit)	Comments	
<b>0</b>			

## OUTPUT 1.1.2

### Livelihoods and sources of income of vulnerable populations diversified and strengthened

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Male

Female

Total number of direct beneficiaries with diversified and strengthened livelihoods and sources of income

**2,346**

**1,446**

**900**

**Livelihoods and sources of incomes strengthened / introduced**

Agriculture

Agro-Processing

Pastoralism/diary

Enhanced access to markets

**false**

**false**

**false**

**false**

Fisheries /aquaculture

Tourism /ecotourism

Cottage industry

Reduced supply chain

**false**

**false**

**false**

**false**

Beekeeping

Enhanced opportunity to employment

Other

Comments

**false**

**false**

**false**

## OUTPUT 1.1.3

**New/improved climate information systems deployed to reduce vulnerability to climatic hazards/variability**

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		Male	Female
Total number of direct beneficiaries from the new/improved climatic information systems	0	0	0
<b>Climate hazards addressed</b>			
Flood <b>false</b>	Storm <b>false</b>	Heatwave <b>false</b>	Drought <b>false</b>
Other <b>false</b>	Comments		
<b>Climate information system developed/strengthened</b>			
Downscaled Climate model <b>false</b>	Weather/Hydromet station <b>false</b>	Early warning system <b>false</b>	Other <b>false</b>
Comments			
<b>Climate related information collected</b>			
Temperature <b>false</b>	Rainfall <b>false</b>	Crop pest or disease <b>false</b>	Human disease vectors <b>false</b>
Other <b>false</b>	Comments		
<b>Mode of climate information dissemination</b>			
Mobile phone apps <b>false</b>	Community radio <b>false</b>	Extension services <b>false</b>	Televisions <b>false</b>
Leaflets	Other	Comments	

falsefalse

OUTPUT 1.1.4

Vulnerable natural ecosystems strengthened in response to climate change impacts

Types of natural ecosystem

Desertfalse	Coastalfalse	Mountainousfalse	Grasslandfalse
Forestfalse	Inland waterfalse	Otherfalse	Comments

OUTPUT 1.2.1

Incubators and accelerators introduced

Total no. of entrepreneurs supported0	Male	Female
No. of incubators and accelerators supported	Comments	
No. of adaptation technologies supported	Comments	

## OUTPUT 1.2.2

### Financial instruments or models to enhance climate resilience developed

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#### Financial instruments or models

PPP models  
**false**

Cooperatives  
**false**

Microfinance  
**false**

Risk insurance  
**false**

Equity  
**false**

Loan  
**false**

Other  
**false**

Comments

## OUTPUT 2.1.1

### Cross-sectoral policies and plans incorporate adaptation considerations

---

Will mainstream climate resilience

**0**

Of which no. of regional policies/plans

Of which no. of national policies/plan

#### Sectors

Agriculture

Fishery

Industry

Urban

**false**

**false**

**false**

**false**

Rural

Health

Water

Other

**false**

**false**

**false**

**false**

Comments

## **OUTPUT 2.1.2**

### **Cross sectoral institutional partnerships established or expanded**

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No. of institutional partnerships established or strengthened

Comments

## **OUTPUT 2.1.3**

### **Systems and frameworks established for continuous monitoring, reporting and review of adaptation**

---

No. of systems and frameworks

Comments

## **OUTPUT 2.1.4**

### **Systems and frameworks established for continuous monitoring, reporting and review of adaptation**

---

No. of systems and  
frameworks

Comments

## **OUTPUT 2.2.1**

### **No. of institutions with increased ability to access and/or manage climate finance**

---

No. of institution(s)      **30**

Comments

## **OUTPUT 2.2.2**

## **Institutional coordination mechanism created or strengthened to access and/or manage climate finance**

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No. of mechanism(s)    **0**

Comments

### **OUTPUT 2.2.3**

## **Global/regional/national initiatives demonstrated and tested early concepts with high adaptation potential**

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No. of initiatives or  
technologies            **0**

Comments

### **OUTPUT 2.2.4**

## **Public investment mobilized**

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Amount of investment  
(US\$) 0

Comments

## **OUTPUT 2.2.5**

### **Private investment mobilized**

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Amount of investment  
(US\$) 1,421,065

Comments

## **OUTPUT 2.3.1**

### **No. of people trained regarding climate change impacts and appropriate adaptation responses**

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Total no. of people trained	<b>7,970</b>	Male <b>4,610</b>	Female <b>3,360</b>
Of which total no. of people at line ministries	<b>7,970</b>	Male <b>4,610</b>	Female <b>3,360</b>
Of which total no. of community/association	<b>0</b>	Male <b>0</b>	Female <b>0</b>
Of which total no. of extension service officers	<b>0</b>	Male <b>0</b>	Female <b>0</b>
Of which total no. of hydromet and disaster risk management agency staff	<b>0</b>	Male <b>0</b>	Female <b>0</b>
Of which total no. of small private business owners	<b>0</b>	Male <b>0</b>	Female <b>0</b>
Of which total no. school children, university students or teachers	<b>0</b>	Male <b>0</b>	Female <b>0</b>
Other	Comments		

## OUTPUT 2.3.2

**No. of people made aware of climate change impacts and appropriate adaptation responses**

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		Male	Female
No. of people with raised awareness	0	0	0

Please describe how their awareness was raised

### OUTPUT 3.1.1

**National climate policies and plans enabled including NAP processes by stronger climate information decision-support services**

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No. of national climate policies and plans 0

Comments

### OUTPUT 3.1.2

**Systems and frameworks established for continuous monitoring, reporting and review of adaptation**

---

No. of systems and  
frameworks 0

Comments

### **OUTPUT 3.1.3**

## **Vulnerability assessments conducted**

---

No. of assessments  
conducted 1

Comments

### **OUTPUT 3.2.1**

## **No. of institutions with increased ability to access and/or manage climate finance**

---

No. of institution(s) 30

Comments

## **OUTPUT 3.2.2**

**Institutional coordination  
mechanism(s) created or strengthened  
to access and/or manage climate  
finance**

---

No. of mechanism(s)    **0**

Comments

## **OUTPUT 3.2.3**

**Global/regional/national initiative(s)  
demonstrated and tested early  
concepts with high adaptation potential**

---

No. of initiative(s) or  
technology(ies)    **0**

Comments

## **OUTPUT 3.3.1**

## No. of people trained regarding climate change impacts and appropriate adaptation responses

---

Total no. of people trained	0	Male 0	Female 0
Of which total no. of people at line ministries	0	Male 0	Female 0
Of which total no. of community/association	0	Male 0	Female 0
Of which total no. of extension service officers	0	Male 0	Female 0
Of which total no. of hydromet and disaster risk management agency staff	0	Male 0	Female 0
Of which total no. of small private business owners	0	Male 0	Female 0
		Male	Female

Of which total no. school children, university students or teachers	0	0	0
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Other

Comments

## OUTPUT 3.3.2

### No. of people made aware of climate change impacts and appropriate adaptation responses

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No. of people with raised awareness	3,309	Male 1,686	Female 1,623
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Please describe how their awareness was raised

## PART II: Project JUSTIFICATION

### 1. Project Description

#### A. describe the project rationale and expected measurable adaptation benefits:

1. **Civil War.** Yemen is entering its sixth year of conflict and has been impacted by concurrent aggravating problems of cholera outbreaks, financial crises, blockades, near-famines and flooding events forcing Yemeni officials to dedicate their resources to the most visible problems. Conflict increases vulnerability to climate change as irrigation infrastructure is regularly targeted in the bombing campaigns and on-the-ground fighting. The World Bank says that the water table is already sinking by six meters per year due to climate change and overconsumption, in the countryside around Amran, Dhamar, Sada, Sanaa, and Taiz with some experts predicting that Sanaa will deplete its water supply by 2023.

2. The resulting water scarcity in Yemen has had a detrimental impact on agriculture, which constitutes the economic mainstay for 53% of the rural population, and limits agriculture production, which significantly deteriorates food supplies and increases the prices of food products. With the conflict, the government has limited capacity to finance the rehabilitation of deteriorated rural infrastructure that often requires significant spending when around 10 million Yemenis are "one step away from famine". Fighting regularly blocks commercial shipments of food but with a collapsed economy, spiralling inflation and 24 million people needing some form of humanitarian assistance, few have the money to buy food.

3. **Low agricultural productivity.** War, water scarcity, a lack of off-farm economic and employment opportunities, high rural population growth together with climate change constitute critical negative factors affecting rural areas and causing severe rural poverty. Conflict, limited resources, especially water, and collapse of basic services are major factors in the migration from rural mountainous villages and settlements. Access to transport is inexistent, and 80% of Yemeni's population lack food, fuel, drinking water and access to healthcare services that has been decimated by years of unrelenting war. This already desperate situation is bound to get worse with the projected negative impacts of climate change especially on water availability and the increased risks associated with extreme rainfall events. The situation will be further aggravated with the Covid-19 pandemic where there are officially around 2,000 cases and nearly 600 confirmed deaths<sup>[1]</sup>, although the real figures are likely to be significantly higher.

4. **War has increased the urgency** for the rebuilding of livelihoods and climate change adaptation coping mechanisms. In Yemen groundwater is depleting at a rate of 1.5 billion m<sup>3</sup> (170%) per year; an estimated 19 million people are in need of adequate sanitation or safe water; basic rainwater and floodwater harvesting infrastructure needs to be rebuilt following years of conflict-related destruction. 103 districts are at risk of famine, 41 districts have malnutrition rates above 15 per cent, 54 districts have acute WASH deficits, and 46 districts are at high risk of cholera. The lack of sanitation, access to clean water and

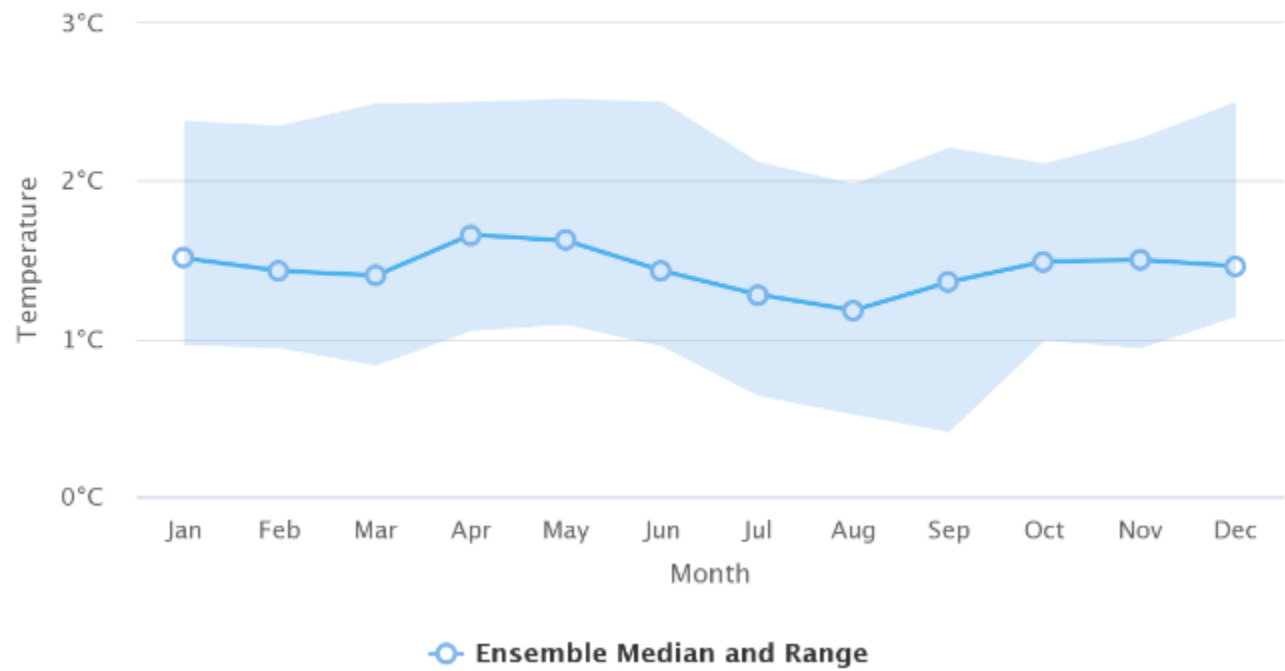
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extensive and repeated flooding further exacerbates people's vulnerability resulting in the worst cholera outbreak in epidemiologically recorded history in 2017.

5. **Climate change.** Research predicts that all areas of Yemen are expected to get warmer with the greatest increases to occur in the winter months. The Special Report on Emission Scenarios (SRES) scenarios simulate that all of Yemen will get warmer with the biggest temperature increases to take place in the winter months. Annual mean temperatures will most likely increase the most under the medium A1b emission scenario between 1.7°C and 2.4°C by the 2050s with an average increase of 2.0°C (12-month average). Largest winter temperature increases are expected for all of the SRES emission scenarios with the smallest occurring during the summer months.<sup>[2]</sup> The Representative Conservation Pathways (RCP) scenarios predict that mean temperatures are expected to increase by between 1.2°C to 3.3°C by 2060

Figure 1 Projected Change in Monthly Temperature for Yemen for 2040-2059 and 2080-2099 under RCP 4.5 [3]<sup>3</sup>

### Projected Change in Monthly Temperature for Yemen for 2040-2059



## Projected Change in Monthly Temperature for Yemen for 2080-2099

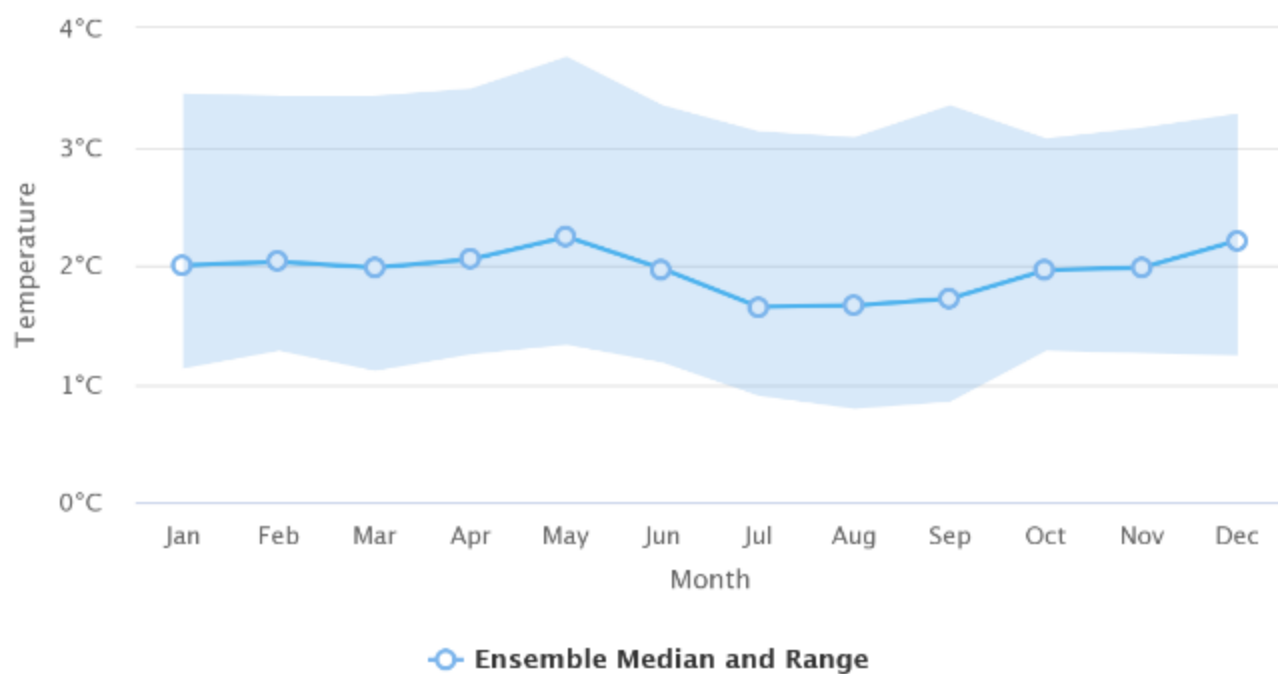
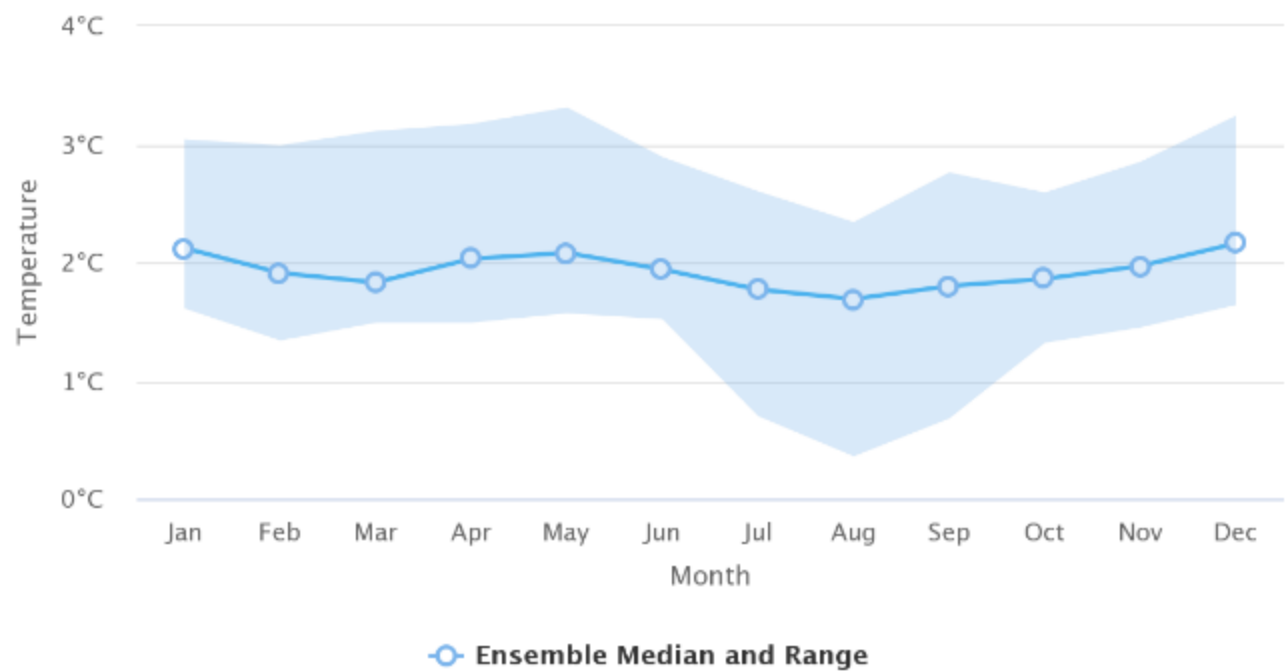
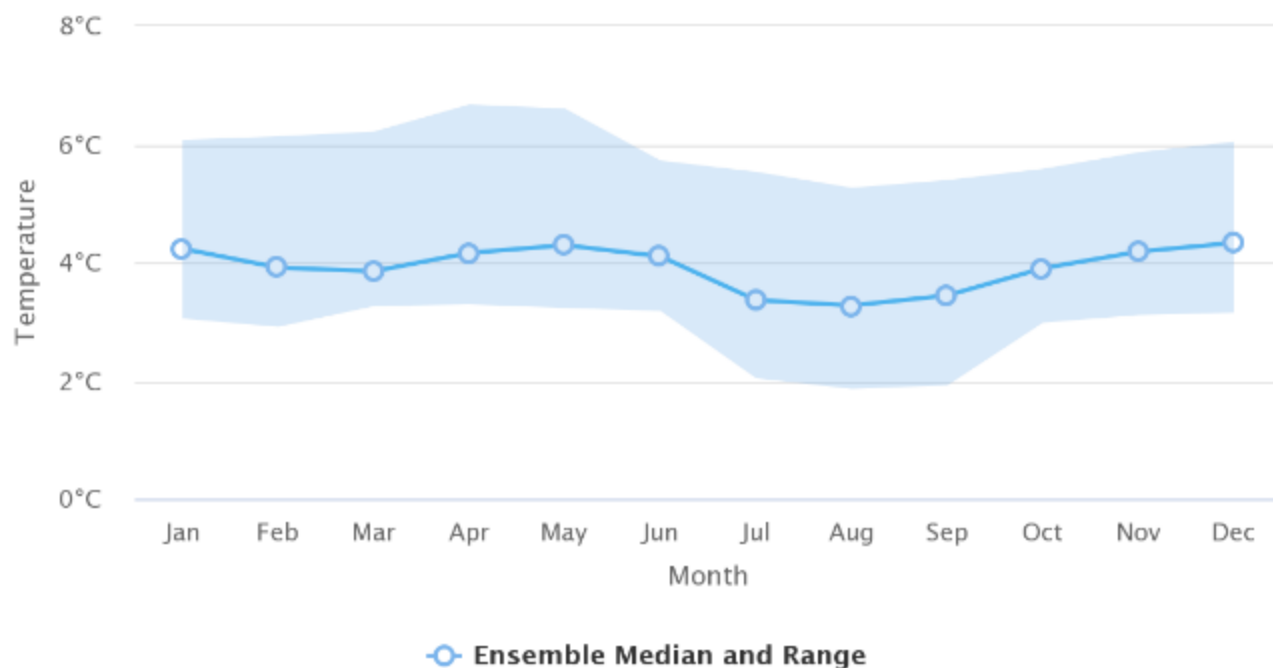


Figure 2 Projected Change in Monthly Temperature for Yemen for 2040-2059 and 2080-2099 under RCP 8.5

# Projected Change in Monthly Temperature for Yemen for 2040-2059



## Projected Change in Monthly Temperature for Yemen for 2080-2099

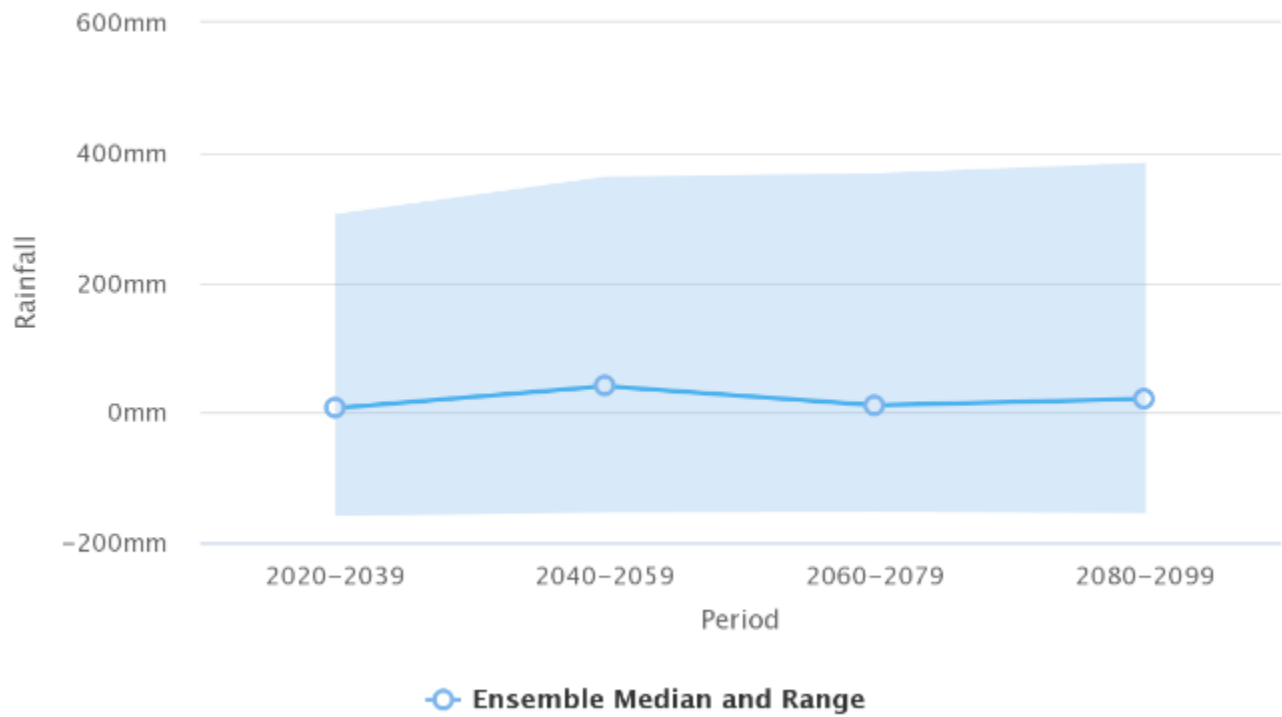


6. Long-term precipitation models are more uncertain in their predictions. Although the proportion of heavy rainfall events shows an increase for autumn (September, October, and November) in most model projections, some scenario combinations show possible future increases in rainfall, others show a decline in rainfall. The Third National Communication (TNC) to the UNFCCC states that there may be an average annual increase of 129 mm per year increase across the whole country. The impact of climate change on Yemen is expected to be considerable. The TNC expects negative impacts and climate threats to the availability of water resources and underground water resources steadily declining; damage to coastlines due to sea-level rise; damage to agriculture with significant reductions in yields across all emissions

scenarios for both rainfed and irrigated areas and the resulting threats to public health that result from extensive poverty through the increase of vector-borne diseases among others.

Figure 3 Projected Change in Annual Rainfall for Yemen under RCP 4.5 (left) and RCP 8.5 (right)

Projected Change in Annual Annual Rainfall Range for Yemen



# Projected Change in Annual Annual Rainfall Range for Yemen

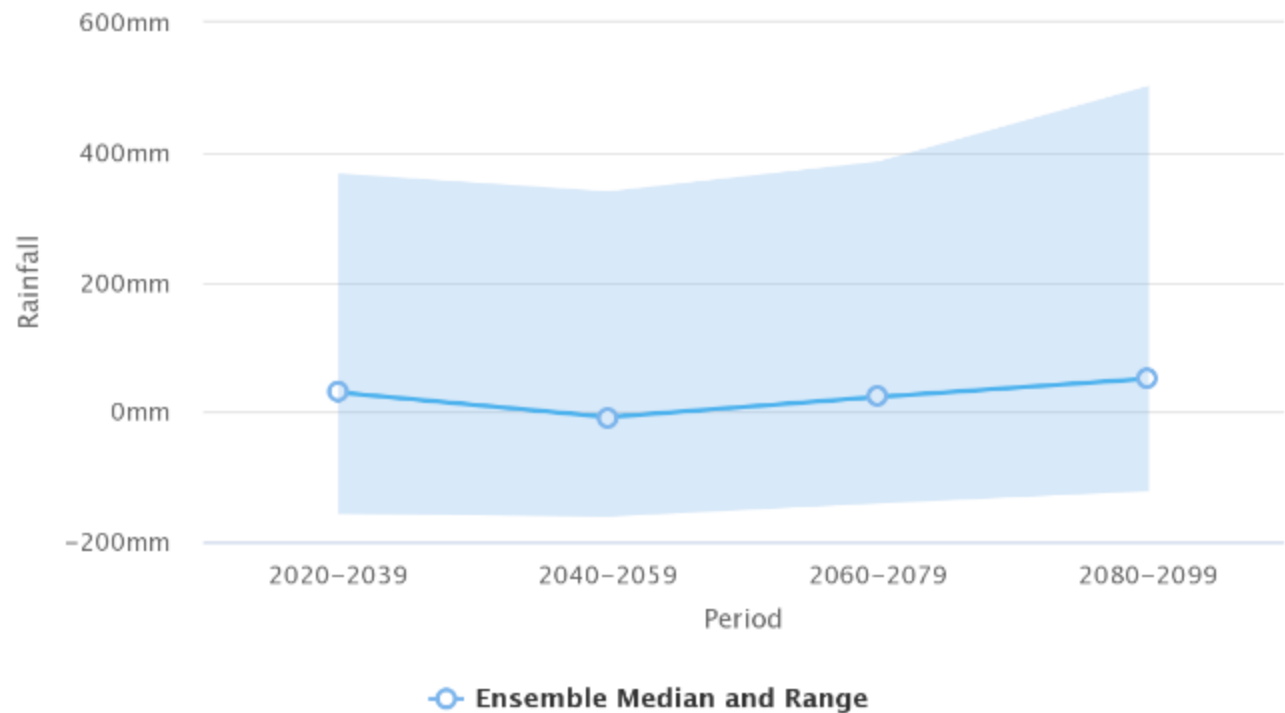
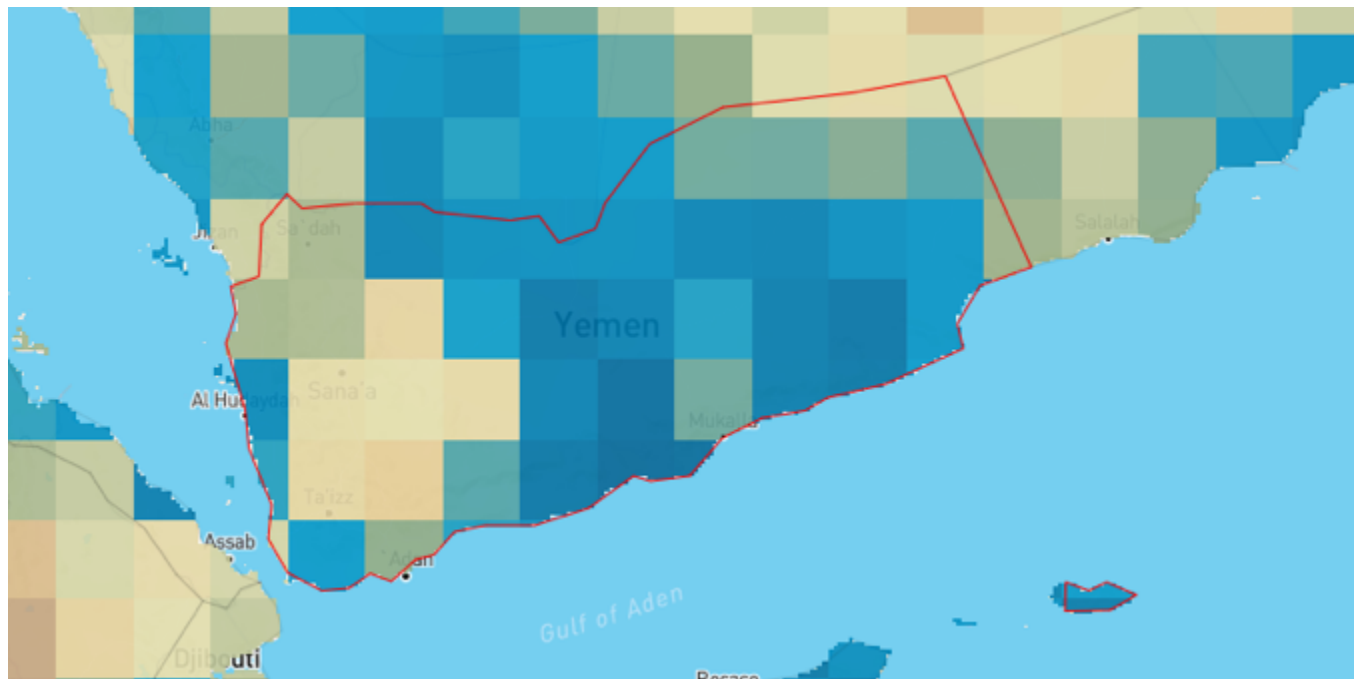
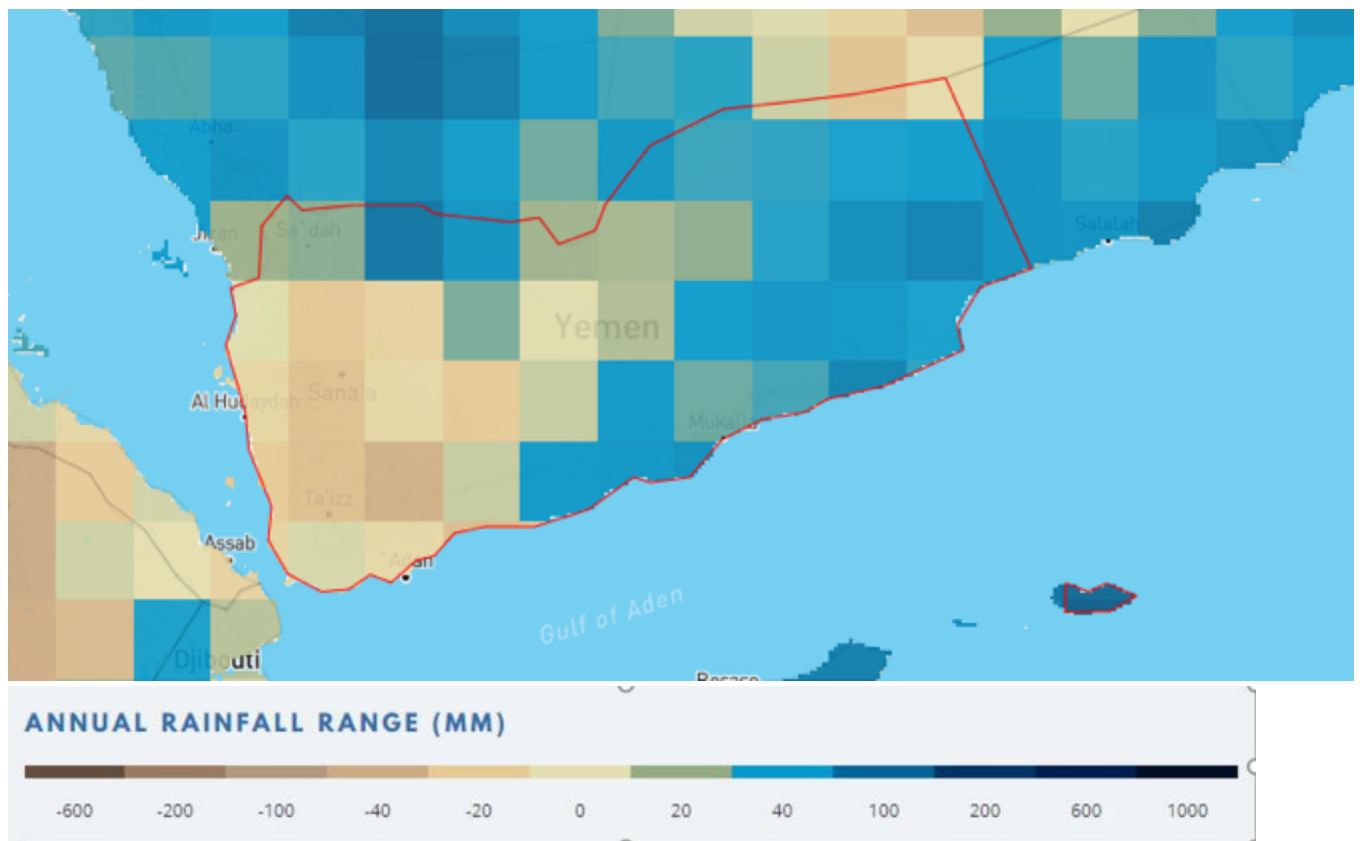


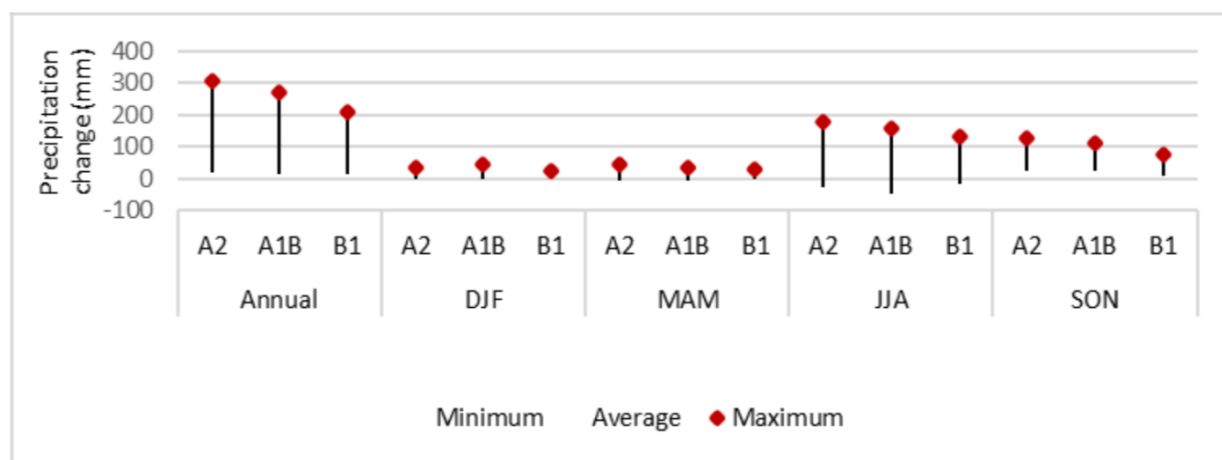
Figure 4 Maps for the Projected Change in Annual Rainfall for Yemen under RCP 4.5 for the Periods 2040-2059 (left) and 2080-2099 (right)<sup>[4]</sup><sup>4</sup>





7. Precipitation predictions are uncertain and conflicting, for example the projections of the Third National Communication to the UNFCCC differ from the World Bank projections. Annual mean precipitation change show the greatest rise under the A2[5]<sup>5</sup> scenario of between 21 mm/year and 306 mm/year by the 2050s with an average annual increase of 129 mm/year, differing from the World Bank projections as the period 2040-2059 is expected to show a decline under RCP 8.5. Seasonal mean rainfall shows both increases and decreases by 2050. For each of the emission scenarios, the largest seasonal rainfall change occurs during the summer months ranging between a decline of 14 to 47 mm/season and an increase of 131 to 179 mm/season across all emission scenarios. The smallest seasonal rainfall change occurs during the winter months, ranging between a decline of 1 mm/year and an increase of 27 to 45 mm/season across all emission scenarios. This differs again from World Bank projections that show the largest change during September, October and November, not summer under RCP 8.5. Figure 5 below shows the precipitation projections according to the Third National Communication to the UNFCCC.

Figure 5 Projected Annual and Seasonal Change in Precipitation for Yemen by 2050<sup>[6]</sup>



8. **Climate change impact on agriculture.** The TNC explains that wheat, maize, and sorghum exhibit threshold responses to climate. This means that any increases in future climate variability may exceed threshold levels of climatic conditions in terms of temperature, radiation, precipitation, water vapor pressure, wind speed that the individual crop physiologies can tolerate. The impact this would have is one of reduced productivity of wheat, maize, and sorghum with limited growth, development and yields. Even climatic thresholds that span only a few days can hamper the crop reproductive system.

9. The chronic effects of higher temperatures on wheat, maize, and sorghum productivity are potentially even more important than climatic thresholds as yields reflect season-long effects, and crops generally have a greater yield when temperatures are cooler during the primary growth cycles. Increased temperatures will decrease the duration between sowing and harvesting - for maize it could be between one and four weeks shorter. While this could contribute to a greater number of cropping cycles, such a decrease could adversely affect productivity. Moreover, a greater number of cropping cycles would require greater inputs, likely leading to a depletion of soil nutrients and moisture, greater exposure to pests, and greater pressure on already marginal lands.

10. The Third National Communication to the UNFCCC (TNC) expects the impact of climate change on Yemen to be considerable with negative impacts and climate threats to the availability of water resources and underground water resources steadily declining, damage to coastlines due to sea-level rise, damage to agriculture with significant reductions in yields across all emissions scenarios for both rainfed

and irrigated areas and the resulting threats to public health that result from extensive poverty through the increase of vector-borne diseases among others.

11. Yemen requires a wide range of measures in soil and water resource management and agriculture to help rebuild shattered livelihoods and CCA coping mechanisms following years of war, including:

- ? Building climate resilience through rehabilitating terraces as a soil conservation measure especially in areas that are exposed to high risk of soil erosion in the West of Yemen
- ? Improving water management by establishing or rehabilitating rainwater harvesting systems at the household level for domestic water use and at the farm level for supplementary irrigation purposes.
- ? Establishing or rehabilitating floodwater harvesting small dams.
- ? Developing small scale on-farm efficient irrigation systems possibly using solar pumps.
- ? Installing small rooftop and on-farm rainwater harvesting systems for domestic water supply and supplementary irrigation.
- ? Climate awareness and climate-adaptive capacity building for agriculture production through Farmer Field Schools and demonstrations of agriculture-based adaptation practices and technologies, and the exposure to best practices on NRM and climate change adaptation.
- ? The promotion of climate-resilient alternative livelihoods.
- ? Awareness raising of COVID-19 in all teaching programmes.
- ? Strengthening national CCA capacity by promoting and improving crop productivity through the testing and piloting of appropriate technologies, techniques and management practices aimed at improving climate change resilience and risk mitigation in each governorate based on their specific agro-ecological conditions and identified climate risks.
- ? Increase awareness and knowhow of all concerned stakeholders (addressing the gender specificities) on climate change impacts and adaptation measures through information campaigns, training workshops addressing technical issues, institutional strengthening and enhanced collaboration, 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.

12. 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:

- 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;
- 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.

13. 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.

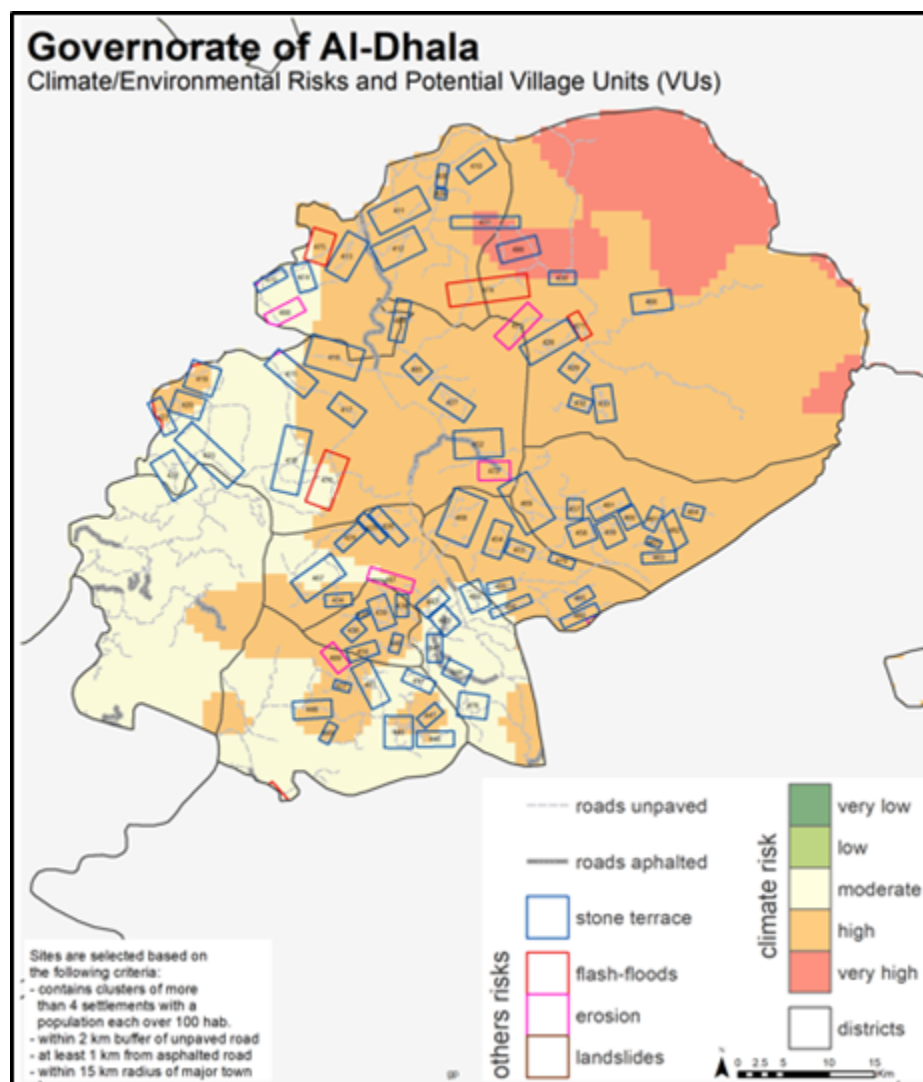
14. The rationale behind the proposed LDCF project is to mainstream the CC adaptation priorities of the government into the community-driven and gender-balanced solutions for rural investments, agriculture production. This will help address in a holistic way the major constraints to sustainable rural 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.

15. **Targeting.** The project geographic targeting is based on a detailed climate change vulnerability assessment by IFAD that has prioritised 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 709 vulnerable hotspot areas for one or all climate change-related hazards ? flash flooding, landslides, soil erosion, and potential for water harvesting in stone terraces. In order to 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). The selection of the Governorates has been undertaken on the basis of vulnerability and not on the basis of political control.

16. **Al Dhala Governorate** is in the mid-altitude of the country. It is almost exclusively rainfed and has limited groundwater for supplementary irrigation. While 63% of households have access to land, the average landholding is only 0.6 ha with 61% of land exclusively rainfed, the rest benefiting from some irrigation; 48% of households cultivate their own land, 5% rent and 7% sharecrop. The main crops are sorghum, maize and millet cultivated by most farmers, with 64% of them also cultivating some qat. Main income sources are the following: 19% of households have the production of qat as first source of income, 13% its sale, 12% agricultural wage labour, and 16% government salaries and remittances from abroad are the main source of income for only 6% of households. Here 73% of households are indebted, 54% of whom have borrowed for food purchases, and 19% for medical expenses. Households borrow from shopkeepers (51%), and family and friends (48%); 50% had been unable to buy food in the previous week. The climate vulnerability assessment identified 82 VUs in Al Dhala with one or more area of vulnerability:

69 where there is high potential for stone terracing, 41 with a risk of flash flooding, and 41 threatened by soil erosion as shown in the figure below. To respond to these climate risks and subject to community consultations, the project will support Al Dhala governorate across all components but most importantly through flood based agriculture, terrace rehabilitation and capacity building on climate smart agriculture.

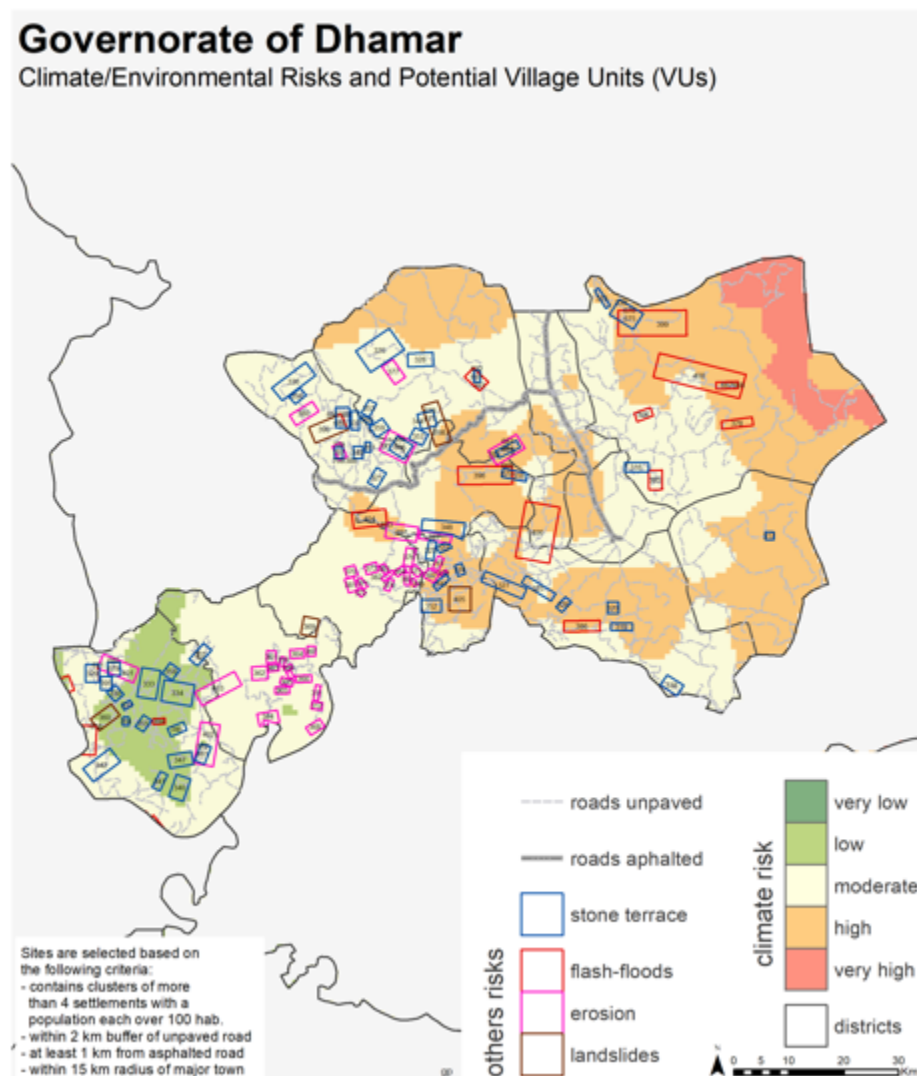
Figure 6 Al-dhala climate vulnerability



17. **Dhamar Governorate** has a wide range of agro-ecological conditions, ranging from the foothills of the hot Tihama plain to the highlands with over 2000 m altitude. Half its households have access to agricultural land, with average landholdings of 0.4 ha, 76% of which is exclusively rainfed. Forty percent of households cultivate their own land while 9% work as sharecroppers and only 2% rent land. Most people cultivate maize, sorghum and wheat, while 44% have some qat. This governorate is also known for its potatoes and some other vegetable and fruit. The production and sale of qat are the main sources of

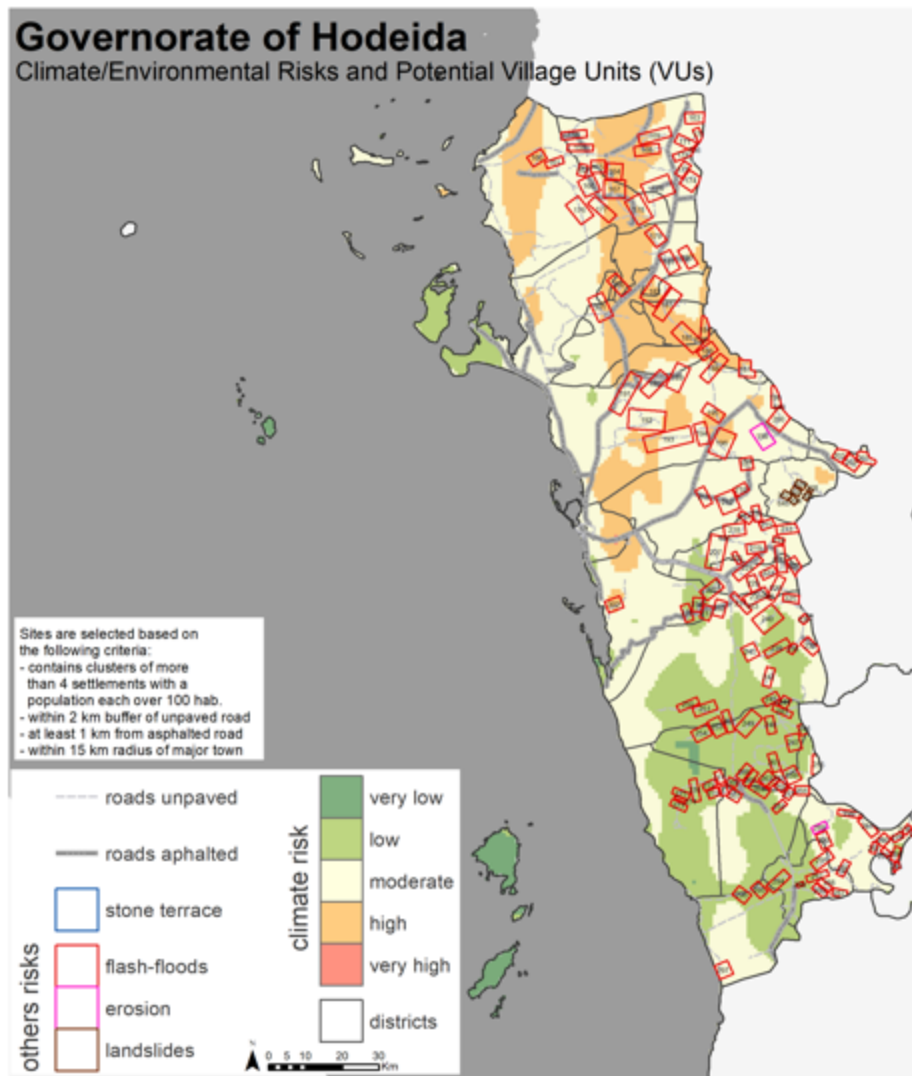
income for 10% of households, while 6% depend on agricultural wage labour, 9% on non-agricultural wage labour, 32% are primarily dependent on government salaries, 15% on services provision and 8% on remittances from abroad. The climate vulnerability assessment highlighted soil erosion as the major threat in Dhamar (137 VUs), particularly in the west, but with a large area of high potential for soil erosion (85). There are also a number of potential sites for stone terracing (40 VUs) and hotspots for flash flooding (37 VUs) and VUs at risk of landslides (15 VUs). To respond to these climate risks and subject to community consultations, the project will support Dhamar governorate across all components but most importantly through flood based agriculture, terrace rehabilitation and capacity building on climate smart agriculture and soil conservation.

Figure 7 Dhamar climate vulnerability



18. **Hodeida Governorate** is located in the west of the country along the Red Sea and is almost entirely composed of the vast Tihama plain in which the country's main seasonal rivers flow. It also has some of the largest spate irrigation systems (mostly along Wadis Zabid and Mawr), which ensure good yields in the upper reaches of these riverbeds. With the prevailing heat and lack of rain, agriculture is very specialized and focuses on cash crops, such as bananas and mangoes. However, the Tihama is also the area with the most skewed land tenure system: the majority of the fertile land is owned by a small group of landowners, either members of the current political elite or descendants of earlier ones; most of them live elsewhere. The land is cultivated by tenants and sharecroppers, as well as by casual labourers who work on very unfavourable terms. As a result the poverty rate in that Governorate is very high. In 2011, 84% of people had no access to agricultural land, while the average landholding is 1.2 ha, although this covers the fact that there are some very large landholdings. While the main income generating activity was provision of services (20%), the next most important is government salaries (16%) followed by agricultural and non-agricultural wage labour (10% each) and remittances from abroad (8%). Here 69% of households are indebted, of whom 52% have borrowed to buy food and 26% to cover medical expenses; lenders are primarily family and friends [64%] followed by shop keepers and money lenders (29%); 58% of households had been unable to buy enough food in the week prior to the survey. [7]<sup>7</sup> In Hodeidah the major sources of climate vulnerability are flash flooding (165 VUs). Given the different terrain – mainly low-lying coastal plains, stone terraces are not a key concern. The majority of vulnerable locations are along the eastern border of the Governorate where the highlands meet the coastal plain and where the most extreme seasonal floods occur. To respond to these climate risks and subject to community consultations, the project will support Hodeida governorate across all components but most importantly through flood based agriculture, capacity building on climate smart agriculture and livelihoods packages.

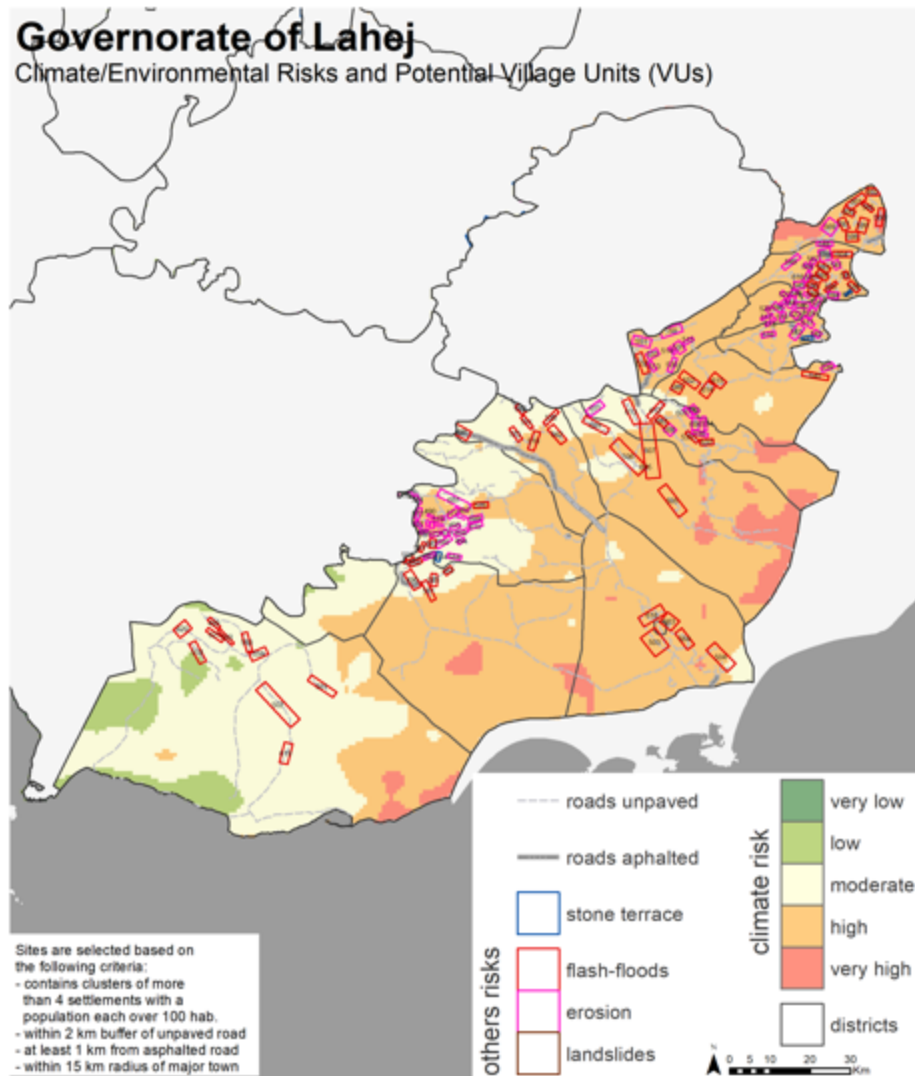
Figure 8 hodeida climate vulnerability



19. **Lahej Governorate** has a greater variety of agro-ecological zones. The coastal plain is largely arid and lacks the regular rain-flows found in the Tihama, with only a few smaller watersheds bringing rainwater on a more irregular scale and in smaller quantities. The Lahej plain area is mainly used as grazing land for goats and occasional cultivation of sorghum/maize in small basins that have retained some water. Further east, the spate irrigated areas of Wadi Tuban include large scale diversion structures and middle altitude mountainous regions, in which some qat is grown alongside the usual sorghum, millet and maize. Overall 65% of its population have no access to land, 28% cultivate their own land, while 2% rent land and 4% sharecrop. With landholdings averaging 1.1ha, 90% is rainfed and the rest is either irrigated or occasionally benefits from supplementary irrigation. About 10% of farmers cultivate some qat. This southern governorate has been less affected by the changes in land tenure brought about by unification in 1990 than some others. While in theory most land was returned to its former landowners, in practice many beneficiaries of the land reform have stayed on their lands and are cultivating them as before. The main problem is that the rehabilitation of the large spate irrigation network has been of primary benefit to the

landholders upstream and those further downstream have problems of water supply; there is practically no rainfall in their area. Immediately after unification landowners started drilling wells throughout the area in the hinterland of Aden where sparse irrigation water was limited, but at low altitude. As a result of considerable saline intrusion, the water is increasingly saline and gradually becoming unusable. Government salaries are the main source of income with 36% of households, followed by service provision (13% of households), remittances from abroad (12%), and non-agricultural labour (9%). Here 74% of households are indebted, 68% of whom have borrowed to buy food and 15% to cover medical expenses, mostly to shopkeepers and money lenders [66%] as well as family and friends [33%]; 54% of households reportedly don't have enough money to buy food. In Lahej the climate vulnerability assessment identified soil erosion (78 VUs) as the major threat. Flash flooding is also a concern in 67 VUs along the main wadis where rains rush down from the highlands to the coastal plains. There is potential for stone terracing in 3 VUs in the more mountainous upland parts of the Governorate. To respond to these climate risks and subject to community consultations, the project will support Lahej governorate across all components but most importantly through flood based agriculture, capacity building on climate smart agriculture and livelihoods packages.

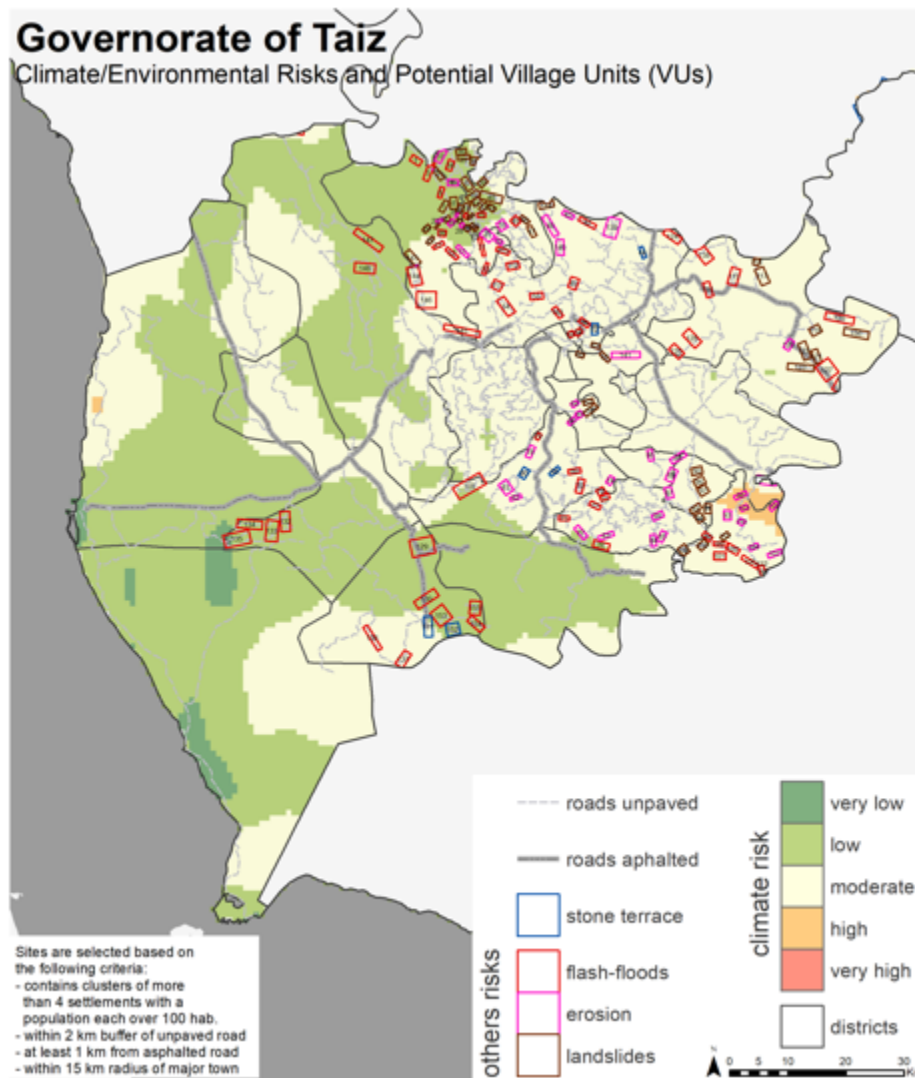
Figure 9 lahej climate vulnerability



20. **Taiz Governorate** lies in the south-western corner of Yemen, around 265 km south of Sana'a. Taiz is divided into three geological areas (i) coastal in the west along the Red Sea covering Bab Al-Mandab and Al-Mokha districts, (ii) low land between the coastal and mountain and highland governorates covering Maqbaneh, Mawza and Al-Waziyah and (iii) rocky mountain and highland districts in the middle and eastern parts of the governorate covering the rest the districts. Agriculture and livestock are the main activities practised by the majority of the population. The average landholding is about 0.4 ha and about 50% of agricultural land is irrigated and 50% is rainfed. Taiz produces cereals, vegetables, and fruits. Herding is the second most important activity where 209,417, 345,671, 479,007 heads of cattle, sheep, goats and camels, respectively, exist with sizeable meat and milk production. Apiculture is an important activity and source of income for landless households. Rainfed agriculture land is shrinking over time due to expansion of irrigated qat crops in mountain and highland and onion in low and coastal areas. Rainfed agriculture crops are sorghum and millet that have very low production cost and low water requirements but good returns in grain for food and forages for animals. Taiz emerged with one of the

largest number of vulnerable VUs (170), mainly in the north and east of the governorate, the main threats are posed by flash floods (68 VUs). A smaller number of VUs are vulnerable to landslides (55) and soil erosion (47 VUs) and with possibility for stone terraces (6 VUs). To respond to these climate risks and subject to community consultations the project will support Taiz governorate across all components but most importantly through flood based agriculture, terrace rehabilitation and capacity building on climate smart agriculture.

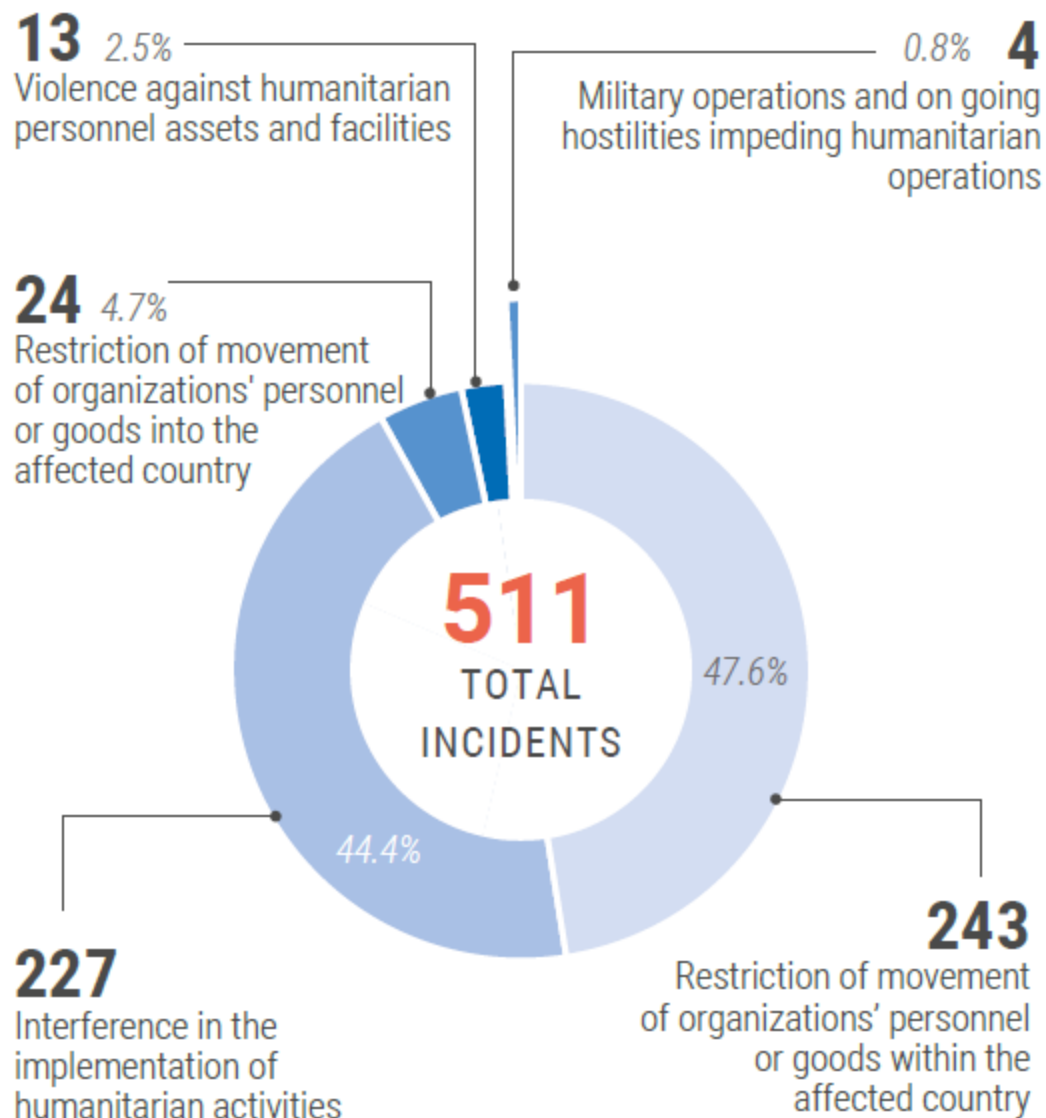
Figure 10 taiz climate vulnerability



21. The project has chosen executing agencies which have learnt to negotiate the difficult political situation effectively among the different political entities to work directly with communities on the ground. The fact that the public administrative structure is in place at the field level regardless of the political control of the area at higher levels greatly supports this approach. The main executing partners (FAO and

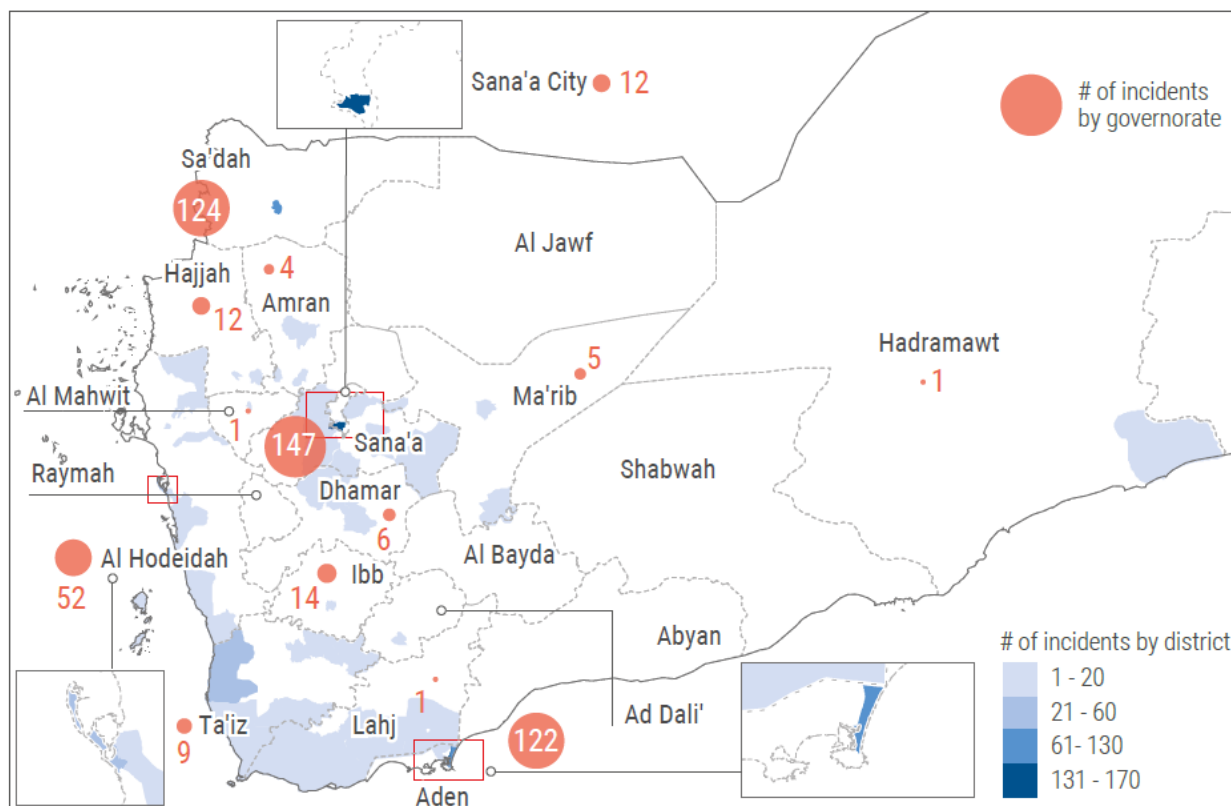
SFD) and the local implementing NGOs all have experience and capacity to work on the ground regardless of the political reality of which Government controls a particular area. In terms of security, areas which are deemed unsafe will be avoided during implementation. Project districts have been selected based on the selection of areas which are deemed safe by the local UN agencies who monitor the situation very closely. Over September and October 2021, humanitarian partners reported 511 access incidents in September and October across 61 districts in 14 governorates in Yemen. This is a significant increase by 49 percent from the incidents reported in July-August (343), mainly due to the increase of restrictions on movement within Yemen and delays in approval of sub agreements by both the De facto government and the Internationally Recognized Government (IRG). More than half of these incidents involved restrictions on movement within and into Yemen while only 17 incidents involved violence. Figure 11 below shows the nature of these incidents[8]<sup>8</sup>.

Figure 11 Incidents undermining humanitarian assistance during september and october 2021 in yemen



22. Figure 12 below shows the distribution of these incidents per governorate. It is clear that Al Hodeidah is the governorate with the highest number of such incidents compared to the other four governorates. Al Hodeidah had 52 incidents followed by Taiz with 9 and Dhamar with 6. Lahj and Ad Dali? each had 1 incident. The project will continue to monitor the volatile situation across the five governorates through its contact with UNCT and its presence on the ground. The project teams will consult and follow the UNDSS clearance system for travel and operations authorizations. The project's targeting strategy is based on a flexible approach so that if and when a targeted district proves to be inaccessible due to insecurity/limited access or other major factors which are assessed prior to starting implementation, the district will be replaced with the next priority district from the ranked districts list.

Figure 12 Incidents by governorate during september and october 2021 in yemen



23. The proposed project will adopt an integrated approach combining community-based planning for climate-risk reduction, sustainable land and water management integrating traditional knowledge and innovative technologies and the establishment or rehabilitation/modernization of existing and new infrastructures (e.g. traditional agriculture terraces and water harvesting structures). 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 will 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 improving crop productivity and food security in each agro-climatic zone through the testing of appropriate technologies, techniques and management practices aimed at improving climate change resilience and risk mitigation. The RLDP programme will support the establishment and/or strengthening of Community Development Associations (CDAs), Water User Associations (WUA), Community-Based Association (CBO) and Village Councils (VC) 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, WUAs, CBOs and VCs to produce climate-resilient Community Action Plans (CAPs) to articulate their development needs, combining rural development and climate adaptation

needs. Farmers will be part of the CAPs production and implementation, identifying climate change adaptation needs. 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 and reducing barriers for women's participation. The project will ensure that women and men have equal access to capacity building, training and productive assets. With this objective, the project will target 50% women as overall direct beneficiaries. Average of women participation in trainings promoted by the project goes from 40% to 50%. Furthermore, specific services and trainings will target women on a 70% or 100% basis (i.e. literacy and nutrition). The project aims to increase women's voice in decision-making at the household and community level. As part of literacy and life skills, leadership training will also be included. Women will be trained to form groups and their leadership and negotiation skills will be strengthened to enable them to make informed decisions during the community planning process. It is expected that women in representative position (committees) will be 30%. Gender-awareness trainings, including both women and men, will be carried out at both household and community levels, including village leaders. The project also aims to increase women's access to skills and knowledge: Women will be 70 % beneficiaries for the trainings in literacy, life skills and nutrition (including young women). Furthermore, women will be 40% beneficiaries of FFS where they will be able to acquire practical knowledge for livelihood improvement through FFs and climate resilience and 50% beneficiaries of training package under Component 2 as for example: climate resilient irrigation technologies, Improved soil and water conservation practices, water management.

24. The project will also develop skills to improve the well-being of women and other family members: with this purpose, nutrition education will be provided at both household and groups level. The training will include training in nutrition, kitchen gardening, dietary knowledge and promotion of hygiene as a response to COVID-19, cholera and other diseases. Specific attention will be given to PLW and young women, including also women from IDPs (10%). The project will train project staff and extension service providers on gender-related issues. It will be ensured that training modules include specific sections related to gender sensitive topics, including Gender Based Violence (GBV). The executing partners will produce/adapt and oversee the training modules and curricula that will be delivered to targeted communities/ households and the work of Community Facilitators and Gender Focal Points as per their Tors. ToRs for the Social and Environmental Safeguard expert includes points related to gender sensitivity and ensure that gender issues are all captured and minimize. Finally, the project will contribute to reducing any harmful act based on gender through: (i) sensitization on the importance of addressing GBV, application of IFAD's no tolerance for Sexual Harassment (SH) /Sexual Exploitation and Abuse (SEA) for project staff and project's activities and operations; (ii) map out and partner with GBV prevention and response actors in project adjoining communities; (iii) have GBV risks adequately reflected in all safeguards instruments, contracts with suppliers and other third parties to be funded with IFAD/LDCF funds.

25. As the LDCF Rural Adaptation in Yemen (RAY) project will be blended and fully integrated into the IFAD-supported Rural Livelihood Development Project (RLDP), 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 improved coordination and communication, the application of common procurement and supervision procedures (reducing costs), and the implementation of complementary project interventions.

## **Expected adaptation benefits**

26. The GEF's LDCF project aims to increase the scope of the rural development objectives pursued through the RGP in view of the expected impact of climate change on the already fragile water sector in Yemen. LDCF funding will help avoid the possibility that the IFAD intervention may turn into a 'business-as-usual' agricultural development project, and not tackle the most important constraints facing agriculture and rural development in Yemen. The GEF project aims to enhance the adaptive capacity of rural people to address climate change and its potential impact on the agriculture sector by focusing on measures that promote the improved management of scarce/threatened key resources such as water and soil fertility, and by empowering key stakeholders with a thorough, gender-balanced capacity building programme. Building on the activities carried out in the baseline, the GEF alternative will aim at covering the additional costs associated with supplemental water and soil management infrastructures, integrating agriculture management/restoration, training in improved agricultural practices, and capacity-building in response to climate change impact. A synergistic and complementary approach will be adopted in linking the GEF activities to the baseline in particular with reference to the water resources component, intensifying and expanding the work on community identified water management/conservation/irrigation schemes as well as terrace rehabilitation, and on the community resilience component by investing in focused capacity building. The LDCF funding will be utilized to substantially expand the scope of the project with regards to investment in NAPA and TNC priority activities such as mountain terrace rehabilitation, sustainable land management, rainwater harvesting and storage, water conservation, increased water use efficiency through better irrigation technologies, and awareness raising and education to adaptation.

27. The programme will aim to reduce poverty, improve food insecurity and increase smallholder climate resilience by stimulating adaptive and sustainable rural economic growth, directly benefiting a total of 71,800 beneficiaries of which 39,040 (54%) will be women and 15,182 (21%) youth. The key outcomes will be: (i) enhanced resilience to shocks for households and communities; (ii) the improved climate-resilience of infrastructures, crop production, natural resource management, and post-harvesting investments; (iii) improved gender sensitive and climate resilient agricultural practices and productivity; (iv) increased access to diversified income generation opportunities for rural women and men; (v) vulnerability reduction through FFS; (vi) knowledge generation, dissemination and climate change adaptation awareness raising; and (vii) support policy development in mainstreaming CCA into agriculture and the eventual development of an NDC for Yemen.

28. Households and community resilience to shocks enhanced: 30 community institutions will be created or rehabilitated to implement water and soil conservation as well as resilient agricultural production activities. Training programmes will be designed for the implementation of components 2 and 3, and sustainable NRM and climate change adaptation will be mainstreamed into the adult literacy programme that will help empower and reduce climate-vulnerability for 6000 women, men and youth. The project will also train 30 AREA researchers to be farmer-focused, how to test seed agro-climatic suitability,

technologies and management practices that will enhance climate resilience and risk mitigation, and test and demonstrate best practices through FFS in close collaboration with beneficiaries. The testing will result in: identifying the response of existing improved and local varieties to differing agro-ecological and climatic stresses; identifying new crop varieties tolerant to drought, floods, heat, humidity, salinity, pests and diseases; testing local and new crop species resistant to harsh climatic conditions; the development of non-conventional water resources for agricultural production, growing improved landraces under saline and re-used water; improved farming practices for increased climate resilience; and testing and genetic improvement of climate-change resilient/tolerant varieties.

29. Gender-sensitive and climate resilient agricultural practices and improved natural resources management and agricultural productivity: Gender is fully mainstreamed into the RAY project; overall RAY will have a 50% target for women participation. 4,200 female, 1,800 male and 4,500 young trainees will benefit from the literacy programme on gender issues and life skills, such as: confidence building; negotiation and leadership skills; and entrepreneurship training to support women's self-employment. Natural resource management and awareness about climate risks and adaptation measures will also be mainstreamed into the basic literacy courses. 11,300 women (51%) will benefit from 800 rooftop water harvesting and open catchment cisterns to increase household water availability for domestic and gardening; the construction of 4 communal multi-purpose water schemes; and 9 village groundwater-based schemes subject to hydrogeological surveys and water quality and environmental assessments.

30. Infrastructure and natural resource base made climate resilient: 51% of women beneficiaries (7,800, from a total of 2,463 households) will also benefit from small-scale community level water infrastructures for irrigation schemes and flood-based agriculture schemes including the rehabilitation and modernizing of 33 irrigation schemes through the use of micro-catchment rainwater harvesting and improved irrigation technologies at the farm level, to support crop irrigation during dry spell periods which will make crop production more reliable. 2,463 households of which 51 % women, will benefit from 17ha of rehabilitated terraces with improvements to enhance soil moisture retention, cut-off drains to provide extra surface runoff water into terrace plots; farm ponds to support supplementary irrigation to adapt to water scarcity; and the collection of run-off from hilly terrains and convey it to improved terrace cropping areas by spreading directly on the adjacent farms or through intermediate storage cisterns or water tanks to allow supplementary irrigation.

31. Improved gender sensitive and climate resilient agricultural practices and increased diversification. A further 6000 households (70 % women) will benefit from better access to agricultural inputs; more efficient drip irrigation systems; adaptive agronomic practices and technologies; nutrition sensitive and climate resilient technologies such as grow-bags, wicking beds, drought tolerant crops, diversification in production and water efficient practices.

32. Rural women and men with increased access to economic opportunities: 2346 households (45% women) will furthermore receive assistance through livelihood packages for the provision of agriculture livelihood support kits for value-added key agricultural products such as low-cost greenhouses, beekeeping and milk processing, poultry, and small ruminants.

## **Theory of Change**

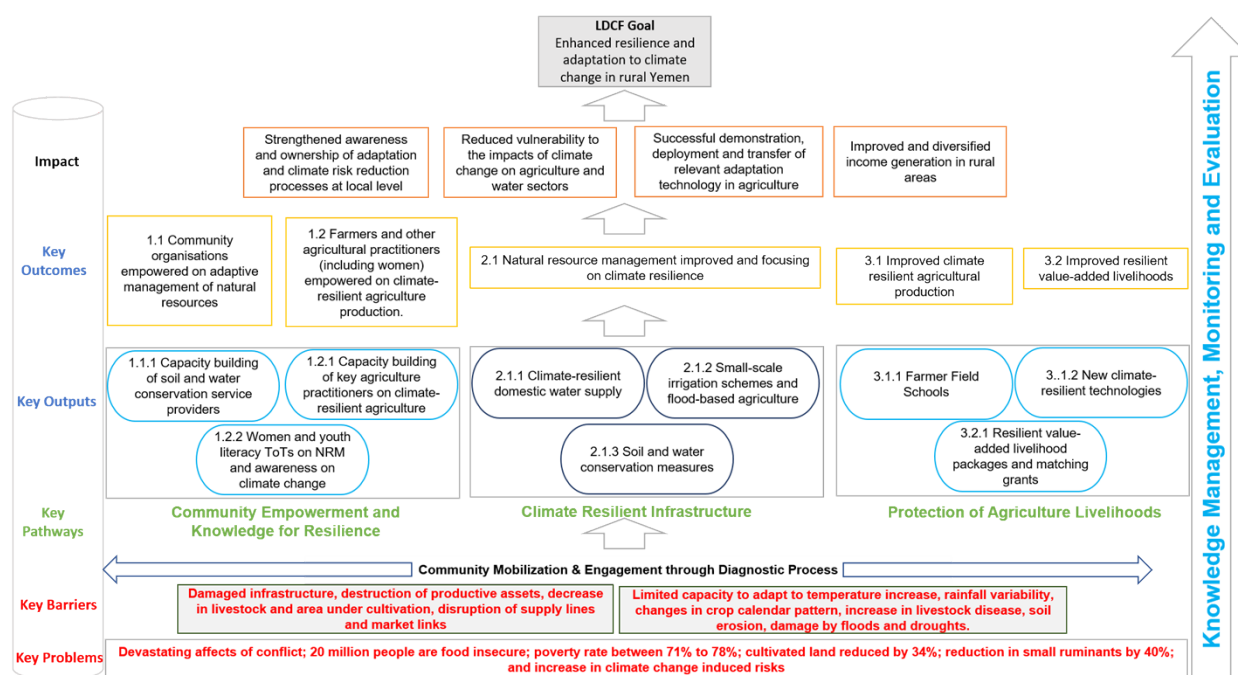
33. The people in Yemen have been devastated by the on-going conflict leading to a sharp increase in poverty rates and food insecurity. The war has led to destruction of social and economic infrastructure especially water and communication facilities and has diminished the productive asset base leading to a sharp decline in cultivated land, crop production and livestock holding in the country. Food insecurity and malnutrition impact a large proportion of the country especially the most vulnerable segments such as women and children. Conflict also affects availability and accessibility to food and health services. These issues are further exacerbated by the impacts of climate change, extremely high food prices, the liquidity crisis, disrupted livelihoods and high levels of unemployment. These factors are also affecting nutrition security of households, and especially children, as food insecurity affects availability of foods for child feeding and maternal care. Inadequate access to potable water may lead to diarrhoea and cholera outbreaks further aggravating malnutrition. This complex context reduces the adaptive capacities of rural communities in Yemen and increases their vulnerability to climate change.
34. The theory of change of the project is based on the premise that despite the destruction of livelihoods and the difficult situation in which rural populations in Yemen live, local communities and households are willing to engage in productive activities to rebuild their lives and forge a future for themselves. Promising pathways to re-establish resilient and sustainable livelihoods in Yemen require the project to address multiple issues simultaneously and in a coordinated manner: community organization and empowerment; household literacy, numeracy, nutrition and health; productive skills and knowledge; supportive infrastructure. In order to strengthen awareness and ownership of adaptation and climate risk reduction processes at the local level (first impact), it is necessary to ensure that at least 30 Community Development Associations (CDAs), Water User Associations (WUAs) and Village Council (VCs) in the project Village Units (VUs) are empowered on adaptive management of natural resources, with a focus on climate-smart water and soil conservation (outcome 1.1). This could be achieved through a training programme that is designed and implemented to build the capacity of water and soil conservation service providers (output 1.1.1). It is also crucial that farmers and other agricultural practitioners are empowered on climate-resilient agriculture production (outcome 1.2). This could be achieved through a training of trainers programme designed and implemented to build the capacity of key agriculture practitioners on climate-resilient agriculture production (output 1.2.1); and a gender and youth literacy training of trainers programme developed and implemented (output 1.2.2) that targets graduating 48 teachers annually for 5 years to train a total of 6000 heads of households (4200 women and 4800 youth). The project will use the non-primer based Reflect approach which is a specially designed approach for adult literacy. The literacy sessions are being organized based on the previous experience that this is an important avenue for change and provides an opportunity to young women and men to become literate and numerate in a short span of time and also more importantly empowers the participants and gives them a renewed vision about their lives which is a key starting point in any process that aims to rehabilitate communities demoralized by unending conflict. The approach has proven effective in enabling communities to discuss key challenges and overcoming them. The approach has resulted in women's increased participation in family and community and resulted in changes in the gender division of labour in many different contexts.
35. Another key pathway is the investment in climate resilient infrastructure to provide assets to the empowered communities to reduce vulnerability to climate change impacts (second impact) and ensure successful deployment and transfer of relevant adaptation technologies in agriculture (third impact). Due to conflict and poverty, local communities need support in rehabilitating and reconstructing infrastructure that could help at least 80% of households improve natural resource management and increase their resilience to climate change (outcome 2.1) by adopting environmentally sustainable and climate resilient technologies and practices. In doing so, providing at least 800 households with climate-resilient domestic water supply (output 2.1.1) is crucial to improve access to clean water. In addition, investing in rehabilitating and modernising small-scale irrigation schemes and flood-based agriculture (output 2.1.2) for at least 550 hectares and 33 systems will help

communities adapt to water scarcity and protect them against floods. Soil and water conservation measures (output 2.1.3) through investments in at least rehabilitating 17 hectares of terraces. It is assumed that key investments in rebuilding water infrastructure and protecting fields against erosion and floods will assist households in increasing crop and livestock production. Based on previous experience it is further assumed that communities and households will be able to maintain and operate the infrastructure on a sustainable basis themselves and will not be dependent upon peace and stability at the national level given investments made in community empowerment. The project will be conflict sensitive in that it will avoid building any asset that are potentially conflict generators such as investment in rangelands or communal grazing lands where rights may be subject to community policing or tribal tensions.

36. Local communities have also shown considerable interest in enhancing and updating their farming knowledge and practices especially in learning about how best to adapt to climate change and have in the past been actively participating in farmer field schools that have led to high adoption rates of climate resilient practices. Improving and diversifying income generation is a key adaptation measure in Yemen's context (fourth impact). Thus, a promising pathway is the protection of agricultural livelihoods. Training of at least 6000 heads of households in Farmer Field Schools (output 3.1.1) and the testing and demonstration of new climate-resilient technologies (output 3.1.2) where a host of inputs such as drought resistant seed, water efficient technologies and water productivity enhancing techniques, grow bags and wicking beds, soil conservation techniques, will be introduced would improve climate resilient agricultural production (outcome 3.1). The project will also provide 1500 livelihood packages and 846 matching grants for post-harvest activities (output 3.2.1) to improved resilient value-added livelihoods (outcome 3.2).
37. Knowledge management is an integral and continuous part of the project. The project will contribute to enhancing the capacity of the Agriculture Research & Extension Authority (AREA) through short training of its researchers to test the suitability of seeds, technologies and management practices to different agro-climatic zones for enhanced climate resilience and risk mitigation and disseminating the findings in the FFS and to the wider farming community, private suppliers and policy makers. Knowledge generated through the project will be systemically captured including the best practices and lessons learned for improvement of future IFAD programming in Yemen.
38. Yemen's climate risks are at the center of its fragility and are already aggravating existing issues. In order to enhance resilience and adaptation in rural Yemen, it is vital to empower communities through knowledge to raise their awareness on adaptation; to invest in climate-resilient infrastructure to guarantee reduced vulnerability and successful technology transfer; and to make livelihoods climate-resilient to ensure improved and diversified income generation. It is worth noting that- apart from the pathways explained above- most outputs eventually contribute to more than one outcome and most outcomes contribute to more than one impact since the process of building climate resilience is integrated and interconnected. These correlations are denoted with dotted lines in the diagrammatic illustration of the Theory of Change.
39. The project builds on the experience that an integrated approach has the potential to deliver much greater impact than interventions which are implemented in isolation. The project approach also capitalizes on lessons that a community based approach in which participating households and communities identify their own priority needs are much more relevant and build ownership. Using these two findings, the RAY approach will follow a community-based diagnostic process in which participating communities identify their priorities from the menu of options included in the project design. The project approach will focus on targeted village units which are the most vulnerable to food insecurity and climate risks and deliver a package of complementary activities. The combined impact of the project investments will be enhanced resilience and adaptation to climate change in rural Yemen as a result of strengthened awareness to climate change at the local level, reduced

vulnerability to climate change impacts on agriculture and water sectors, enhanced adaptation in agriculture production and improved income generation. The diagrammatic illustration of the Theory of Change is given below.

FIGURE 13 RAY THEORY OF CHANGE



## Project Description

40. The rationale behind the proposed LDCF RAY project is that it will mainstream resilience to climate- and environment-related shocks within the IFAD RLDP baseline project which features community-driven and gender-balanced solutions for rural investments, agriculture production, water management and soil conservation. The RAY project will adopt an integrated approach combining community-based planning for climate-risk reduction; the sustainable use of 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 such as traditional agriculture terraces and water harvesting structures. It will mainstream climate change adaptation needs into infrastructure design, spatial planning and agriculture practices and technologies, and help disseminate them among the most vulnerable population living in areas with high climate change risk, with a special

focus on women, youth and nutrition. The following diagram summarises the baseline project's theory of change to which LDCF is contributing.

41. The project's goal is enhancing resilience and adaptation to climate change in Rural Yemen, while the objective is to improve farmland productivity, food security, and soil and water conservation through the rehabilitation and sustainable management of climate-resilient agriculture. The LDCF intervention will be articulated around three components in addition to Knowledge Management, Monitoring and Evaluation: (i) Community Empowerment and Resilience; (ii) Climate-resilient Investments in Natural Resources Management; and (iii) Climate-resilient investments for improved agricultural livelihoods; .

42. Under Component 1 (Community Empowerment and Knowledge for Resilience), which will be implemented by FAO in coordination with SFD, the RLDP baseline will support the finalisation of the district selection based on the short-list identified during the design process and identify the most vulnerable village units to conduct the diagnostic survey and assess which households are willing to participate in the project. At the start of implementation, district accessibility and the security situation will be reviewed and assessed. RLDP will employ non-Government organizations (NGOs) or private sector service providers to identify Community Development Association (CDA), Village Councils (VC), Community Based Organizations (CBO), Water User Associations (WUA), literacy teachers and community leaders as required.

43. The RAY will develop training programmes in water and soil conservation as well as in climate-resilient agricultural production with the aim to empower and guide farmers in the process of mainstreaming climate change adaptation (CCA) in NRM and the diversification of livelihoods and income generation. The project will design and implement gender balanced CCA capacity building programmes for farmers and will develop and deliver literacy training for 6000 women, men and youth.

44. In Component 2 (Climate-resilient Investments in Natural Resources Management), which will be implemented by SFD, the RAY will focus on the planning and implementation of community actions and investments for climate-resilient natural resource management and infrastructure for water management and soil conservation. The aim will be to supply 8,045 households (53,900 people) with water through water harvesting technologies. This will include: i) 800 individual household investments (rooftop rainwater harvesting including concrete tanks/underground cisterns); ii) 4 community water schemes based on water harvesting cisterns, protected shallow wells / boreholes, and springs (subject to geological surveys and underground water scarcity assessments); iii) rehabilitation of 9 village unit groundwater supply projects; iv) the rehabilitation and modernisation of 550 hectares of flood-based agriculture and irrigation systems and 33 irrigation systems with no single irrigation scheme above 100 ha; and v) 17 hectares of rehabilitated terraces that will protect against soil erosion and when combined with supplementary irrigation systems such as tanks, increase crop productivity through retaining soil moisture and reducing water scarcity.

45. Under Component 3 (Climate-resilient Investments for Improved Agricultural Livelihoods), which will be implemented by FAO, the RAY will help strengthen capacity for 6000 farmers trained in improved crop and livestock production and in the management of climate-related risks. Of these, 2400 people trained will be women and 2400 will be young men and women. The LDCF project will support

investments in climate change adaptation technologies, including suitable equipment and inputs for efficient irrigation, for sustainable on-farm agronomic systems. It will support the sustainable management of livestock and feed by increasing productivity, and reductions of GHG emissions through improved feeding practices and better herd size control. Farmers will be able to better cope with decreases in water recharge and soil moisture by favouring better soil moisture storage and retention capacity as well as the optimal use of irrigation water. This will help ensure a more stable and improved production, reducing the risk of environmental shocks such as drought, soil erosion and salinization potentially allowing for increased productivity per unit of water and more stable income for households.

46. Component 3 will also support vulnerable households recover their livelihoods from conflict and climate shocks; GEF will provide 2346 households with livelihood support packages and help them add value to their current production in order to make their livelihoods more climate-resilient. The activity aims to provide technical assistance to 1500 households, livelihood packages to 1500 households, and post-harvest processing and marketing support through matching grants to 846 households. The component will also build the research capacity of Agricultural Research and Extension Authority (AREA) to conduct seed and agro-climatic suitability testing of technologies and management practices that will enhance climate resilience and reduce climate risk. This testing will be conducted on the Farmer Field School (FFS) demonstration plots hereby facilitating the quick transfer of knowledge to the farmers and integration into the training programmes. The results of the testing will also benefit policy development dialogues in mainstreaming CCA into agriculture and the eventual development of an NDC for Yemen in line with the Paris agreement.

47. IFAD field coordinator will ensure coherence among the interventions of the two implementing institutions through consolidated and well synchronised joint Annual Work Plan and Budget. Any other required documents such as Progress Reports and updated Project Logical Framework will also be consolidated by the Field Coordinator based on inputs from the two M&E sub-systems under FAO and SFD which then will be entered into IFAD's ORMS system periodically as per the specifications in the Project Implementation Manual (PIM). The Field Coordinator with support from the Environmental, Social and Climate Specialist will consolidate inputs from FAO and SFD to the annual GEF PIR before submission to IFAD and subsequently to GEF. The Field Coordinator will also ensure that knowledge management activities including- studies, awareness brochures and workshops- are well coordinated among the two executing agencies in accordance with the communication and KM strategy and the agreed Annual Work Plan and Budgets (AWBPs).

48. The GEF project will be fully blended with the IFAD's RLDP and will be implemented by FAO and SFD. Both agencies have proven capacity with strong performance orientation and country presence as well as sound systems for financial management and procurement. FAO and SFD will use their own Procurement regulations as long as they don't contradict with IFAD's Procurement Guidelines. The Implementing Partner will have to follow FAO or SFD Procurement Guidelines depending on the case. During implementation. FAO and SFD shall observe the following specific principles: (a) procurement would be carried out in accordance with the Financing Agreement and any duly agreed amendments thereto; (b) it would be conducted within the project implementation period, except as provided in the financing agreement; (c) the cost of the procurement is not to exceed the availability of duly allocated funds as per financing agreement, and (d) the Revised IFAD Policy on Preventing Frauds and Corruption in its Activities and Operations are to be respected. Both FAO and SFD have clear lines of accountability and responsibility, and they have proven experience with the Government line agencies in terms of

building their capacity and capitalizing on the presence of local implementing partners for effective logistical arrangements. FAO and SFD can effectively negotiate with different partners in the country and capable of building the capacity of community based organizations through community-mobilization activities. An Advisory Steering Committee (ASC) will be formed at the country level which will be chaired by the Ministry of Planning and International Cooperation (MoPIC); it will be kept informed of project performance through an annual meeting. Its permanent members will include the Ministry of Agriculture and Irrigation and the Environmental Protection Authority (under the Ministry of Water and Environment). Other stakeholders will be seconded to the ASC as needed throughout the project. The ASC's main task will be to facilitate implementation where possible and guide the implementing agencies and suggest potential linkages to enhance synergy and increase impact.

**B. describe the consistency of the project with LDCF/SCCF eligibility criteria and priorities:**

49. In line with the LDCF criteria, the IFAD-supported project was developed in compliance with the principles of country ownership and drivenness. The design was undertaken remotely because of the security situation and the COVID-19 pandemic in March-May 2020. The mission members worked from their home stations and extensive virtual meetings were held with the Government of Yemen, FAO, SFD, WFP and World Bank that were facilitated by IFAD's regional office in Cairo. The mission was assisted by a GIS expert, who consolidated available socio-demographic, environmental and climate datasets to facilitate targeting and the analysis of response options. The local consultants on the ground provided ground truthing and verification of some key aspects for design and implementation.

Table 2 ?RAY alignment with National Adaptation Programme of Action (NAPA) in Yemen

Sector	NAPA Adaptation Activity	RAY Alignment
Agriculture	? Testing drought resistant and heat- salinity-tolerant crops and crop varieties in different agro-ecological areas	Output 3.1.2
	? 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 3.1.1
Water	? Select and construct the most applicable rainwater harvesting systems through various techniques including traditional methods	Output 2.1.1
	? Development and implementation of sustainable water and soil management strategies to combat desertification and land degradation	Output 2.1.1 Output 2.1.2 Output 2.1.3
	? Rehabilitation and maintenance of mountain terraces and efficient associated watering conduction systems in critical vulnerable areas.	Output 2.1.3

Sector	NAPA Adaptation Activity	RAY Alignment
Cross-sectoral	? Implementation of an awareness raising programme of the potential impact of climate change on vulnerable sectors and potential adaptation measures	Output 1.2.1 Output 1.2.2
	? Design and implement extension and farmers' training programmes on the proposed adaptive technologies and monitoring operations	Output 1.1.1 Output 1.2.1 Output 1.2.2

Table 3 RAY alignment with Intended Nationally Determined Contributions (INDC).

Sector	INDC Adaptation Activity	RAY Alignment
Water	? Promotion and scale-up of rainwater harvesting to reduce climate induced water shortage	Output 2.1.1 Output 2.1.2
Agriculture	? Promoting agriculture drought management as well as sustainable crop and livestock management;	Output project KM Output 2.1.3 Output 3.1.1 Output 3.1.2
Cross-sectoral	? Capacity building and awareness raising.	Output 1.2.1 Output 1.2.2
	? Institutional capacity for building resilience climate change	Output 1.1.1

Table 4 RAY alignment with Third National Communication (TNC)

Area	TNC Adaptation Activity	RAY Alignment
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Area	TNC Adaptation Activity	RAY Alignment
Diversify livelihoods	? Promote crop diversification specifically introducing cash crops such as fruit, vegetables as well as poultry farms	Output 3.1.2
Introduce alternative practices	? Support alternative crop measures (i.e., drought resistant crop varieties, early-maturing varieties, improved seeds for greater productivity), and adjustments in crop rotation patterns to account for shifts in the onset of the rainy season.	Output project KM Output 3.1.1
Increase water management	? Introduce widely available technologies for improving irrigation efficiency (e.g., drip and bubbler systems). ? Introduce water storage and conservation techniques (e.g., dams, water ponds, boreholes, rainwater harvesting, terrace rehabilitation, desalination) to increase available supply.	Output 2.1.1 Output 2.1.2
Exploit land management co-benefits	? Support measures that stabilize slopes, conserve soils, and improve soil fertility, and which also provide co-benefits to build household resilience.	Output 2.1.3
Build local capacity	? Provide farmers with access to training and education opportunities to build capacity to better understand climate risks	Output 1.1.1 Output 1.2.2 Output 3.1.1

#### LDCF Added Value Compared to the baseline:

50. As the crisis is entering its sixth year, around 24 million people, 80 per cent of the entire population, require some form of assistance or protection and close to half of all families are in acute need. Over 230 of Yemen's 333 governorates are food insecure, 103 districts are at risk of famine; 41 districts have malnutrition rates above 15 per cent; 54 districts have acute WASH deficits; and 46 districts are at high risk of cholera. Intensifying conflict has compromised access to health care while there are ongoing risks of cholera, malaria, dengue and other disease outbreaks; only 50 per cent of health facilities in Yemen are functioning, further hampered by intermittent electricity and power outages across the country.

51. An estimated 19 million people lack adequate sanitation or safe water and fuel shortages have meant the costs of commercial water trucking have become prohibitive for most. Following years of aerial bombing campaigns and on-the-ground fighting, Yemen's water and sanitation infrastructure has faced widespread destruction. These conditions have led to the largest cholera outbreak in epidemiologically recorded history, with over 1.3 million suspected cases and over 2,600 associated deaths since the April 2017 outbreak.<sup>[9]</sup>

52. IFAD has a long history of working in Yemen and prior to its disengagement with the war-torn country, it had supported 22 development projects valued at USD 727.4 million, of which USD 232.9 million financed by IFAD and the rest covered by external financiers and domestic resources, and it had reached an estimated 580,000 households. The operational experiences of Government and financiers,

including IFAD, in Yemen have generated lessons which have been considered in the programme design and execution. The key lessons of relevance considered in this design include: (i) community leadership in planning and implementing development projects from the outset is essential for their success, future ownership and sustainability; (ii) positive impacts of investments in domestic water supply on women's empowerment are multiplied when combined with literacy, life-skills and vocational training; (iii) rigorous ex-ante assessment of the potential environmental and social impacts of activities and the development of appropriate plans and measures to mitigate their risks are essential elements for the programme sustainability.

53. The RLDP aims at supporting the country in facing a long-term protracted political and developmental crisis that has weakened institutions, disrupted livelihoods, destroyed infrastructure, and made the people extremely vulnerable to food security, malnutrition, poverty and eroded their capacity to withstand economic and climate risks. The LDCF investment conducted a climate-vulnerability study and through the RAY project aims to enhance this by mainstreaming CCA to reduce vulnerability to climate risks. It will help to protect the most vulnerable against climate shocks, growing food insecurity and further deterioration of livelihoods and by offering them support to rebuild their livelihoods through provision of critical agriculture inputs, equipment, productive assets, infrastructure and technical support.

54. The RAY project will help IFAD address the governmental priorities for climate change adaptation in the agriculture sector, incorporating climate-resilient investment measures and adaptation criteria with a special focus on women and youth. The LDCF will raise awareness among policy-makers, extension agents, and local stakeholders, through co-learning and on-farm demonstrations led by farmers and help individuals and community organizations plan, test and validate alternative water harvesting systems, climate adapted crop varieties, sustainable land management practices, and disaster reduction measures that better cope with climate risks, while increasing yields and enhancing climate-resilience.

55. **LDCF.** Particular areas in which the LDCF will help improve on the performance of the RLDP are: (i) increasing focus on mainstreaming CCA into water management and soil conservation (water harvesting structures and water storage facilities, spate irrigation schemes, and terrace rehabilitation) associated with promotion of modern irrigation schemes to improve on-farm water use efficiency; (ii) mainstreaming CCA to strengthen social organizations and infrastructure in targeted communities; (iii) promoting climate-change resilience at all levels of the programme; (iv) strengthening M&E frameworks and climate change-impact measurement; and (v) strengthening awareness and CCA knowledge among all concerned stakeholders at national and local levels.

56. RAY is fully aligned with IFAD's Strategic Objectives approved in 2019 in the Country Strategy Note for Yemen. The programme will contribute to IFAD's overall strategic goal at the corporate level to 'reduce poverty and enhance food security through remunerative, sustainable and resilient livelihoods'. It will also contribute to key IFAD priority areas namely gender and youth mainstreaming, climate focus and integration of nutrition sensitive interventions. The LDCF project is fully aligned with IFAD's 2019-2025 climate change strategy that aims to maximize impact on rural poverty in a changing climate through: i) helping poor people secure access to environmental assets; ii) ensure poor rural people have the knowledge, skills, technical support needed to respond to the negative impacts of climate and environmental change on their livelihood practices and productivity; iii) support the rural poor and their institutions to design, develop and disseminate innovative technologies and integrated approaches for addressing climate change in ways that safeguard environmental assets and promote social inclusion; iv)

support local and national adaptation programmes and policies; and (v) support initiatives that contribute to climate change adaptation while enhancing rural livelihoods, environmental assets and social inclusion.

57. Where possible synergies will be found with FAO's ongoing portfolio. IFAD's project will collaborate with FAO's relevant projects and will take advantage of FAO being the executing agency for components 1 and 3 to ensure maximum synergy between projects. Coordination will hence be much easier and knowledge transfer as well as lessons learned and best practices will be captured feeding into policy dialogue. Some of FAO's ongoing projects in Yemen include:

58. Emergency agricultural livelihoods support to the most vulnerable agriculture- and fisheries-dependent households (2020-2021) USD 4 million. Emergency agricultural livelihoods support to the most vulnerable agriculture and fisheries-dependent households in six high priority IPC Phase 4 and IPC Phase 3 districts in Yemen.

59. Strengthening Food Security Information and Early Warning System (2019-2021) USD 6.8 million. Improving Food Security and Nutrition Governance for decision making at national and Governorate levels, and future plans include systematization and expansion of the scope of the current Early Warning System to include food and nutrition security to ensure generation of holistic information utilizing socio-economic factors.

60. Enhancing food availability through increased agriculture production (2019-2021) USD 2 million. Enhancing food availability through increased agricultural production for subsistence farmers in Hadramout Governorate in Yemen

61. Emergency agricultural livelihoods support to the most vulnerable households in Yemen (2019 - 2020) USD 10 million. Funding to FAO emergency response plan to Yemen to help support livelihoods of the most vulnerable in Yemen.

62. Livelihood assistance to conflict affected population (2018- 2020) USD 1.7 million. A project that aims to provide livelihood assistance in Taiz and Al Dale'e Governorates through integrated food security and nutrition sensitive support.

63. Yemen Smallholder Agricultural Productivity Restoration and Enhancement Project (SAPREP) (2017 - 2020) USD 36 million. The Smallholder Agricultural Production Restoration and Enhancement project aims to restore agricultural production in seven most food insecure governorates. Some 47,300 beneficiaries have received start-up packages of staple seeds and poultry to resume agricultural production.

64. Global Network Against Food Crises Partnership Programme - Country Investment Yemen (2018 - 2021) USD 6 million. An EU founded network comprising FAO and WFP that aims to take concrete steps to mitigate food crises and avert famine in crises areas. FAO received funding from EU in 2018 in light of the Yemeni crises to help mitigate food insecurity.

65. Resilient and Sustainable Livelihoods for Rural Yemen (2021-2028) USD 71 million. The project- which will be financed by the GEF among other donors- aims to support the development of sustainable and resilient livelihoods for rural Yemenis by mainstreaming climate change adaptation, biodiversity conservation, and SLM across productive agriculture, livestock and fisheries sectors. Anticipated objective level indicators: 118,000 hectares of productive land under improved sustainable and resilient management, 48,000 ha of which directly benefiting biodiversity 100,000 hectares of productive marine area under improved management to benefit biodiversity conservation 120,000 small-scale livestock,

fisheries, and agriculture producers (60,000female/60,000male) engaged in and successfully demonstrate SLM and climate change innovation and adaptation practices resulting in increased productivity and reduced food insecurity.

66. Between 2015 and 2019, international donors gave the UN-led aid response in Yemen US\$8.35 billion, including \$3.6 billion in 2019 that reached almost 14 million people each month with some form of aid, up from 7.5 million people in 2018. Yemen remains in acute need of immediate humanitarian assistance, but also in rebuilding the climate adaptive coping mechanisms that are essential to reduce the exposure of the most vulnerable. In February 2019 donors have pledged USD 2.62 billion to support a massive humanitarian operation in Yemen.<sup>[10]</sup> The international community already plays a key role in implementing several additional short and long-term interventions as shown in the table below.

Organisation	Overview	Summary
UNDP	Cash Assistance for Safe Relocation of Households Affected by the Conflict in Hodeida (2017-2019). USD 1,8 million	The project provides families (identified by government) with a one-time cash assistance equivalent to USD \$40 to enable their safe relocation.
	Crisis Support for Solid Waste, Water Supply and Sewage Institutions in Aden and Mukalla Cities (2018-2020) USD 8.2 million	The objective of this project is to make two essential service institutions located in two major cities more resilient to the multiple vulnerability they are facing (financial, planning, maintenance and management of aging and reduced fleets). It will achieve this through the following outputs:  Capacity development: to improve the performance of Cleaning funds and Public corporation for water and sewerage for Aden and Mukalla.  Rehabilitation of critical infrastructure: rehabilitate and extend the water and sanitation system and restoration of physical assets.
	Social Protection for Community Resilience (2017 ? 2020) USD 28 million	Enhance financial security through income-generation activities and upgrading or replacing the necessary tools used for work and resources.  Improve access to healthcare services (including psychosocial support) and infrastructure through community-based projects and provision of equipment.  Strengthen the ability of local authorities to deliver basic services through better planning, coordination and monitoring.  Assist the most vulnerable communities and households to access public services and social safety nets.  Encourage inclusion of women, youth and other vulnerable groups in community development activities.

Organisation	Overview	Summary
	Yemen Livelihood and Human Security (2017 ? 2021) USD 4.6 million	Project activities are designed to increase employment opportunities, improve service delivery and strengthening community-based protection. Specifically, they are intended to:  Generate knowledge to analyze and prioritize needs; Restore income sources in crisis-affected groups; and  Strengthen protection mechanisms within communities, with a focus on women and youth
	Yemen Emergency Crisis Response Project (YECRP) ? USAID (2017 ? 2020) USD 9.7 million	The project is designed to realize five practical outcomes: Households and communities are stronger and better able to cope with the effects of crisis; women and young people have better job opportunities because they have developed their skills as midwives, paramedics, and community teachers/social workers; key health and education services are delivered.; schools are repaired so that students can continue their education; and clean water and safe sanitation are available.
	Yemen Emergency Crisis Response Project (YECRP) - World Bank (2017 ? 2020) USD 250 million	The project aims to enable communities to benefit from short-term work, and youth gain skills that expand their job and life opportunities; to benefit from repaired and improved assets; and to enable financial service providers and small businesses to develop and expand.
<b>IOM</b>	IOM?s Emergency Operations (2020) USD 8.6 million.	IOM?s health and protection assistance to IDPs and migrants in Yemen.
<b>UNFPA</b>	My Safety, Our Future. (2019 ? 2021) USD 8 million	The project aims for the protection of women and girls from Gender-based Violence in Yemen
<b>UNICEF</b>	Cash incentives to support teachers and Schools based staff (2019) 70 million.	The project aimed to facilitate incentives for approximately 135,000 teachers and school-based staff for approximately nine months to help support the education sector in Yemen.
	WASH and Education Support to internally displaced children and families (2020) USD 4.9 million	Project to support water, sanitation and hygiene as well as education to IDP?s children and their families.
<b>UNHCR</b>	Multi-year contribution to support displaced people and migrants (2017 ? 2020) USD 3 million	A four-year fund to support IDPs and migrants with social protection measures between 2016 and 2020.

Organisation	Overview	Summary
<b>World Bank</b>	Emergency Health and Nutrition Project (2017 ? 2022) USD 200 million	To contribute to the provision of basic health, essential nutrition, water and sanitation services for the benefit of the population of the Republic of Yemen.
	Yemen COVID-19 Response Project (2020 ? 2021) USD 27 million	To prevent, detect and respond to the threat posed by the COVID-19 pandemic
	Emergency Crisis Response Project (2016 ? 2021) USD 840 million	The Project Development Objective is to provide short-term employment and access to selected basic services to the most vulnerable; preserve existing implementation capacity of service delivery programs; and provide emergency cash transfers to the poor and vulnerable in response to the food crisis.
	Yemen Integrated Urban Services Emergency Project (2017 ? 2020) USD 150 million	To restore access to critical urban services in selected cities within the Republic of Yemen.
	Yemen Emergency Electricity Access Project (2018 ? 2021) USD 50 million	Improve access to electricity in rural and peri-urban areas within the Republic of Yemen.
<b>Joint Programme</b>	Supporting Resilient Livelihoods and Food Security in Yemen Joint Programme (ERRY II) (2019 ? 2022) USD 40 million	The Supporting Resilient Livelihoods and Food Security in Yemen Joint Programme (ERRY II) is a 3-year programme financed by the EU and will be managed by UNDP and jointly implemented together with the Food and Agriculture Organization (FAO), International Labour Organization (ILO) and the World Food Programme (WFP). The programme covers six vulnerable governorates: Abyan, Hajjah, Hodeidah, Lahj, Taiz and Sana'a (a total of sixteen districts). The overall objective of ERY II is to contribute to reduced vulnerability and strengthened resilience of crisis-affected communities in Yemen through the creation of sustainable livelihoods and improving access to basic services.

[1] WHO (September 2020) <https://covid19.who.int/region/emro/country/ye>

[2] Yemen (2018) Third National Communication to the Conference of Parties of the UNFCCC

[3] World Bank climate knowledge portal <https://climateknowledgeportal.worldbank.org/>

[4] World Bank climate knowledge portal <https://climateknowledgeportal.worldbank.org/>

- [5] A2 = high emission scenario, A1B = medium emission scenario and B1 = low emission scenario.
- [6] Third National Communication to the UNFCCC, 2018
- [7] The national Central Statistics Organisation (CSO) 2012
- [8] OCHA (2021). Yemen Humanitarian Access Snapshot.
- [9] UNICEF (Nov,2018), Yemen Humanitarian Situation Report
- [10] OCHA (2019) <https://www.unocha.org/story/yemen-donors-pledge-us26-billion-support-massive-humanitarian-operation>

### **C. describe additional cost reasoning**

1. The IFAD/LDCF project will be fully integrated into the IFAD-supported RLDP and it will build on the knowledge, information, and experience accumulated by IFAD through past projects.
2. From experience from previous projects, among the main opportunities identified by farmers to diversify their sources of income are bee-keeping, coffee production or sheep fattening. 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.
3. The Economic Financial Assessment (EFA) undertaken as part of the project design found the IFAD / LDCF project is expected to generate benefits for rural households and communities. Some of the expected cost-effectiveness will result in: (i) increased water availability for productive use; (ii) diversification of productive activities and sources of income thanks to greater access to technical assistance and inputs; (iii) increased food availability for rural poor, (iv) increased value-added of agricultural outputs; (v) enhanced productivity through improved infrastructure; (vi) improved quality of processed products, thus attracting higher prices at local market; (vii) increased employment opportunity either for hired or family labour, for both on-farm and off-farm activities; and (viii) tax revenues as a result of increased volume of taxable production.
4. The EFA calculated the cost-effectiveness of the intervention vis-?-vis the business-as-usual scenario where climate change is expected to largely have adverse impacts across the range of a basket of crops assessed to be typical of the rural household in the project area. Table 14 below shows the expected benefits brought about by the project intervention, the significant improvements in the production capacity by the project will help bring about positive change in food security that is expected to make significant contributions to reducing the climate vulnerability of the rural poor in Yemen.

Table 5 Changes in yields as a result of climate change and project interventions

Yields (ton/ha)					
	Current (tons)	Without Project Future (tons)	Change (%)	With Project Future (tons)	Change (%)
Sorghum	0.7	0.6	-14%	1.2	71%
Cowpea	1.1	1.1	0%	1.8	64%
Barley	1.1	0.85	-23%	1.5	36%
Wheat	1.7	1.5	-12%	2.4	41%
Millet	0.76	0.7	-8%	1.2	58%
Potato	10	10	0%	15	50%
Tomato	10	10	0%	18	80%
Onion	13	12	-8%	21	62%
Coffee	1.6	1.4	-13%	2.5	56%

5. 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 cowpea, sorghum (grain and fodder), barley, coffee (new plantation), potato and mangoes. The incremental economic benefit shows the expected financial impact of the increase in production resulting from the project activities and illustrate the impact of efficient irrigation technologies and climate-resilient soil and water conservation techniques on crop yields.

6. The summary of crop budgets, and underlying technical assumptions on which these models are based, are presented in the table 6 below. These budgets indicate that there is an expected 6% drop in post-harvest losses resulting in additional marketable produce and increased household revenue. Yields of the major crops are projected to increase under irrigated and rainfed conditions 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 6. Financial crops budgets summary

Proxy crop	Average yield (ton/ha)	Total production volume	Reduction rate in post-harvest	Additional marketed produce	Price (YER ?000/ton)	Incremental economic benefit (YER / ton /	Incremental economic benefit (USD / ton /
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		(tons)	losses	(tons)		ha)	ha)
Sorghum	1.2	45.1	6%	2.7	465	1,258,000	5,032
Cowpea	1.8	5.7	6%	0.3	600	207,000	828
Potatoes	14	67.2	6%	4	428	1,725,000	6,900
Barley	1.5	14.4	6%	0.8	516	445,000	1,780
Coffee	2.5	14	6%	0.8	1,700	1,428,000	5,712
Mangoes	15	96	6%	5.7	350	2,016,000	8,064
<b>TOTAL</b>						<b>7,079,000</b>	<b>28,316</b>

7. Village groundwater water-based schemes: The RLDP conducted economic benefit analyses on project activities in terms of water benefit from groundwater-based schemes based on the expectation that the project will increase water availability and extend the irrigation period during the dry season and increases in yields are expected accordingly. The investment yields a positive Economic Net Present Value (ENVP) of YER 150 million and Economic Internal Rate of Return (EIRR) of 43 percent. The benefit-cost ratio (BCR) is equal to 1.48 therefore generating an additional wealth of 0.48 Rial for each Rial invested.

8. Rainwater harvesting at HHs level: Benefits for this type of roof-top water collection infrastructure have been calculated by the RLDP as related to increases in water availability in the households. The expected benefits relate to increased production from backyard farming (mainly vegetables) and reduced time to fetch water from alternative sources (a task mainly carried out by women in the HHs). The investment yield a positive ENPV of YER 773,093 and EIRR of 40 per cent and a BCR of 1.30.

9. Communal multipurpose water harvesting infrastructure: These interventions will provide beneficiaries with potable drinking water sources by restoring existing schemes or building new water facilities. The benefits expected range from health improvements to time saving. The Disability-Adjusted-Life-Year is used as a key metric to show potential health increase and reduction in water borne diseases (i.e. diarrhoea) diseases made possible by the access to safe drinking water. The economic results are positive, with the ENPV equal to YER 114 million, the EIRR of 154 per cent and a BCR of 4.27.

**D. describe how cost-effectiveness is reflected in the project design:**

1. The project is mainly investment-oriented with a view to maximize the impact per GEF dollar. Project management is 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, would lead to increased cost-effectiveness. Cost-effectiveness will be further analysed 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 allow 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, help reduce the impact of soil extreme temperatures in crops, and improve soil health conditions resulting in higher yields and crop diversification with a positive effect in food security.

2. **Sustainability:** The project will adopt several approaches to address climate change risk reduction and its impact on the rural economy. These approaches include: (i) promotion of income generating activities to support the implementation of the disaster-risk community action plans; (ii) promotion of climate resilient agricultural approaches and technologies, including sustainable agricultural practices and research for the promotion of drought/heat tolerant crops; (iii) construction/rehabilitation of resilient water infrastructure enabling improved water management for both drinking water and irrigation, and (iv) restoration of natural resources and assistance to improve communities' management of natural assets.

3. Long-term sustainability will be sought through a broad and deep community-based programme, designed to create a critical mass of knowledgeable and skilled experts on climate change 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 community-based process will integrate strong participatory elements to fully address issues that affect the long-term sustainability of natural resources, improve the long-term sustainability of the irrigation schemes, and terraces through 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.

4. **Exit Strategy:** The overall approach is designed to embed an exit and sustainability aspect in all key project components. The project approach is premised on the experience that community-based approaches in which all priorities are identified by the beneficiaries lead to strong ownership of the investments and are far more sustainable. A summary table showing the different project investments, the point at which project will exit, the elements that will serve to enhance the sustainability and the prospects of sustainability based on current features and past experience of similar investments is given in the table below.

Investment	Exit Point	Sustainability Elements	Prospect for Sustainability
Climate resilient community infrastructure	At completion of scheme	<ul style="list-style-type: none"> <li>? Based on priority needs as identified by beneficiaries.</li> <li>? Clear terms of ownership, financing and responsibility for operation and maintenance.</li> <li>? Beneficiary contribution.</li> <li>? Climate resilience features.</li> <li>? Training in scheme operation and maintenance.</li> </ul>	<b>High</b> Evidence of high proportion of schemes functioning and maintenance in the past as long as not damaged during conflict.

Farmer Field Schools	At completion of FFS session after one crop cycle or after 10 sessions.	? Based on relevance of topics for production and climate adaptation. ? Focus on capacity building of farmers.	<b>High</b> Evidence of adoption of 80% of the practices demonstrated in similar programmes.
Agricultural climate-resilience	At completion and after the presentation of position paper	? Increased capacity to conduct farmer-focused adaptive research. ? Contributions to a national policy dialogue for innovative adaptive agriculture. ? Contributions to international commitments for climate change adaptation	<b>High</b> Testing and demonstration sites will be monitored and reviewed annually. Positive results will be mainstreamed into the FFS training programme. An international consultant will review the demonstrations and draw relevant conclusions for policy development.
Adult Literacy	After 9 months of reflect training	Focus on developing skill and vision of self-empowerment.	<b>High</b>

#### **: EXPLAIN THE ALIGNMENT OF PROJECT DESIGN WITH THE ORIGINAL PIF**

1. **Changes vis-?-vis 2013 - 2014.** The proposed RAY project redesigns the original for which the PIF was approved in 2013. While the project attempts to remain faithful to the original PIF, some changes have had to be made to ensure that the LDCF intervention remains relevant to the current context in meeting the needs of the rural poor. The original RAY project that was first submitted for CEO approval in 2014 had been significantly delayed because of the civil war that has adversely affected the country for the last 6 years. The protracted conflict has put Yemen back 21 years in developmental terms according to a UNDP study and exposed it to a series of humanitarian crises leaving 80% of the entire population in acute need. 19 million people lack adequate sanitation or safe water and fuel shortages have increased the costs of commercial water trucking putting it out of reach of most. Yemen's water and sanitation infrastructure that previously was already characterized by a lack of proper public infrastructure, contaminated water supplies and poor sanitation, has also faced widespread destruction leading to regular cholera outbreaks. The immediate needs vis-?-vis 2013 have changed considerably, as has the institutional governance landscape and the security situation.

2. The main changes to the original PIF and CEO Endorsement focus primarily around the all structures to be built or rehabilitated by the project will be small-scale and local in nature to reduce the risk of conflict over ownership or maintenance and minimize the risk of being targeted by parties to the conflict are primarily with respect to the rangeland rehabilitation, the watershed approach to terrace rehabilitation, climate change downscaling, the value chain approach and the level of available co-financing. The project has been designed keeping in mind the difficult and changing security situation and the associated

accessibility challenges. Consequently, it was not deemed possible to include rangeland rehabilitation as this would also entail some degree of community-based policing to ensure that management plans are being adhered to and the risk of community tensions and conflict is high. Difficulty in accessing project areas and changing security situations also mean that developing integrated watershed approaches to terrace rehabilitation is also difficult to achieve and thus the watershed approach has been removed. The project will however the project will take an agro-ecosystem approach yet with a flexible targeting strategy that can adapt with the dynamic situation in Yemen and still focus on rehabilitating terraces, to support improved soil water retention, reduced soil degradation and improved agriculture as these are combined with water storage facilities that help rural communities to better withstand periods of drought.

3. Following the redrawing of the governance landscape because of the civil war, complicated and expensive meteorological stations have been deemed as being not feasible given the operating context as well as not a priority in meeting the changed humanitarian needs of the population vis-?-vis 2013/14. Institutional capacity to generate climate change downscaling scenarios of temperature and precipitation and translate these into government policies are now unrealistic as the government has not been developing new policies and does not have the capacity to process meteorological data and translate these inter alia into programme activities in assessing the climate-vulnerability of value chains. Following 6 years of war, the rural population face the challenges of high commodity prices and unemployment resulting in destitution and extreme poverty. Households are forced to sell their assets as the crippling of crop and livestock production are pushing more and more people into hunger. The country has become heavily dependent on food imports at a great cost, further elevating the poverty and increasing the vulnerability to shocks. The social fabric has deeply changed and the value chains that operate within it have disappeared as the entire country is on the brink of widespread famine. To address these changes and the immediate needs of the rural poor, the project will not develop a value chains approach and will instead focus on promoting sustainable forms of household food production to help reduce vulnerability to climate change and extreme conditions.

4. Another significant change since 2013/14 is the drying up of the available co-financing. While the proposed budget of the original RAY project was USD 50.5 million, currently it is USD 20 million comprising USD 10 million from LDCF and USD 10 million from IFAD. The USD 15 million from the Islamic Development Bank (IDB) is no longer available nor is the original IFAD soft-loan. The Government will also not be expected to make contributions, and the USD 1.4m beneficiary contributions will be in-kind. Contribution from beneficiaries is equal to USD 1.4 million as in kind contributions to the infrastructure works in component 2 and diversified livelihood activities of component 3. In the case of infrastructure, beneficiaries are expected to contribute in-kind, by providing family labour, assumed to be 15 per cent on average of the investment and O&M costs (as percentage of total cost to be financed by both GEF and IFAD grant), which amounts to USD 1,276,000. The beneficiary contribution to the livelihoods activities is expected to be in the form of family labour and similarly assumed to be 15% of the total cost of the Livelihood support Packages and amounts to USD 184,000. The assumption 15% is determined based on discussions with SFD, FAO, and the beneficiaries through consultation process during the design mission. **Alignment with original PIF and RAY project.** Despite the changed humanitarian, governmental and security landscapes in Yemen, the project will be aligned with the focal areas strategy framework as outlined in the PIF with the main exception that the CCA -2 output 2.1.2 will no longer be achievable as there will be no systems in place to disseminate timely risk information. The originally planned USD 6 million for CCA -1 to reduce vulnerability in development sectors and to promote

diversified and strengthened livelihoods and sources of income for vulnerable people in targeted areas (outcome 1.2) will be reduced to USD 4.1 million. The budget for CCA -2 and the remaining outcome 2.3 to strengthen awareness and ownership of adaptation and climate risk reduction processes at local level has increased slightly to USD 1.62 million. Lastly the CC ? 3 for the demonstration deployment, and transfer or relevant adaptation technology in targeted areas and the enhanced enabling environment to support adaptation-related technology transfer (outcomes 3.1 and 3.2) will have an increased budget of almost USD 4 million vis-?-vis the foreseen USD 2 million in the PIF.

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[1] WHO (September 2020) <https://covid19.who.int/region/emro/country/ye>

[2] Yemen (2018) Third National Communication to the Conference of Parties of the UNFCCC

[3] World Bank climate knowledge portal <https://climateknowledgeportal.worldbank.org/>

[4] World Bank climate knowledge portal <https://climateknowledgeportal.worldbank.org/>

[5] A2 = high emission scenario, A1B = medium emission scenario and B1 = low emission scenario.

[6] Third National Communication to the UNFCCC, 2018

[7] UNICEF (Nov,2018), Yemen Humanitarian Situation Report

[8] OCHA (2019) <https://www.unocha.org/story/yemen-donors-pledge-us26-billion-support-massive-humanitarian-operation>

#### **A.2. Child Project?**

**If this is a child project under a program, describe how the components contribute to the overall program impact.**

#### **A.3. Stakeholders**

**Please provide the Stakeholder Engagement Plan or equivalent assessment.**

Stakeholder	Role in the project
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The government of Yemen	IFAD will diverge from its normal implementation approach in which projects are implemented directly by Government. The role of the government in RLDP is rather advisory and facilitative i.e the government will be kept informed about the project performance and to seek their guidance and support to facilitate implementation. The project design envisaged establishment of Advisory Steering Committee (ASC) under the helm of the Ministry of Planning and Coordination with representatives of the Ministry of Agriculture and Irrigation, the Environmental Protection Authority and the Ministry of Public Works. The key implementing agencies will be invited to present the project progress to the ASC on an annual basis, identify key challenges and plans. The ASC's main task will be to facilitate implementation where possible, guide the implementing agencies and suggest potential linkages to enhance synergy and increase impact.
The Ministry of Planning and International Cooperation (MOPIC)	MOPIC represents the government in negotiating with the external development partners to conclude loans, grants and technical assistance agreements. MOPIC is also the legal borrower of loans coming from IFIs such as IFAD and the World Bank. MOPIC will be the chair of the Advisory Steering Committee (ASC).
Ministry of Agriculture and Irrigation MAI	MAI is responsible for governance and policies of irrigation, crops, livestock, and forestry. MAI is a member of the steering committee and under the FAO supervision Agricultural Research and Extension Authority (AREA) will be involved directly in the implementation of research under this project. RLDP intends to strengthen the capacity of MAI staff, use their experience, and involve them as technical specialists. The plant production specialists and livestock production specialists in the selected Governorates will be used for conducting the Farmer Field Schools and guiding and monitoring field demonstrations. Involving the Government line agencies and building their capacity and engagement with the community for long-term sustainability
Agriculture Research Extension Authority (AREA)	The research under the project will be conducted by the Agriculture Research Extension Authority (AREA) of the MAI. FAO will work to strengthening improved seeds production capacities AREA through tailored training programme. This includes mainly Applied Research for Vulnerability Reduction? activity will be sourced from the research centers within the RLDP selected project districts and will be given allowances paid for by GEF for their transportation, accommodation and food requirements throughout the duration of the training programme. The research will take place in the project's Farmer Field Schools nearest to the AREA research centers and the researchers will be provided allowances for transport, accommodation and food. FAO should ensure that the outputs in climate-adaptive techniques are being mainstreamed into the FFS training programmes and used in the GEF-funded knowledge management outputs.

Environment Protection Authority (EPA)	EPA is under the Ministry of Water and Environment and aims at preserving of the natural environment, safety and balance and control systems, maintaining biodiversity in the national environment from harmful effects that are outside the national environment and conservation of renewable natural resources and protecting them from degradation or environmental pollution. EPA will be sitting in the ASC to facilitate implementation of the climate related intervention; guide the implementing agencies and suggest potential linkages between the different component to enhance synergy and increase impact. EPA will benefit from the research conducted as part of the project especially with regards to agricultural adaptation options to ensure inclusion of the results in Yemen's NDC process. Yemen's GEF OFP residing in the EPA will be informed of the project progress, will receive the annual GEF PIR and will be invited to be part of IFAD supervision missions.
Public Works Project	The PWP is active in providing infrastructure service projects for the poor and deprived communities and when needed will be used for the technical designs and implementation of village infrastructure schemes. This will allow the targeted households and communities to better cope with the devastation and build resilience. PWP implements sub-projects by contracting local private sector contractors to level roads and construct rainwater-harvesting schemes.
FAO	FAO will take the lead in implementing component 1 and 3 directly or in collaboration with qualified implementing partners and services as presented in relevant section of the engagement plan. FAO will be directly leading the training local Agriculture Extension Agents for both crop and livestock production activities, organizing the FFS, sourcing production inputs for the FFS and livelihood packages (staple seeds, agricultural tools, startup packages for backyard poultry, small ruminants, apiculture and equipment for post-harvest and processing) to assist vulnerable households resume crop and livestock production. Climate resilience practices will be mainstreamed in the FFS curriculum to build the capacities of farmers to adapt to climate. FAO will engage an Implementing agency for field level logistical support as well as through community extension agents. The Nutrition sub-component will be implemented by FAO with the technical guidance and backstopping of the FAO Nutrition Specialist in Sana'a. FAO will also engage a full-time national nutrition expert to support implementation. AT the village level the logistical support and follow-up will be undertaken through an Implementing Partner supported by Community Nutrition Facilitators on the ground.

Social Fund for Development (SFD)	<p>SFD is a key institution for poverty reduction, and social and economic development in Yemen, with extensive experience of working with local communities and has been an important partner for many development agencies including IFAD in the country. SFD has sustained delivery of critical programmes in the country throughout the conflict. SFD will lead the implementation of the community resilient infrastructure component (Component 2). The selection, design and implementation arrangements of the community infrastructure schemes will be undertaken in close participation with community members. Representatives of the branch offices of SFD and their locally registered consultants will also accompany the Implementing Partner to the village during the preparatory meetings. Once the infrastructure schemes have been identified in an open manner, the SFD technical staff will be responsible for scheme design, implementation and supervision with close interaction and engagement with community members. The community representatives together with SFD staff will be responsible for determining the most appropriate contracting modality (community contracting, individual contracting or through private sector) for each type of infrastructure identified. The Terms of Partnership that will be signed between SFD and the representative community organization will specify the roles and responsibility of each partner, their contribution in cash and kind and the operation and maintenance arrangements, etc.</p>
Local communities	<p>The project approach capitalizes on lessons that a community based approach in which participating households and communities identify their own priority needs are much more relevant and build ownership. RLDP approach will follow a community-based diagnostic process in which participating communities identify their priorities from the menu of options included in the project design. Communities in Yemen have a great deal of practical experience and have the capacity to provide solutions that are locally available and effective. Farmers are keen to learn and adapt to climate risks and incorporate practices that will help them become more resilient to climate change. As explained above, the project follows a community-based bottom-up approach to identify the investment options in close collaboration with the target group and that an open, transparent and participatory mechanism is in place to communicate with the targeted communities and identify the target households. Local communities have also shown considerable interest in enhancing and updating their farming knowledge and practices especially in learning about how best to adapt to climate change and have in the past been actively participating in Farmer Field Schools that have led to high adoption rates of climate resilient practices. T Another mechanism of engagement of local communities and empowering them will be the organization of special sessions for young men and women to provide them literacy and numeracy skills as well as mentoring sessions in nutrition for women in households.</p>

Non-governmental organisations (NGOs) and Community Based Organization	The current implementation model for most UN and international development agencies in Yemen, including FAO, is heavily dependent on IPs. This is due to the fact that the sporadic security and political situation in the country makes it very difficult for any single organization to reach all targeted areas for a given project. Accordingly, most international development organization operating in Yemen have to use different IPs to implement the different components of a given project. Such IPs include national and international NGOs, CDAs, WUAs, COs, CCs, and VCs. For example, the implementation of the Adult-Literacy sessions using the Reflect Approach will be outsourced to a qualified implementing partner who will be supported in the field by Reflect Teachers. FAO will recruit a specialized competent Implementing Partner to supervise and monitor their work.
Service providers	RLDP takes into consideration the ever changing and sporadic security situation. It should be expected that at certain points in time direct IFAD supervision missions will not be possible. For this same reason, RLDP will opt to use Third Party Monitoring Party to minimize the security risks of its own staff. Several private institutions are currently operating in Yemen to support UN agencies and IFI including the WB in undertaking field supervision and verifications e.g. Apex Consulting and Moore Stephens
World Food Programme	WFP is active in Yemen. RLDP will liaise with WFP for improved targeting and building synergies between the project investments and the cash and nutrition assistance of WFP programmes in Yemen will be sought where possible.
World Bank	IFAD will also work closely with the World Bank in the areas of programming including knowledge management, and policy advocacy on the wide range of issues to influence the government decision making to lead policy change towards sustainable rural development

## Documents

Title	Submitted
<p><b>In addition, provide a summary on how stakeholders will be consulted in project execution, the means and timing of engagement, how information will be disseminated, and an explanation of any resource requirements throughout the project/program cycle to ensure proper and meaningful stakeholder engagement.</b></p> <p>Please refer to the stakeholder engagement plan.</p> <p>In addition, component 1 will rely on community and stakeholder mobilization to develop action plans.</p> <p><b>Select what role civil society will play in the project:</b></p> <p><b>Consulted only;</b></p>	

**Member of Advisory Body; Contractor; Yes**

**Co-financier;**

**Member of project steering committee or equivalent decision-making body;**

**Executor or co-executor; Yes**

**Other (Please explain)**

#### **A.4. Gender Equality and Women's Empowerment**

**Please briefly include below any gender dimensions relevant to the project, and any plans to address gender in project design (e.g. gender analysis).**

### **RLDP Gender Action Plan**

#### **Targeting Approach**

The programme will be implemented applying a combination of self-targeting and direct targeting approach: Most of the interventions will be of interest for all target groups. Furthermore, specific activities are directed to specific disadvantaged categories. The robustness of the target strategy relies on a diagnostic process to be conducted at the beginning of the operations (described in Component 1: Community mobilisation and engagement). Community development planning and identification of development priorities and sub-projects will be of interest for all community members and all will be engaged to participate. Using community driven development (CDD) approach, a strong social inclusion strategy, clear selection criteria and diagnostic process with key steps for community engagement, the operation will ensure that all views are captured.

Specific needs of some vulnerable and extremely vulnerable socio-economic categories: women, female head of households (FHH), pregnant and lactating women (PLW), malnourish child, IDPs will also be considered through specific interventions: livelihood packages as well as literacy, life skills and nutrition education (sub-component 3.2 and 3.3.). The project will also include quotas for participation of women, youth and IDPs, depending on their livelihoods and likelihood of participation. Women will be 64% of the total programme beneficiaries and Youth 54% of target beneficiaries for Component 3. Furthermore, within the above categories, it is also expected that a minimum of 10 to 15% will be from IDPs households in the host community. Women should account for 30% leaders in grassroots institutions at community level (i.e. WUAs and other grassroots institutions operating under RLDP).

**Direct targeting:** The poorest households (more than 9 members) and within these, women-headed households, young women and men and households with under-nourished children, with specific attention for pregnant and lactating mothers (PLM) will be targeted directly by the project to be the first recipients of the Livelihood Resilience and Value Addition (sub-component 3.2. and 3.4).

This includes a direct targeting for 4,000 women for nutrition (100% basis) ensuring that 40% will be young women, in both cases from the below categories: (i) households headed by women, (ii) households headed by youth, (iii) households with pregnant and lactating women and (iv) households with malnourished children under 5 years of age or children undergoing treatment or being released from nutrition feeding centres.

A total of 6,000 women and youth will also have the opportunity to participate in literacy, life-skills and leadership trainings (70% women and 80% youth).

To contribute to generate employment and economic opportunities for young people and women, it is expected that they will join Farmers Field Schools (FFs) as following: (i) 2.400 women and 2.400 young men and young women in FFs (livestock, poultry, beekeeping) corresponding to 40% women and 40% youth.

Furthermore, under livelihood resilience and value addition (sub-component 3.4) it is expected that livelihood packages will benefit 675 women 600 youth and (45% and 40% respectively) and matching grants for processing and marketing activities to 225 women and 200 youth (45% and 40% respectively).

**Empowering measures:** In addition to developing technical skills in (i) small livestock /poultry production or post-harvesting as well as (ii) climate resilient irrigation technologies and practices, the project will support women beneficiaries to develop (iii) other life skills, especially in household nutrition, basic literacy and numeracy, leadership. Gender awareness trainings will contribute fostering more equitable gender roles and relations at household and group levels. The activities (sub-component 3.3) will include adult literacy sessions, nutrition sessions and input support to help enhance nutritional status. While this component is designed primarily for women, it is expected that young women and men will both be included in these literacy classes to acquire empowerment skills. Furthermore, through the leadership training, the project expects at least 30% women in leadership position in the institutions/committees formed under RLDP.

**Approach for gender mainstreaming.** To contribute to tackle constraints faced by rural women, the project will adopt an inclusive approach to ensure that women and men equally benefit from project's interventions. The targeting and social inclusion strategy will rely on a strong community engagement (Diagnostic process as explained in an annex to the PIM) to be undertaken at the beginning of the project and support identification of the target groups and all socio-economic categories identified. The IP will follow selection criteria provided as an annex to the PIM and ensure that the project's approach to gender mainstreaming will achieve the following objectives which align to IFAD gender policy:

•**Ensure that women and men have equal access to capacity building, training and productive assets.** With this objective, the project will target 50% women as overall direct beneficiaries. Average

of women participation in trainings promoted by the project goes from 40% to 50%. Furthermore, specific services and trainings will target women on a 70% or 100% basis (i.e. literacy and nutrition).

•**Increase women's voice in decision-making at the household and community level.** As part of literacy and life skills, leadership training will also be included. Women will be trained to form groups and their leadership and negotiation skills will be strengthened to enable them to make informed decisions during the community planning process. It is expected that women in representative position (committees) will be 30%. Gender-awareness trainings, including both women and men, will be carried out at both household and community levels, including village leaders.

•**Increase women's access to skills and knowledge:** Women will be 70 % beneficiaries for the trainings in literacy, life skills and nutrition (including young women). Furthermore, women will be 40% beneficiaries of FFS where they will be able to acquire practical knowledge for livelihood improvement through FFs and climate resilience. Women will be 50% beneficiaries of training package under Component 2 as for example: climate resilient irrigation technologies, Improved soil and water conservation practices, water management.

•**Develop skills to improve the well-being of women and other family members:** with this purpose, nutrition education will be provided at both household and groups level. The training will include training in nutrition, kitchen gardening, dietary knowledge and promotion of hygiene as a response to COVID-19, cholera and other diseases. Specific attention will be given to PLW and young women, including also women from IDPs (10%).

•**Train project staff and extension service providers on gender-related issues.** It will be ensured that training modules include specific sections related to gender sensitive topics, including GBV. The IP will produce/adapt and oversee the training modules and curricula that will be delivered to targeted communities/ households and the work of Community Facilitators and Gender Focal Points as per their Tors. ToRs for the Social and Environmental Safeguard expert includes points related to gender sensitivity and ensure that gender issues are all captured and minimize (ToRs are attached to the PIM).

### **Gender Strategy**

The overall objective of the Gender strategy will be to ensure that women and men are equally involved in decision-making and in sharing the benefit of project's interventions and that gender will be mainstreamed throughout all project activities. The strategy will have to include the following items:

- (i) Specific objectives, related to project's components;
- (ii) Specific activities foreseen to reach the objectives and expected outcomes/ outputs;
- (iii) Methodological approach;
- (iv) Knowledge management: the strategy should explain how the knowledge and experience acquired in mainstreaming gender-related issues in on-going projects will be capitalized;

**Preventing Gender Based Violence (GBV) in the agricultural sector:** the project will contribute to reducing any harmful act based on gender through: (i) sensitization on the importance of addressing GBV, application of IFAD's no tolerance for Sexual Harassment (SH) /Sexual Exploitation and Abuse (SEA) for project staff and project's activities and operations; (ii) map out and partner with GBV prevention and response actors in project adjoining communities; (iii) have GBV risks adequately

reflected in all safeguards instruments, contracts with suppliers and and other third parties to be funded with IFAD funds.

**Youth Mainstreaming:** Youth will be consulted, selected by facilitators at the beginning of the project then organized in groups on the basis of their interests and different degrees of participation in the programme; i.e. as existing farmers? producers or new entrants; skilled or unskilled, thus being organized accordingly and receiving targeted interventions and trainings on the basis of their aspirations and interest in engaging in agricultural activities: as producers ( FFs-subcomponent 2.1) or in the post harvest /adding value sector (subcomponent 2.3) . Furthermore, young women will be targeted by specific interventions such as literacy, life skills and nutrition (subcomponent 2.2).

**Preventing Child Labour in agriculture:** the project will contribute to reducing any risk of child labour through: (i) Awareness on legislation and training to project staff and ensuring compliance with regulations (ii) sensitization on the importance of addressing child labour issues within the community, (iii) have Child labour related risks adequately reflected in all safeguards instruments, contracts with suppliers and and other third parties to be funded with IFAD funds.

**Community Engagement (Diagnostic Process):** The first task of the implementing partner (FAO/SFD) will be to conduct an exploratory visit with the Community Development Association (CDA) and village elders, inform them about the project activities and fix a date for a meeting with community members to inform them about the project activities and seek community concurrence about the relevance of the planned activities and ascertain their interest in participating in the different activities. Separate interaction with special groups, such as women and youth (including from IDPs) will also take place. The gender focal points and reflect facilitators will be directly responsible to facilitate separate consultation with those groups and their consequent mobilisation within the proposed activities. The IP together with village elders will also ensure that the identification of beneficiaries is based on the selection criteria that is communicated during the first dialogue of the diagnostic process.

**Grievance Redress Mechanism (GRM):** An adequate grievance redress mechanism (GRM) will be established to ensure beneficiaries may communicate their concerns due to subproject activities either with the relevant focal point at the local level or with FAO/SFD central level and it is required this mechanism be publicized at the local level and in the local language. The RLDP GRM will follow established FAO Yemen and SFD practices, and will provide multiple access points (telephone, complaints box, website, email, postal address) so that beneficiaries will know whom to contact with regard to their concerns. The RLDP manager will have the overall responsibility to address concerns brought to the attention of the focal point regarding any environmental and/or social impacts due to subproject activities. Complaints received by the implementing agency shall be recorded and documented in the subproject file and the subproject progress report including the number and type of complaints and the results of their resolution.

**Social Accountability:** Social accountability will be taken into consideration through: (i) the ability of beneficiaries to voice complaints and provide feedback through well-established GRMs; (ii) dissemination of information about the resumption of the RLDP to the intended beneficiaries? relevant

communities; (iii) independent verification through the third-party monitoring agency; and (iv) the FAOs/SFD field monitoring activities.

## Documents

Title	Submitted
<b>8- RAY_RLDP Gender Action Plan</b>	
<b>Does the project expect to include any gender-responsive measures to address gender gaps or promote gender equality and women empowerment?</b>	
<b>If yes, please upload document or equivalent here</b>	
<b>If possible, indicate in which results area(s) the project is expected to contribute to gender equality:</b>	
<b>Closing gender gaps in access to and control over natural resources;</b>	
<b>Improving women's participation and decision making</b>	
<b>Generating socio-economic benefits or services or women</b>	
<b>Will the project's results framework or logical framework include gender-sensitive indicators?</b>	

### A.5. Risks

**Elaborate on indicated risks, including climate change, potential social and environmental risks that might prevent the project objectives from being achieved, and, if possible, the proposed measures that address these risks at the time of project implementation.**

**E. indicate the risk that might prevent the project objective(s) from being achieved and outline risk mitigation measures:**

1. The project faces a number of risks, which could have an impact on the achievement of overall objectives and outcomes. The major risks are associated with the on-going conflict and the political instability and insecurity in the country. The project will be implemented through executing agencies which have learnt to negotiate the difficult political situation and work with communities on the ground. Areas which are deemed unsafe will be avoided during implementation and project districts have been selected based on the selection of areas which are deemed safe by the local UN agencies who monitor the situation very closely. The project's targeting strategy is based on a flexible approach so that if and when a targeted district proves to be inaccessible due to insecurity/limited access or other major factors which are assessed prior to starting implementation, the district will be replaced with the next priority district from

the ranked districts list. The COVID-19 pandemic is likely to make movements even more difficult and further disrupt supply lines. The project will not put any one in undue risk and follow all safety protocols which are put in place to ensure that social distancing norms are practiced. The project time-frame of five-years is also intended to let the peak of the pandemic pass. The main thrust of the project is investments in agriculture which have been shown to be two to three times more effective at reducing poverty and helping smallholders combat a crisis and enable rural communities to recover.

2. There are a range of operational risks that the project is likely to experience because of weakened Government institutions, heightened tensions in the community because of the on-going conflict, growing insecurity and destruction of productive resources and growing food insecurity. The project will be executed through FAO and SFD which both have strong presence on the ground and are perceived as neutral agencies. A key aspect of the mitigation strategy will be to provide operational support and incentives to Government line agency staff based in the field and closely supervise them and update their knowledge where required. The project will use local implementing partners and community agents for field level support. Although extraordinary and unforeseen events by their nature cannot be planned, a contingency budget allocation will provide an additional commitment mechanism by enabling the discretionary use of funds to address extraordinary and unforeseen events that could potentially impede project progress and are necessary to achieve adaptation benefits.

3. Climate induced changes and extreme weather events can have a debilitating impact on productive assets and yields. The project has included a range of climate adaptation strategies and practices in all its components. COVID-19 in Yemen has led to a severe restriction on movement in the country and is likely to have a further detrimental impact on the supply lines and the economy.

4. All prescribed procedures will be followed during implementation for safety and health of all. Awareness about safe measures will be included as part of the training sessions to be delivered by the project. IFAD will closely coordinate with its executing agencies both FAO and SFD in this regard. The project will meet WHO and national guidelines to protect against the virus. To this end at all project-related activities including training programmes and meetings for building clusters/networks will provide hand sanitisers and promote their regular use using the appropriate techniques, enforce strict social distancing and make the wearing of masks compulsory at all times. The project service providers will at all times thoroughly clean all surfaces and training equipment before and after events including the toilet facilities; and ensure the safe disposal of any disposable masks. Should large public gatherings not be possible, then suitable alternatives will be sought that are in compliance with best practices in reducing the risk of infection and ICT will be used for communication as far as possible.

5. The project will be directly supervised by IFAD and supervision/implementation support will follow IFAD's operational modalities and established guidelines with particular focus on changes in project implementation timelines, baseline and conditions of beneficiaries due to COVID-19 related restrictions and socio-economic impacts. Supervision and implementation support will be applied as a continuous process, consisting of continuous communication and engagement with the implementing partners, Government, and other project's stakeholders, guiding the project towards the timely achievement of strategic objectives while ensuring fiduciary compliance and responsiveness to the accountability framework. IFAD will provide technical support by recruiting technical experts as needed for the project implementation. In view of the current travel restrictions because of COVID-19, and until movement restrictions are lifted, IFAD in close collaboration with the Recipient will apply IFAD new guidelines for

remote supervision that will be followed by field visits, as soon the situation will improve. IFAD fiduciary responsibility will be exercised in terms of procurement reviews and withdrawal applications processing. The baseline project as well as the LDCF project will both be governed by IFAD's Social, Environmental and Climate Assessment Procedures (SECAP) and the Environmental and Social Management Plan (ESMP) developed during the project design. As RAY is fully mainstreamed into the RLDP, every precaution as outlined above will be taken throughout the RLDP project and will be updated in compliance with required international and national safety measures applicable at the time of project implementation. Any associated costs will be absorbed by the IFAD co-financing. The ESMP elaborates all the environmental, social and health risks and includes mitigation measures for them. The ESMP is a live document that can be updated as and when needed to respond to the dynamic situation in Yemen. To ensure full compliance with its social and environmental policies or commitments, RAY will also utilise IFAD's Grievance and Redress Mechanism (GRM) for RLDP.

6. The COVID-19 pandemic represents a major challenge that the project will mitigate as elaborated earlier. However, there are also opportunities arising from the COVID-19 pandemic that the project will make sure to exploit as a contribution to building back better. The project will capitalise on the higher appetite for hygiene awareness as a result of the crisis and will mainstream hygiene awareness in all its capacity building, literacy and community activities. A special focus on hygiene will be part of the nutrition trainings that uses the Knowledge, Attitude and Practices (KAP) methodology taking advantage of the high women participation under this sub-component. In addition, communities will support the planned infrastructure intervention related to providing households, communities, and Village Units (VUs) with sustainable potable drinking water sources by restoring existing schemes or building new water facilities. The already existing cholera outbreak coupled with COVID-19 is aggravating the needs of these communities to accessing clean water for hygiene reasons. Another opportunity that arose from the COVID-19 pandemic is that it makes the participation of women even more important. The project's activities that are related to nutrition and literacy will benefit from the increased appetite for nutrition and hygiene awareness as a result of COVID-19. The project will follow its targeting approach and commits to the targeted participation of women in activities. However, it is expected that women will be more keen in participating in trainings and community activities to voice their concerns, and benefit from learning on these topics.

7. In 2020, IFAD has established a rapid response multi-donor COVID-19 Rural Poor Stimulus Facility (RPSF) to assist countries in coping with the negative effects of the pandemic in rural areas. The RPSF focused on mitigating the socio-economic impact and safeguard people and their livelihoods and addressing the food security of rural communities and the need to support small-scale producers in times of economic crisis and market failures. IFAD provided US\$836,377 to mitigate the effects of covid-19 pandemic in Yemen on production and rural economy through the procurement and provision of agriculture and livestock inputs to small-scale producers, which will provide fast-maturing solutions to the farm enterprises. The Project is implemented in Lahj and Taiz governorates by SFD RAY will build on the RPSF supported activities and take stock of the lessons learned from the implementation in the targeted districts.

Table 7. Risks and Mitigation Measures

Risk categories	Risk Probability	Risk Impact	Mitigations
1. Political and governance	High	High	There are now three political Governments in the country who have control over specific geographic areas. The country suffers from high political instability as a result of the ongoing conflict. RLDP will be executed by FAO and SFD who have proven that they can successfully negotiate with all three governments and deliver effectively on the ground for the benefit of the people regardless of the Government which purports to exercise control. The project is taking a flexible targeting strategy allow for replacing some of the targeted districts based on the security and accessibility aspects.
2. Exchange rate instability and macroeconomic issues	High	High	Impact of exchange rate instability is high. Ensure adequate provision for price contingencies in detailed design. The unallocated category of the grant will reflect this risk. Annual review of unit costs in the AWPB will allow for price escalations.
3. Weak enabling environment	High	High	The implementation of strategies in agriculture and sustainable development has been interrupted due to the conflict. Due to the weakened governance and political instability, the government cannot prioritize its core functions including the development of new strategic vision and policy instruments for the rehabilitation of social and economic sectors. IFAD will work through the Rome Based Agencies (RBAs) to focus on areas of its strategic priorities as identified in the 11 <sup>th</sup> Replenishment.
4. Weak technical capacities	Low	High	External factors that may impede the proper design of technical components due to lack of understanding of the changing priorities. IFAD has long years of experience in Yemen and implemented large-scale programs in the country. The design will focus on the core competencies and lessons learned from its previous portfolio. The project takes into account a flexible community driven approach to ensure relevance for the target group.

<b>Risk categories</b>	<b>Risk Probability</b>	<b>Risk Impact</b>	<b>Mitigations</b>
5. Weak institutional capacities for project management and implementation	High	High	The project will be implemented through FAO and SFD. However, a key part of its implementation strategy is to provide operational support and incentives to Government line agencies, local implementing agencies, and community organizations and community agents for effective delivery. This will also serve to rebuild their institutional capacity and inspire hope and confidence.
6. Inadequate procurement procedures and capacities	High	High	The Project will be implemented by FAO and SFD with the help of implementing partners in some cases. FAO and SFD will use their own Procurement regulations as long as they don't contradict with IFAD's Procurement Guidelines. The Implementing Partner will have to follow FAO or SFD Procurement Guidelines depending on the case. Community contracting will be used where appropriate.
7. Community-level Instability and tribal conflicts	High	High	Instability in local communities and tribal conflicts are common. IFAD will provide people a real incentive to rebuild their lives and contribute to stability and peace, and focus on poverty targeting and identification of priority needs and beneficiaries through an open and transparent diagnostic process.
8. Climate variability and extreme weather events	Medium	Medium	Climate induced changes and extreme weather events can have a debilitating impact on productive assets and yields. The project has included a range of climate adaptation risks and practices in all its components.

Risk categories	Risk Probability	Risk Impact	Mitigations
9. Covid - 19	High	High	<p>The World Health Organisations (WHO) states that there are around 2000 known COVID-19 cases and 600 deaths in Yemen, although it is not possible to know the true extent of infections.</p> <p>The pandemic in Yemen has led to a severe restriction on movement in the country and is likely to have a further detrimental impact on the supply lines and the economy. All prescribed procedures will be followed during implementation for safety and health of all. Awareness about safe measures will be included as part of the training sessions to be delivered by the project. As far as possible ICT will be used for communication.</p> <p>The security situation in Yemen is such that a high degree of implementation flexibility has already been integrated through the utilization of FAO, SFD and other non-governmental executing entities experienced in overcoming unforeseen consequences of the civil war. This structure will additionally help ensure flexibility to adapt to additional COVID-related challenges for an in already strained government capacity, changes in project implementation timelines and changes in the condition of beneficiaries (already in extreme need).</p>
Overall	High	High	<p>Overall project risk probability is high and these risks may have high impact if not mitigated properly. IFAD will also ensure that the risks are measured and assessed properly during the implementation, particularly in the first two years of implementation. A contingency budget will be allocated for any technical support and emergency activities to ensure that the project has the resources to respond quickly in case of unforeseen events. IFAD will closely coordinate with its executing agencies both FAO and SFD in this regard.</p>

#### A.6. Institutional Arrangement and Coordination

**Describe the Institutional arrangement for project implementation. Elaborate on the planned coordination with other relevant GEF-financed projects and other initiatives.**

#### INSTITUTIONAL COORDINATION AND SUPPORT

##### **A. Project Implementation Arrangement:**

1. FAO will be responsible for the execution of components 1 and 3 while SFD will be responsible for the execution of Component 2. FAO and SFD will rely on their own M&E systems for their respective components and the IFAD Field Coordinator will consolidate reports from both institutions. He/ She will

ensure coherence among the interventions of the two implementing institutions through consolidated and well synchronised joint Annual Work Plan and Budget. The Field Coordinator will also ensure that knowledge management activities including- studies, awareness brochures and workshops- are well coordinated among the two executing agencies in accordance with the communication and KM strategy and the agreed Annual Work Plan and Budgets (AWBPs).

2. As described further in annex E, the 6-year conflict has had a significant adverse impact on the operational capacity on the ground for both ministries with staff confined to different geographical regions controlled by different warring factions. The resulting financial restraints and the fact that the manpower is unevenly split between the two opposing governments resulted in a substantial reduction in the MAI and MWE overall operational capability and the need to rely on FAO, the SFD among other yet undefined executing entities on the ground.

3. The implementation arrangements for the combined IFAD/ LDCF projects are based on a hybrid approach given the unusual political situation in the country. The project governance, implementation and supervision arrangements were designed keeping in mind the fragile position of the Government, the dynamic and evolving security situation and limited IFAD field presence. Therefore, the standard project management structure had to be reconsidered as it was deemed not fit for purpose. The project implementation arrangements took into account the need to select agencies with a strong performance orientation and country presence; ability to navigate competing authorities on the ground; demonstrated technical capacity for implementation; sound systems for financial management and procurement; clear lines of accountability and responsibility; encourage the use of Government line agencies to build capacity; capitalize on the presence of local implementing partners that can ensure community-mobilization; and build the capacity of community based organizations for operation and maintenance. At the same time, it was important to keep the national Government involved and informed of project performance despite its tenuous position.

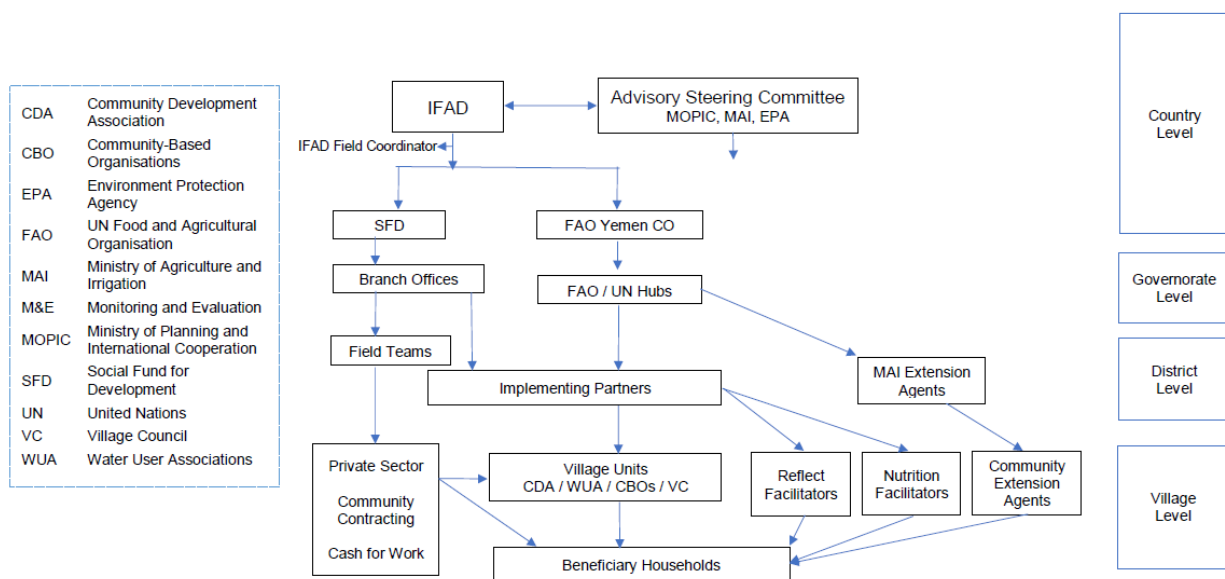
4. As the GEF Agency, IFAD will ensure global oversight of the project's implementation and compliance with its as well as GEF's fiduciary, technical, social, environmental, climate, health and safety safeguards. IFAD's oversight role will include reviewing and providing non-objections for key annual planning documents and contracting/procurement actions. Supervision missions will be undertaken at least once per year, with deployment of staff and consultants to the field as/when security conditions and health restrictions permit it. Supervision missions will be, to the extent possible, scheduled to provide updated progress reports to the Advisory Steering Committee (ASC). IFAD will also organize the project's mid-term review and evaluation and ensure the preparation and submission of all required reports to the GEF/LDCF. An experienced retainer GEF-Fee-funded national consultant, with arms-length but constructive collaboration with Executing Agencies, will facilitate regular liaison, support the organization of missions and contribute to prevent non-compliance with safeguards.

5. Project execution will be undertaken by FAO and SFD which within the context of the conflict and insecurity, is believed to be cost-effective, as FAO and SFD have broad experience in liaising with various political groups in Yemen to enable project implementation. They will work in close coordination with the Ministry of Agriculture and Irrigation (MAI) and the Environmental Protection Authority (under The Ministry of Water and Environment (MWE)) who will have advisory roles in the Advisory Steering Committee (ASC) which will be chaired by the Ministry of Planning and International Cooperation (MOPIC). Other stakeholders will be seconded to the ASC as needed throughout the project. The ASC's

main task will be to facilitate implementation where possible and guide the implementing agencies and suggest potential linkages to enhance synergy and increase impact. This approach reduces risks and improves the prospects of successful implementation. The project will build on the lessons learned and best practices from previous projects and ensure that cost effectiveness is considered in implementation plans and ensure cost-effectiveness is included in the identification of appropriate adaptation practices and implementation protocols. IFAD will sign separate grant agreements with FAO and SFD for implementation of their respective project components. FAO and SFD will also engage local implementing partners for community mobilization and providing local logistical, implementation and follow up support.

6. This approach is more cost effective than alternatives such as implementing within ministries with reduced capacity and uncertain political landscapes and it allows the project to be focused on a subset of considered priorities for climate change adaptation to demonstrate specific approaches towards adapting to the adverse impacts of climate change. If this approach is not taken then the implementation would involve government administrations with uncertain capacity and security situations after 6 years of war. Project resources would risk to be ineffectively used increasing challenges and reducing overall impact, thus providing less return on investment. More information on cost-effectiveness is available in section ?? of the full design document.

Figure 14. RLDP Programme Management, Coordination and Governance



7. FAO and SFD offices in Sana'a will be in charge of the day-to-day management of the project, including overall planning, implementation, procurement and financial management, safeguards, monitoring and reporting. Both implementing partners will have dedicated Project Teams in Sana'a including technical specialists to implement their respective components as required. A number of international and national specialists, including livestock, crop production, farmers' field school, climate change resilience, water productivity, nutrition, adult literacy will be hired to provide support to project activities.

8. The implementation of components under the responsibility of FAO will be led by the Lead Technical Officer and supported by the FAO regional hubs. The hub in Aden will coordinate activities in Lahj and partially in Taiz. The hub in Hodeidah will provide support for activities in Al-Hodeidah. The regional hub in Ibb will support implementation in part of Taiz not covered by Aden office. Project activities will be backstopped technically and operationally by the multidisciplinary team of experts at FAO Regional Office for the Near East and North Africa (RNE) in Cairo.

9. On the SFD side, the Water and Environment Unit in the central office in Sana'a will provide overall support while the branch offices will provide support and coordination for the project activities in Lahj and branch offices in Taiz, and Al-Hodeidah will provide support and coordination in their own governorates. Staff in the branch offices include branch manager, procurement officer, financial management (FM) officer, technical officer for the quality supervision, M&E, Information Technologies (IT) which are involved in the day-to-day activities. SFD has a system of retaining technical specialists on the ground and uses them for specific technical tasks such as infrastructure design, implementation, monitoring, training, etc. These specialists will be used by SFD when required.

10. FAO will take the lead in training local Agriculture Extension Agents for both crop and livestock production activities, organizing the FFS, sourcing production inputs for the FFS and livelihood packages (staple seeds, agricultural tools, startup packages for backyard poultry, small ruminants, apiculture and equipment for post-harvest and processing) to assist vulnerable households resume crop and livestock production. FAO will engage an Implementing agency for field level logistical support as well as through community extension agents (20).

11. The implementation of the Adult-Literacy sessions using the Reflect Approach will be outsourced to a qualified implementing partner who will be supported in the field by Reflect Teachers (48). FAO will recruit the Implementing Partner, supervise and monitor their work through the Project Manager and the Environment, Climate and Social Safeguard Specialist.

12. Collaboration with the Agriculture Research Extension Authority (AREA) of the Ministry of Agriculture and Irrigation (MAI) will be coordinated by FAO and SFD for their respective components under the overall guidance of the Field Coordinator and the Environment, Social and Climate Specialist. The Specialist will work closely with the FAO staff for the strengthening improved seeds production capacities project as well as with MAI/ AREA. He / she will recruit an international consultant to conduct a strengths and weaknesses assessment of the AREA research capacity. Based on the results of the assessment a training programme will be designed and a trainer trained. The 30 researchers that will be trained in the RPLP 'Applied Research for Vulnerability Reduction' activity will be sourced from the research centres within the RLDP selected project districts and will be given allowances paid for by LDCF for their transportation, accommodation and food requirements throughout the 7-day training programme.

13. **An Advisory Steering Committee (ASC)** will be formed at the country level which will be chaired by the Ministry of Planning and International Cooperation (MoPIC). Its members will include the Ministry of Agriculture and Irrigation, the Environmental Protection Authority and the Ministry of Public Works. Other members- including representatives of community based organisations (e.g. CDAs, WUAs, etc.)- can be seconded as and when required. IFAD will be a member of the ASC. The ASC will be kept informed of project performance through an annual meeting. As key implementing agencies, FAO and SFD will attend all meetings and will be invited to present the project progress to the ASC on an annual basis, identify key challenges and future plans. The ASC's main task will be to facilitate implementation

where possible and guide the implementing agencies and suggest potential linkages to enhance synergy and increase impact. The Third-Party Monitoring agents recruited to undertake the annual supervision of the project will also be expected to share their report with the ASC and seek their guidance to improve performance. The Ministry of Planning and International Cooperation will participate in the meetings of the ASC and provide overall guidance in the supervision, monitoring and evaluation of the project.

14. **A project implementation manual (PIM)** has been prepared as part of the project design, 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 defines procedures, criteria and procurement conditions for the project, addressing climate resilience and gender requirements. Funding will facilitate the generation and introduction of innovative technologies and will support the delivery of environmental services.

15. **Flow of funds and disbursement.** Disbursement to FAO and SFD shall be made on the advance under revolving fund modality. FAO and SFD are required to prepare and submit AWPB and certified financial reports in accordance with the format and periodicity agreed with IFAD. The grants proceeds will be transferred into the FAO and SFD bank accounts based on withdrawal application submitted to the IFAD. The first advance to SFD and FAO will cover projected expenditures for the activities for the first the AWPB. Subsequently, advances to, FAO and SFD will be based on approved AWPB for each agency, and the receipt of certified financial report from FAO and the receipt of certified financial report and audit report from SFD.

16. **Financial management arrangements.** FAO and SFD will maintain financial management arrangements and internal control systems which satisfy IFAD's minimum requirements to provide accurate and timely information and guarantee the separation of functions through several levels of independent controls and checks. In accordance with IFAD's Handbook for Financial Reporting and Auditing, FAO will submit a semi-annually financial reports as of 30 June and 31 December. The financial report due on 31 December will be certified by FAO authorised representatives of FAO finance division. In addition, FAO will submit the institutional audit report on yearly basis covering the grant proceeds. While SFD, will submit quarterly certified financial report and the institutional audited financial statements with a separate audit opinion on statement of expenditures incurred.

17. **SFD Financial Assessment.** SFD has strong experience in implementing projects funded by international donors (World Bank, USAID, EU AID, Islamic Bank, KfW, UNDP, FAO DFID, etc). A financial management capacity assessment of the SFD was carried out to ensure if it complies with IFAD policies and requirements for the project management. The FM assessment covered the human resources, the accounting system, the internal control mechanism, the external audit, the information system, and the capacities of the project reporting system. The assessment of SFD financial management capacity concluded that the project financial management arrangements and internal control systems as set out for this project will satisfy IFAD's minimum requirements to provide to the Lead Implementing Agency, with reasonable assurance, accurate and timely information on the progress of project implementation and appropriate accountability for funds.

## **B. outline the coordination with other related initiatives:**

1. The project will be country-driven, is developed in compliance with relevant policy documents addressing climate change adaptation in Yemen, and will support the implementation of national priorities identified in the DPPR 2011- 2015, the SNC, the National Strategy for Climate Change Resilience, and the priority projects included in the 2009 NAPA, the 2015 INDC and the 2018 TNC.

2. The RAY project will develop research partnerships with AREA by building on the existing EU-funded FAO project for strengthening improved seeds production capacities. This will benefit future MAI policy development in mainstreaming CCA into agriculture as well as the Environmental Protection Agency (EPA) for the raising awareness about the future development of the country's NDC. The project will furthermore partner with yet to be determined implementing partners for the design and implementation of the adult literacy programme and yet to be selected NGOs will be used for the diagnostic (beneficiary identification) processes.

3. The fully blended IFAD / LDCF project expects to work closely and collaborate with the humanitarian and development agencies, which have continued their support to Yemen despite the on-going conflict with positive results. IFAD will use the opportunity to abide by its commitment to forge strategic and complementary partnerships with the Rome-based agencies (RBAs). The project will work closely with FAO and WFP who have active presence in all the governorates in Yemen to build synergies and exchange learnings as well as to strategically plan for development activities in a way to complement the works by building on the strong nexus between humanitarian and development support, and focus on a well-structured graduation path from aid support to self-reliance.

4. The project will be implemented by FAO and SFD. FAO will be responsible from the implementation of Component 1 and Component 3. FAO will also ensure alignment with a number of ongoing FAO projects as detailed under the LDCF baseline section. The project will leverage FAO's presence on the ground to increase crop and livestock production supported by the UN hubs at the governorate level. The project will work closely with the World Bank in the areas of programming including knowledge management, and policy advocacy on the wide range of issues to influence the government decision making to lead policy change towards sustainable rural development. Component 2 will be implemented by the Social Fund for Development (SFD), which is a key institution for poverty reduction, and social and economic development in Yemen, with extensive experience of working with local communities and has been an important partner for many development agencies, including IFAD in the country.

**Additional Information not well elaborated at PIF Stage:**

#### **A.7. Benefits**

**Describe the socioeconomic benefits to be delivered by the project at the national and local levels. How do these benefits translate in supporting the achievement of global environment benefits (GEF Trust Fund) or adaptation benefits (LDCF/SCCF)?**

#### **A.8. Knowledge Management**

**Elaborate on the knowledge management approach for the project, including, if any, plans for the project to learn from other relevant projects and initiatives (e.g. participate in trainings).**

**conferences, stakeholder exchanges, virtual networks, project twinning) and plans for the project to assess and document in a user- friendly form (e.g. lessons learned briefs, engaging websites, guidebooks based on experience) and share these experiences and expertise (e.g. participate in community of practices, organize seminars, trainings and conferences) with relevant stakeholders.**

### **Learning and Knowledge Management**

15. Operational experiences will create valuable knowledge in these areas, which will be captured by the project and utilized to generate lessons and best practices to be shared with public institutions, Community Development Organizations and other project beneficiaries, the FAO and SFD country teams, partners and others. The results of programme support for developing sustainable community-based development institutions and infrastructure as well as the results of the FFS testing, will be widely publicised. Partnerships with the Ministry of Agriculture and Irrigation (MAI), the Agricultural Research and Extension Authority (AREA), the Environment Protection Agency (EPA), FAO and SFD will be intensified in this respect. FFS research will furthermore facilitate the quick transfer of knowledge to the farmers and integration into the training programmes. The results of the research will additionally benefit policy development dialogues in mainstreaming CCA into agriculture and the future development of the NDC.

16. The programme will promote: (i) in-country knowledge networking through periodic seminars/workshops and (ii) regional research networks. The IFAD and SFD country teams will contribute to national 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 the basis for that, 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. The communication and knowledge management strategy for IFAD's Yemen programme will be carefully crafted to ensure the sustainability of the project's activities and its influence on the policy dialogue in the country. IFAD will organize events to share learning about the impact of targeted investments in agriculture and rural development in fragile states based on experience in Yemen. IFAD will establish a mechanism for on-going discussion and engagement with the Government to keep them informed on the performance of the project. FAO and SFD expertise in developing knowledge products will be leveraged. The project will be in continuous contact with other on-going development efforts including the proposed FAO GEF/LDCF project to maximise the synergetic effect of climate change adaptation interventions and strong policy engagement. Operation and Maintenance trainings and Training of Trainers (ToTs) will create a knowledge basis in the target areas that guarantee dissemination of knowledge to different stakeholders beyond the project's timeframe.

17. The project will support the preparation of a number 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 FAO and SFD offices.

### **B. Description of the consistency of the project with:**

#### **B.1. Consistency with National Priorities**

**Describe the consistency of the project with nation strategies and plans or reports and assessments under relevant conventions such as NAPAs, NAPs, ASGM NAPs, MIAs, NBSAPs, NCs, TNAs, NCSAs, NIPs, PRSPs, NPFE, BURs, INDCs, etc.**

1. **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 Sustainable Development Goals in the country. Climate change concerns have been flagged in the fourth National Plan for Development and Poverty Reduction (DPPR 2011-2015), and the Joint Social and Economic Assessment for the Republic of Yemen (2012-2015). Prior to the conflict, Yemen had initiated fundamental steps to integrate climate change considerations at policy levels. The National Capacity Self-Assessment (NCSA) was conducted and national capacities for implementing the commitments under the UNFCCC were identified. As a part of its commitment under the UNFCCC, Yemen has submitted the National Adaptation Programme of Action (NAPA), the Intended Nationally Determined Contributions (INDC) and the Third National Communication to the UNFCCC (TNC). The use of resilient agriculture systems and technologies for more stable and higher yields and diversified crop project will represent a major contribution to climate change adaptation, responding to a number of priority measure and recommendations proposed in the NAPA and NDC. The RAY project is fully aligned with international climate change adaptation frameworks as outlined in tables 2 - 4 above.

2. LDCF ensures RLDP is aligned with the TNC (2018) in terms of improving water irrigation efficiency and reducing water losses; alternative cropping schemes such as drought resistant crops, crop diversification and crop rotation patterns; soil conservation measures and protection from soil erosion; diversifying livelihoods and promoting opportunities for off-farm income; and building local capacities for farmers to deal with climate risks and use improved technologies in farming. It is furthermore aligned with the INDC (2015) in terms of promotion and scaling-up of rainwater harvesting to reduce climate induced water shortage; the promoting of agriculture drought management as well as sustainable crop and livestock management; implementing proper land resources management programs; and capacity building and awareness raising of communities. The LDCF project is also aligned with the NAPA (2009) in terms of water conservation through irrigation saving techniques; raising awareness of communities on climate change adaptation; rainwater harvesting through various techniques including traditional methods; rehabilitation and maintenance of mountainous terraces; and promotion research on drought resistant, heat resistant and salinity tolerant crops.

3. RAY is aligned with the National Water Sector Strategy and Investment Programme II (NWSSIP 2004 and updated NWSSIP II in 2009). The NWSSIP II has a strong focus on poverty alleviation function of rural water supply and sanitation and is guided by the principles of good natural resource management, as well as socio-economic and institutional principles. RAY is aligned with the NWSSIP II through the promotion of the sustainable and efficient use of natural resources; to prioritise households with a strong focus on poverty alleviation; contribute to the expansion of water and sanitation services in rural areas, to provide services to more than 5m people by 2015.

4. The LDCF project is also aligned with the National Food Security Strategy (NFFS) from 2010. The objectives of the NFFS is to promote universal access to sufficient and nutritious food to lead healthy, active and productive lives. The NFFS aimed to reduce food insecurity by one-third by 2015; to make 90 percent of Yemenis food secure by 2020; and reduce child malnutrition by one percentage point per year.

RAY is aligned with the NFFS through the promotion of sustainable soil and water management by providing supplemental water and soil management infrastructures, integrating agriculture management, training in improved agricultural practices, and capacity-building in response to climate change. It will achieve this by promoting mountain terrace rehabilitation, sustainable land management, rainwater harvesting and storage, water conservation, increased water use efficiency through better irrigation technologies, and awareness raising and education to adaptation.

**C. Describe The Budgeted M & E Plan:**

**H. 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 improving farmland productivity and food security, and water conservation through the rehabilitation and sustainable management of climate-proof agriculture. The project will undertake a baseline exercise to define the baseline status prevalent before the initiation of the project activities. Basic data and information relevant to the project will be collected, and project indicators will be further refined and 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 groups in comparison with objectives. All M&E data, analysis, and reporting will be disaggregated by age and gender. All M&E activities will be based on IFAD's Guide for Programme M&E.

4. The Project will have one consolidated log frame reporting on the progress and achievements. FAO and SFD will be responsible to collect data and produce reports of the log frame indicators with respect to their activities at the input and output level. This can be easily achieved with the well developed M&E systems already built in each institution. At the outcome and goals level, the indicators will be collected through the baseline, midterm and completion surveys through service providers to be contracted by FAO. Since these surveys will be conducted at the Project level, the results will have a consolidated reporting of the achievements. The risk of duplicating the outreach data will be handled diligently by developing electronic beneficiary database by each implementing partner based on an agreed format and record keeping with simple flags identifying the beneficiaries from multiple activities. The consolidation of the Project log frame will be the responsibility of the IFAD Field Coordinator who will also be responsible to enter the LF data into the IFAD's ORMS system

5. The responsibility for FAO M&E activities will rest with the Head of M&E at FAO Yemen Country Office. One dedicated national M&E Officer will be recruited on a full-time basis through competitive selection. The M&E Officer will have the overall responsibility for managing the IFAD /

LDCF M&E system under the supervision of Head of M&E at FAO. The other responsibilities will include (i) the supervision of field M&E associates, (ii) overall coordination of M&E activities with IFAD and SFD and (iii) the supervision of Third-Party Monitoring (TPM) contractor for the Rural Livelihood Development Project (RLDP) activities. Additional two M&E associates will be based at FAO Field Hubs in Aden and Sana'. M&E Associates will report to the M&E Officer and will be responsible (i) to conduct field monitoring, analysis, and reporting, (ii) to coordinate TPM activities implemented in their respective project areas.

6. In addition, the M&E section of the Social Fund for Development will work closely with the IFAD Field Coordinator and provide all required reports from its branch offices with reference to the progress on the activities being implemented by it. One person will be assigned as M&E Coordinator at SFD who will mobilize the SFD Field Monitoring Officers to conduct field monitoring for component 2 activities as required.

7. The project's logical framework will be reviewed at a Start-up Workshop. At the beginning of implementation, a Baseline Survey will be conducted. Both FAO and SFD will be responsible for the design and implementation of the Project M&E System, including the consolidation of all inputs, data, and reporting with respect to their own components. Both institutions will work with each other holding regular and structured meetings to review progress and developments, and ensure a coordinated implementation. IFAD will hire a field coordinator to ensure coherence between the two implementers and that their interventions are well synchronised in a joint Annual Work Plan and Budget (AWPB). The Field coordinator will be responsible for ensuring that the project has an integrated system through the consolidation of the reports produced by the two M&E sub-systems based at FAO and SFD. Both FAO and SFD will submit semi-annual project progress reports (including log frame report) for which they are responsible. SFD and FAO will contribute to the annual Project Implementation Report (PIR) which will be consolidated and reviewed by the IFAD Field Coordinator and IFAD will submit it to the GEF Secretariat. FAO will contract a Third Party Monitoring (TPM) supplier that will work closely with the M&E Officer and Associates to carry out the field monitoring activities for the whole project to reduce risk exposure, and improve access in conflict areas through hiring locals for data collection. In line with this approach, project field monitoring activities will be implemented by the TPM contractor as agreed by IFAD, FAO and SFD. In cooperation with the Environmental, Social and Climate Specialist, the M&E units at FAO and SFD will ensure the implementation of the project's Environmental and Social Management Plan (ESMP), gender action plan and stakeholder engagement activities as well as facilitate the Grievance and Redress Mechanism (GRM).

8. National institutions including MoPIC, MoAI and EPA will be part of the Advisory Steering Committee (ASC) which will be informed of project performance through an annual meeting and will guide the implementing agencies and suggest potential linkages to enhance synergy and increase impact. Yemen's GEF OFP will be also informed of the project progress, will receive the annual GEF PIR and will be invited to be part of IFAD supervision missions.

9. **Project Indicators:** FAO and SFD in consultation with the IFAD field coordinator will fine-tune the progress and performance/impact indicators of the project at the Inception Workshop. 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.

10. Periodic monitoring of implementation progress and supervision 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 and youth participation in project 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.

11. 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 the Mid-Term and Completion surveys, through specific studies by TPM that are to form part of the project's activities, or periodic sampling.

12. **Reporting.** FAO will submit annual project progress report within 90 days from the end of the FAO's Fiscal Year, while SFD will submit semi-annual and annual project progress reports to IFAD. The Environmental, Social and Climate Specialist will consolidate the inputs from FAO and SFD and prepare the annual GEF PIR for the Field Coordinator's review. Reporting progress will be made available for each governorate as well as consolidated for the programme area. Annual Project Implementation Reviews will be prepared and submitted by IFAD to the GEF Secretariat

13. A Mid-Term Review will be undertaken at the end of PY3 covering: (i) physical and financial progress in comparison with AWPBs; (ii) performance assessment of service providers; (iii) institutional and national policy changes arising from project activities; (iv) opportunities for deeper integration of implementation within national systems; and (v) overall progress towards the achievement of project objectives. At the end of the programme, a Terminal Evaluation will be prepared to examine the overall project performance, taking into account a broader and longer-term perspective.

14. Surveys will be conducted to establish the baseline, and then at mid-term and completion as the main quantitative tools, which will be contracted to a third party by FAO in coordination with SFD and in consultation with IFAD. The contractor(s) in coordination with M&E officers will be responsible for those surveys. The surveys will cover the entire project area and all the components of RLDP implemented by both organizations. Ad hoc surveys, qualitative case studies and thematic reviews will be outsourced to the third-party organizations to verify results and draw lessons on themes such as climate resilience and adaptation, market access, community empowerment, Community Action Plans (CAPs) infrastructure development and food security improvement.

### **Learning and Knowledge Management**

15. Operational experiences will create valuable knowledge in these areas, which will be captured by the project and utilized to generate lessons and best practices to be shared with public institutions, Community Development Organizations and other project beneficiaries, the FAO and SFD country teams, partners and others. The results of programme support for developing sustainable community-based development institutions and infrastructure as well as the results of the FFS testing, will be widely publicised. Partnerships with the Ministry of Agriculture and Irrigation (MAI), the Agricultural Research and Extension Authority (AREA), the Environment Protection Agency (EPA), FAO and SFD will be intensified in this respect. FFS research will furthermore facilitate the quick transfer of knowledge to the

farmers and integration into the training programmes. The results of the research will additionally benefit policy development dialogues in mainstreaming CCA into agriculture and the future development of the NDC.

16. The programme will promote: (i) in-country knowledge networking through periodic seminars/workshops and (ii) regional research networks. The IFAD and SFD country teams will contribute to national 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 the basis for that, 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. The communication and knowledge management strategy for IFAD's Yemen programme will be carefully crafted to ensure the sustainability of the project's activities and its influence on the policy dialogue in the country. IFAD will organize events to share learning about the impact of targeted investments in agriculture and rural development in fragile states based on experience in Yemen. IFAD will establish a mechanism for on-going discussion and engagement with the Government to keep them informed on the performance of the project. FAO and SFD expertise in developing knowledge products will be leveraged. The project will be in continuous contact with other on-going development efforts including the proposed FAO GEF/LDCF project to maximise the synergetic effect of climate change adaptation interventions and strong policy engagement. Operation and Maintenance trainings and Training of Trainers (ToTs) will create a knowledge basis in the target areas that guarantee dissemination of knowledge to different stakeholders beyond the project's timeframe.

17. The project will support the preparation of a number 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 FAO and SFD offices.

### **Evaluation**

18. Mid-term Evaluation - An independent Mid-Term Review will be undertaken at mid-term of project implementation. The Mid-Term Review 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, sustainability, and timeliness of project implementation; will highlight issues requiring decisions and actions; and will present initial lessons learned about project design, implementation and management. Findings of this review will be incorporated as recommendations for enhanced implementation during the final half of the project's term, 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 to the project document. The Terms of Reference for this Mid-term evaluation will be prepared by IFAD, in consultation with FAO and SFD, the GEF Operational Focal Point (OFP) and MAI.

19. 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 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 for this evaluation will be prepared by IFAD, in consultation with FAO and SFD, the GEF OFP, and MAI.

Table 1. Monitoring and evaluation plan and budget

<b>Type of activity</b>	<b>Responsible Parties</b>	<b>Budget USD (LDCF contribution)</b>	<b>IFAD Co-financing</b>	<b>Time frame</b>
Inception Workshop (IW) and report	FAO / SFD	10,251	25,600	Within first two months of project start up
Baseline study	Field Coordinator / FAO / SFD / IFAD	0	60,300	Baseline indicators will be confirmed and agreed in PY1.
Semi-annual Project Progress Reports	SFD and Field Coordinator	0	0	Twice a year
Annual Project Progress Reports	FAO, SFD and Field Coordinator	0	0	Annually
Project Implementation Report (PIR)	IFAD / FAO / SFD- Environment, Climate and Social Safeguards Specialist / M&E officers	0	0	Annually
Supervision missions	IFAD	0 Covered by the GEF fee	0	At least one supervision mission will be carried out annually
Committee Meetings	FAO / MAI / EPA / SFD	0	100,000	Following Project IW and subsequently at least once a year
Field level monitoring of indicators and verification	Third-Party Service Provider	0	50,000	Ongoing
Quarterly financial reports	SFD	0	0	Quarterly
Semestral financial reports	FAO	0	0	Semi-annually

Type of activity	Responsible Parties	Budget USD (LDCF contribution)	IFAD Co-financing	Time frame
Monitoring of ESS and management plans	IFAD / FAO / SFD - Environment, Climate and Social Safeguards Specialist / M&E officers	0	0	Continuous
Mid-Term Review	IFAD, independent external consultants, in consultation with FAO and SFD, OFP and Field Coordinator	31,064	35,000	At the mid-point of project implementation.
Final External Evaluation	IFAD, independent external consultants, in consultation with FAO and SFD, OFP and Field Coordinator	31,374	83,665	At the end of project implementation
Terminal Report	IFAD/ FAO / SFD and Field Coordinator	0	0	At least one month before the end of the project. The draft report should be ready prior to the TE taking place
Totals		62 438	268 665	331 103

### **PART III: Certification by GEF partner agency(ies)**

#### **A. GEF Agency(ies) certification**

<b>GEF Agency Coordinator</b>	<b>Date</b>	<b>Project Contact Person</b>	<b>Telephone</b>	<b>Email</b>
John McIntire	8/20/2014	Rami Abu Salman		r.salman@ifad.org
Jyotsna Puri	9/1/2021	Nicolas Tremblay	00201069401111	n.tremblay@ifad.org
Tom Anyonge	1/25/2022	Nicolas Tremblay	00201069401111	n.tremblay@ifad.org

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

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

Output	Key indicators	Means of Verification	Assumptions and Risks
<b>LDCF Goal</b> Enhanced resilience and adaptation to climate change in rural Yemen	<ul style="list-style-type: none"> <li>- 80% of households reporting adoption of environmentally sustainable and climate resilient technologies and practices</li> <li>- 75% of households reporting an increase in production</li> </ul>	<ul style="list-style-type: none"> <li>- Project M&amp;E system</li> <li>- Assessments of soil and water conservation, and crop production at mid- term and project completion</li> <li>- Household income and expenditure surveys</li> </ul>	Political and Macro-Economic instability do not interfere with the implementation and lead to inappropriate targeting
<b>LDCF Objective</b> Improve farmland productivity, food security, and water conservation through the rehabilitation and sustainable management of climate-proof agriculture.	<ul style="list-style-type: none"> <li>- 3,253 hectares of land brought under climate-resilient management</li> <li>- 550 ha served under the rehabilitation of flood-based agriculture system and irrigation systems</li> <li>- 800 households provided with water supply</li> </ul>	<ul style="list-style-type: none"> <li>- Project M&amp;E system</li> <li>- Progress reports, mid-term and final evaluations</li> <li>- Contracts and agreements</li> <li>- Publications and other awareness and training tools</li> <li>- Feedback from users and stakeholders</li> </ul>	Instability in local communities are provided real incentive to rebuild their lives and contribute to stability and peace
<b>Component 1 Community Empowerment and Knowledge for Resilience/ Contributes to CCA-2</b> <b>Total GEF Budget USD 1,662,759</b>			

Output	Key indicators	Means of Verification	Assumptions and Risks
<b>Outcome 1.1</b> Community Development Associations, WUAs and Village Council (VCs) in the project Village Units (VUs) empowered on adaptive management of natural resources, with a focus on climate-smart water and soil conservation.	<ul style="list-style-type: none"> <li>- 30 Community Institutions (WUAs / VCs / CDAs) become functional or successfully implementing water and soil conservation activities.</li> </ul>	<ul style="list-style-type: none"> <li>- SFD progress reports</li> <li>- Official registration records</li> <li>- List of members</li> <li>- MoUs</li> <li>- Minutes from WUA / VC / CDA executive</li> <li>- Committee meetings</li> </ul>	Intra-community conflicts prevent formation of effective CDAs / WUA / VC
<b>Output 1.1.1</b> A training programme is designed and implemented to build the capacity of water and soil conservation service providers.	<ul style="list-style-type: none"> <li>- One Training of Trainer programme designed</li> </ul>	<ul style="list-style-type: none"> <li>- SFD progress reports</li> <li>- Training evaluation reports</li> <li>- Evaluation forms from training courses</li> <li>- List of participants</li> <li>- Tools and materials</li> <li>- Field surveys</li> </ul>	Intra-community conflicts prevent formation of effective CDAs / WUA / VC
<b>Outcome 1.2</b> Farmers and other agricultural practitioners empowered on climate-resilient agriculture production.	<ul style="list-style-type: none"> <li>- 30 Community Institutions (CDAs / VCs) become functional and successfully implement resilient agricultural production activities.</li> <li>- Number of households reporting improved literacy levels</li> </ul>	<ul style="list-style-type: none"> <li>- FAO progress reports</li> <li>- Official registration records</li> <li>- List of members</li> <li>- MoUs</li> <li>- Minutes from CDA / VC executive</li> <li>- Committee meetings</li> </ul>	Intra-community conflicts prevent formation of effective CDAs / WUA / VC

Output	Key indicators	Means of Verification	Assumptions and Risks
<b>Output 1.2.1</b> A training of trainers programme is designed and implemented to build the capacity of key agriculture practitioners on climate-resilient agriculture production.	<ul style="list-style-type: none"> <li>- One Training of Trainer programme designed</li> </ul>	<ul style="list-style-type: none"> <li>- FAO Progress reports</li> <li>- Training evaluation reports</li> <li>- Training course programme</li> <li>- List of participants</li> <li>- MTR</li> <li>- Terminal Evaluation</li> </ul>	Intra-community conflicts prevent formation of effective CDAs / WUA / VC
<b>Output 1.2.2</b> Gender and youth literacy training of trainers programme developed and implemented	<ul style="list-style-type: none"> <li>- A TOT programme designed</li> <li>- 48 teachers trained annually for 5 years</li> </ul>	<ul style="list-style-type: none"> <li>- FAO Progress reports</li> <li>- Training evaluation reports</li> <li>- Training course programme</li> <li>- List of participants</li> <li>- MTR</li> <li>- Terminal Evaluation</li> </ul>	<p>Traditional views of women's role in family and society can be changed.</p> <p>Sufficient implementation capacity and capable service providers to develop Reflect / GALS training programme.</p>
	<ul style="list-style-type: none"> <li>- 6000 heads of households (4200 women, 4800 youth and 1800 men) trained in literacy programme</li> </ul>	<ul style="list-style-type: none"> <li>- FAO Progress reports</li> <li>- Training evaluation reports</li> <li>- Training course programme</li> <li>- List of participants</li> <li>- MTR</li> <li>- Terminal Evaluation</li> </ul>	
<b>Component 2. Climate-resilient Investments in Natural Resources Management / Contributes to CCA-1</b> <b>Total GEF Budget USD 4,114,246</b>			

Output	Key indicators	Means of Verification	Assumptions and Risks
<b>Outcome 2.1.</b> Natural resource management improved and focusing on climate resilience	<ul style="list-style-type: none"> <li>- 80% of households reporting adoption of environmentally sustainable and climate resilient technologies and practices</li> </ul>	<ul style="list-style-type: none"> <li>- SFD progress reports</li> <li>- Studies &amp; surveys</li> <li>- Workshops? reports</li> <li>- Feedback from participants</li> <li>- List of participants</li> <li>- MTR</li> <li>- Terminal Evaluation</li> </ul>	<p>Sufficient implementation capacity and capable service providers to develop infrastructure.</p> <p>Intervene in areas where there is no active fighting and work through partners who have developed a good modus operandi in securing clearances from local authorities and are trusted by local communities.</p>
<b>Output 2.1.1.</b> Climate-resilient domestic water supply improved in target areas	<ul style="list-style-type: none"> <li>- 800 households provided with water supply (e.g. rooftop and courtyard water harvesting)</li> <li>- 4 communal multi-purpose rainwater harvesting schemes</li> <li>- 9 village groundwater-based water schemes</li> </ul>	<ul style="list-style-type: none"> <li>- SFD progress reports</li> <li>- Studies &amp; surveys</li> <li>- List of participants</li> <li>- MTR</li> <li>- Terminal Evaluation</li> </ul>	
<b>Output 2.1.2.</b> Small-scale irrigation schemes and flood-based agriculture implemented	<ul style="list-style-type: none"> <li>- 550 ha rehabilitated flood-based agriculture system and irrigation systems</li> <li>- 33 Rehabilitation and modernising irrigation systems</li> </ul>	<ul style="list-style-type: none"> <li>- SFD progress reports</li> <li>- Studies &amp; surveys</li> <li>- List of participants</li> <li>- MTR</li> <li>- Terminal Evaluation</li> </ul>	
<b>Output 2.1.3</b> Soil and water conservation measures implemented.	<ul style="list-style-type: none"> <li>- 17 ha of terraces rehabilitated</li> </ul>	<ul style="list-style-type: none"> <li>- SFD progress reports</li> <li>- Studies &amp; surveys</li> <li>- List of participants</li> <li>- MTR</li> <li>- Terminal Evaluation</li> </ul>	

Output	Key indicators	Means of Verification	Assumptions and Risks
<b>Component 3: Climate-resilient investments for improved agricultural livelihoods / Contributes to CCA 3</b> <b>Total GEF Budget USD 3,989,573</b>			
<b>Outcome 3.1</b> Improved climate resilient agricultural production	<ul style="list-style-type: none"> <li>- 80% of households reporting adoption of new/improved inputs, technologies or practices</li> <li>- 75% of households reporting an increase in production</li> <li>- Training of Trainers module designed</li> <li>- 30 researchers trained</li> </ul>	<ul style="list-style-type: none"> <li>- FAO progress reports</li> <li>- Training programme</li> <li>- Training evaluation reports</li> <li>- List of participants</li> </ul>	<p>Sufficient implementation capacity and capable service providers to develop infrastructure.</p> <p>Intervene in areas where there is no active fighting and work through partners who have developed a good modus operandi in securing clearances from local authorities and are trusted by local communities.</p> <p>Political and governance risks can impede implementation, control of the country by different parties could lead to interferences</p>
<b>Output 3.1.1.</b> Farmer field school programme implemented	<ul style="list-style-type: none"> <li>- 6000 heads of households trained in production practices and/or technologies</li> </ul>	<ul style="list-style-type: none"> <li>- MTR</li> <li>- Terminal Evaluation</li> </ul>	
<b>Output 3.1.2</b> New climate-resilient technologies tested and demonstrated.	<ul style="list-style-type: none"> <li>- Number of research information leaflets produced</li> <li>- Number of climate-resilient innovations identified</li> <li>- Research position paper delivered and presented to MAI and EPA</li> </ul>	<ul style="list-style-type: none"> <li>- FAO Progress reports</li> <li>- Training evaluation reports</li> <li>- Training course programme</li> <li>- List of participants</li> <li>- MTR</li> <li>- Terminal Evaluation</li> </ul>	<p>Sufficient technical capacity to produce research outputs.</p>
<b>Outcome 3.2</b> Improved resilient value-added livelihoods	<ul style="list-style-type: none"> <li>- 1500 livelihood packages and 846 matching grants for post-harvest support received by target groups.</li> </ul>	<ul style="list-style-type: none"> <li>- FAO progress reports</li> <li>- Technical</li> </ul>	<p>Sufficient implementation capacity and capable service providers to</p>

Output	Key indicators	Means of Verification	Assumptions and Risks
<b>Output 3.2.1.</b> Resilient value-added livelihood packages and matching grants	<ul style="list-style-type: none"> <li>- 2,346 heads of households (1446 men, 900 women and 800 youth) accessing production inputs and/or technological packages (livelihood packages) and matching grants</li> </ul>	assistance reports <ul style="list-style-type: none"> <li>- List of recipients</li> <li>- MTR</li> <li>- Terminal Evaluation</li> </ul>	develop infrastructure. Intervene in areas where there is no active fighting and work through partners who have developed a good modus operandi in securing clearances from local authorities and are trusted by local communities.
Monitoring and evaluation informs knowledge management with best practices upscaled	<ul style="list-style-type: none"> <li>- M&amp;E system operationalised</li> <li>- Project KM and lessons and practices captured and disseminated</li> </ul>	<ul style="list-style-type: none"> <li>- FAO and SFD Progress reports</li> <li>- MTR</li> <li>- Terminal Evaluation</li> </ul>	Sufficient implementation capacity and capable service providers to deliver M&E and KM products and services.
Project M&E system operationalized	<ul style="list-style-type: none"> <li>- Percentage of intended outputs and indicators reported by the project's mid- term and final report as delivered and/or on-track for delivery.</li> </ul>	<ul style="list-style-type: none"> <li>- Progress reports</li> <li>- MTR and TER project evaluations</li> <li>- Capacity needs assessment report.</li> </ul>	
Project knowledge management and lessons and practices captured and disseminated	<ul style="list-style-type: none"> <li>- Number of annual KM tool reports uploaded into regional and international KM tools.</li> </ul>	<ul style="list-style-type: none"> <li>- KM annual reports</li> </ul>	

**ANNEX B: RESPONSES TO PROJECT REVIEWS (from GEF Secretariat and GEF Agencies, and Responses to Comments from Council at work program inclusion and the Convention Secretariat and STAP at PIF).**

STAP Comments	GEF Project Responses
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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. Project districts have been selected based on the selection of areas which are deemed safe by the local UN agencies who monitor the situation very closely. The project's targeting strategy is based on a flexible approach so that if and when a targeted district proves to be inaccessible due to insecurity/limited access or other major factors which are assessed prior to starting implementation, the district will be replaced with the next priority district from the ranked districts list. The project will be executed through FAO and SFD who both have strong presence on the ground and are perceived as neutral agencies. A key aspect of the mitigation strategy will be to provide operational support and incentives to Government line agency staff based in the field and closely supervise them and update their knowledge where required. The project will use local implementing partners and community agents for field level support and professional outsourcing to achieve specialization, reduce workload and risk exposure, and improve security &amp; access in conflict areas through hiring locals for data collection.</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 RLDP programme will support the establishment and/or strengthening of Community Development Associations (CDAs), Water User Associations (WUA), Community-Based Association (CBO) and Village Councils (VC) 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, WUAs, CBOs and VCs to produce climate-resilient Community Action Plans (CAPs) to articulate their development needs, combining rural development and climate adaptation needs. Farmers will be part of the CAPs production and implementation, identifying climate change adaptation needs.</p>
3. How climate change downscaling activities described in Component 3 will be linked to Components 1 and 2	<p>The STAP comment is no longer applicable as climate change downscaling as detailed in the PIF will no longer be feasible due to the changed humanitarian need and institutional capacity caused by 6 years of civil war. The required investments in meteorological stations, their operation and maintenance will no longer be feasible within the current Yemen context. As the country is on the brink of wide-spread famine the focus of RAY will be on providing immediate and sustainable climate-adaptive food production and water conservation techniques.</p>
4. How IFAD's implementation of an integrated watershed development approach will ensure a coordinated approach within each watershed.	<p>Due to the precarious security situation and civil war the design was focused on simplicity for ease of implementation. As a consequence the watershed approach was removed.</p>

<p>5. How the sustainability of climate change adaptation education, project results, lessons, and good practices to various stakeholders will be ensured</p>	<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 with regard to: (i) empowering communities to drive planning, implementation and monitoring and evaluation to the extent feasible; an (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.</p> <p>Long-term sustainability will be sought through a broad and deep community-based programme, designed to create a critical mass of knowledgeable and skilled experts on climate change 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 community-based 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 micro income generation activities.</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, 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 4,200 women in the five governorates. The project will produce gender-oriented education materials and technical manuals. For more information, see ?Targeting? section in the CEO ER.</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 through the community-based approach and involvement of the rural poor through the CDAs, WUAs, CBOs and VCs, the 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>An Advisory Steering Committee (NSC) will be established at Sana'a and chaired by the Ministry of Planning and International Cooperation (MoPIC). Its members will include the Ministry of Agriculture and Irrigation, the Environmental Protection Authority and the Ministry of Public Works. Other members can be seconded as and when required and IFAD will be a member of the ASC. As key implementing agencies, FAO and SFD will be invited to present the project progress to the ASC on an annual basis, identify key challenges and future plans. The ASC's will facilitate implementation where possible and guide the implementing agencies and suggest potential linkages to enhance synergy and increase impact. The Third-Party Monitoring agents recruited to undertake the annual supervision of the project will also be expected to share their report with the ASC and seek their guidance to improve performance. The Ministry of Planning and International Cooperation will chair the meetings of the ASC and provide overall guidance in the supervision, monitoring and evaluation of the project.</p>
<p>8. How the risk of lack of capacity and limited understanding of climate change and resilience by Yemeni decision makers and other stakeholders is addressed.</p>	<p>The capacity building actions implemented by the project will build on and make use of already existing structures, such as WUAs, VCs and CBOs, to make sure that the right 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 climate change impacts and adaptation opportunities will be raised throughout all training activities ? e.g. literacy, life skills training for women men and youth; NRM training; and climate-proof infrastructures training,</p> <p>The climate change research programme will be farmer-focused, testing seed agro-climatic suitability, technologies and management practices that will enhance climate resilience and risk mitigation. The research will be fully embedded in the Farmer Field Schools hereby facilitating the transfer of knowledge. The research will also produce a policy position paper based on the results of the 5 years' on-farm research. This paper will assess the RLDP research programme, draw conclusions and make policy recommendations for strengthening improved seeds production capacities. The paper will also be presented to the Environment Protection Authority (EPA) to raise awareness about the research being conducted and relevance towards the development of the NDCs.</p>
<p>9. How involvement of local communities in the project planning and implementation is being considered</p>	<p>The RLDP baseline programme will support the establishment and/or strengthening of CDAs, WUAs, CBOs and VCs 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 the local stakeholders to produce climate-resilient Community Action Plans (CAPs) to articulate their development needs, combining rural development and climate adaptation needs. Farmers will be part of the CAPs production and implementation, identifying climate change 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 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 and water harvesting structures). It will mainstream climate change 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 climate change 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 (WB, FAO, WFP), and local stakeholders (SFD) 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 National Adaptation Programme of Action (NAPA), the Intended Nationally Determined Contributions (INDC) and Third National Communication (TNC).</p> <p>During planning and implementation, the project will continue to have broad consultations with all international actors operating in the country to ensure synergies and cooperation to maximise the impact of the project.</p>

## ANNEX C: STATUS OF IMPLEMENTATION OF PROJECT PREPARATION ACTIVITIES AND THE USE OF FUNDS.

### A. Provide detailed funding amount of the PPG activities financing status in the table below:

status of implementation of project preparation activities and the use of funds

#### 1. explain if the ppg objective has been achieved through the ppg activities undertaken.

The objectives of the PPG were fully achieved as demonstrated by the contents of the original ProDoc and CEO Endorsement 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, and land restoration, 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.

**2. 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 approaches on community-driven, area-based development programmes that have been piloted in Yemen within IFAD operations with successful results in reducing poverty and food insecurity while empowering targeted rural communities and their women members in particular.

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 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:**

<i><b>Project Preparation Activities Approved</b></i>	<i><b>Implementation Status</b></i>	<i><b>LDCF/SCCF Amount (\$)</b></i>				<i><b>Co-financing (\$)</b></i>
		<i><b>Amount Approved</b></i>	<i><b>Amount Spent To-date</b></i>	<i><b>Amount Committed</b></i>	<i><b>Uncommitted Amount*</b></i>	
1. Assessment of institutional and stakeholders? training and capacity enhancement needs	Completed	6530	6530	0	0	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	6300	0	0	3700
3. Identification of interventions aimed at improving water efficiency and promoting sustainable resource management	Completed	32000	32000	0	0	59000
4. Mapping predicted climate change impacts on smallholder agriculture in the project area to guide interventions	Completed	23350	23350	0	0	32000
5. Planning and designing a monitoring and evaluation (M&E) system	Completed	2725	2725	0	0	3300
6. Preparation of project costing and implementation manuals	Completed	2000	2000	0	0	3800
7. Stakeholder consultations	Completed	2530	2530	0	0	1800



				M & E		1 .	1 .	2.1	3 .	3 .	3 .	M & E		ncin g	
<b>Civil Works</b>	Individual household water supply	-	-	-	160 189	-	-	907 739	-	-	-	-	-		<b>SFD</b>
	Communal multi-purpose rainwater harvesting	-	-	-	95 925	-	-	543 573	-	-	-	-	-		<b>SFD</b>
	Village groundwater-based water schemes	-	-	-	166 023	-	-	940 796	-	-	-	-	-		<b>SFD</b>
	Rehabilitation and modernising irrigation systems	-	-	-	145 841	-	-	826 431	-	-	-	-	-		<b>SFD</b>
	Rehabilitation of flood-based agriculture systems	695 016	-	-	235 606	-	-	640 086	-	-	-	-	-		<b>SFD</b>
	Rehabilitation/ construction of check dikes and gabions	1 211 173	-	-	213 736	-	-	-	-	-	-	-	-		<b>SFD</b>
	Terraces rehabilitation	-	-	-	25 911	-	-	146 830	-	-	-	-	-		<b>SFD</b>
	Climate smart village road rehabilitation	1 095 902	-	-	193 395	-	-	-	-	-	-	-	-		<b>SFD</b>
	<b>Sub-total</b>	<b>3 002 091</b>	-	-	<b>1 236 626</b>	-	-	<b>4 005 457</b>	-	-	-	-	-	<b>8 244 174</b>	
<b>Goods, Services and Inputs</b>	Training consumable for participants (stationary, refresh, transport, fees, etc.) for 4 different training categories	-	-	-	-	1 8 6 9 2 1	-		-	-	-	-	-		<b>FAO</b>
	Inputs for FFS	-	-	-	-	-	-		8 8 9 1 3 3	-	-	-	-		<b>FAO</b>

									54546							FAO
	On-farm inputs	-	-	-	-	-	-			-	-	-	-			
	Inputs for Nutrition Sessions for vulnerable HHs	598202	-	-	-	-	-			-	-	-	-	-		FAO
	Livelihood support Packages	-	-	-	184439	-	-			-	-	1045153	-	-		FAO
	Matching grants for post harvest support	-	-	-	-	-	-			-	-	684599	-	-		FAO
	Climate Change awareness raising and production of leaflets and KM material		-	-	-	-	-			-	-	-	53810	-		FAO and SFD
	Sub-total	598202	-	-	184439	186921	-			943679	-	1729752	53810	-	3696804	
Grants and Subsidies	Contingency budget	530000	-	-	-	-	-			-	-	-	-	-		FAO and SFD
	Sub-total	530000	-	-	-	-	-			-	-	-	-	-	530000	
Technical Assistance and Consultancies	Implementing Partner for Mobilization and Logistical Support for all activities	1781004	-	-	-	-	-			-	-	-	-	-		FAO
	Water Engineer and Irrigation Engineer Trainer	-	-	-	-	6030	-			-	-	-	-	-		FAO

	Training of WUAs by water engineer expert	-	-	-	-	4040	-	-	-	-	-	-	-	-	FAO
	Training of farmers by water harvesting/irrigation engineers	-	-	-	-	9207	-	-	-	-	-	-	-	-	FAO
	Training of community/Hs by water engineer in O&M	-	-	-	-	2020	-	-	-	-	-	-	-	-	FAO
	Training program facilitators	-	-	-	-	6121	-	-	-	-	-	-	-	-	FAO
	Identification and preliminary studies (total of 3)	-	-	-	-	-	-	108791	-	-	-	-	-	-	SFD
	Design modules for Climate Smart FFS (Crop, Livestock and apiculture)	-	-	-	-	-	37882	-	-	-	-	-	-	-	FAO
	Climate Vulnerability Analysis	-	-	-	-	-	-	-	8040	-	-	-	-	-	FAO
	Training of trainers	-	-	-	-	-	-	-	1608	-	-	-	-	-	FAO
	Research paper for policy development	-	-	-	-	-	-	-	8366	-	-	-	-	-	FAO
	Designing Reflect Module	-	-	-	-	-	24824	-	-	-	-	-	-	-	FAO
	Technical Assistance	-	-	-	-	-	-	-	-	-	360614	-	-	-	FAO

	Baseline Study	-	-	60 30 0	-	-	-	-	-	-	-	-	-	-	FAO
	Impact Assessment	-	-	83 66 5	-	-	-	-	-	-	-	-	-	-	FAO
	Third Party Monitoring	-	-	50 00 0	-	-	-	-	-	-	-	-	-	-	FAO
	External Audit	-	-	50 00 0	-	-	-	-	-	-	-	-	-	-	FAO
	Knowledge management products	-	-	20 81 3	-	-	-	-	-	-	-	-	-	-	FAO and SFD
	Studies	-	-	30 91 3	-	-	-	-	-	-	-	-	-	-	FAO and SFD
	GEF M&E for Mid-term review	-	-	-	-	-	-	-	-	-	-	31 06 4	-	-	FAO
	GEF M&E for terminal evaluation	-	-	-	-	-	-	-	-	-	-	31 37 4	-	-	FAO
	<b>Sub-total</b>	<b>1 781 004</b>	-	<b>29 5 69 0</b>	-	<b>2 7 4 1 8</b>	<b>6 2 7 0 6</b>	<b>108 791</b>	<b>1 8 0 1 4</b>	<b>3 6 0 6 1 4</b>	<b>62 43 8</b>	-	-	<b>2 698 661</b>	
<b>Traini ng, Works hops and Meetin gs</b>	Training Master Trainers for FFS	-	-	-	-	-	1 1 9 2 7 8	-	-	-	-	-	-	-	FAO
	Conduct Climate Smart FFS (crops, livestock and apiary)	-	-	-	-	-	-	6 8 7 3 4 4	-	-	-	-	-	-	FAO
	Design modules for researcher capacity building	-	-	-	-	-	-	4 1 0 0	-	-	-	-	-	-	FAO
	Researcher capacity building programme	-	-	-	-	-	-	2 2 5 5 2	-	-	-	-	-	-	FAO

[illegible]

	Lead Technical Officer	-	3 0 7 5 9 1	-	-	-	-	-	-	-	-	-	-		<b>IFAD</b>
	Agriculture Specialist	-	9 7 4 0 4	-	-	-	-	-	-	-	-	-	-		<b>FAO</b>
	Livestock Specialist	-	7 6 8 9 8	-	-	-	-	-	-	-	-	-	-		<b>FAO</b>
	International Nutrition Specialist	-	1 5 5 2 6 3	-	-	-	-	-	-	-	-	-	-		<b>FAO</b>
	Project Nutrition Specialist	-	1 8 4 5 5 4	-	-	-	-	-	-	-	-	-	-		<b>FAO</b>
	Procurement Specialist	-	-	-	-	-	-	-	-	-	-	-	9 2 2 7 7		<b>FAO</b>
	Procurement Associate	-	-	-	-	-	-	-	-	-	-	-	4 6 1 3 9		<b>FAO</b>
	Financial Management Specialist	-	6 1 5 1 8	-	-	-	-	-	-	-	-	-			<b>FAO</b>
	Environment, Social and Climate Specialist	-	-	-	-	-	-	-	-	-	-	30 75 9	9 2 2 7 7		<b>FAO</b>
	M&E Specialist	-	-	-	-	-	-	-	-	-	-	18 4 55 4	-		<b>FAO</b>

[illegible]

			9 6 5 5 0												<b>FAO and SFD</b>
	Travel cost	-	0	-	-	-	-	-	-	-	-	-	-		
	Operational and maintenance cost	-	9 6 0 3 7	-	-	-	-	-	-	-	-	-	-		<b>FAO and SFD</b>
	Allowance for hosting RLDP Committee meetings /c	-	1 0 0 0 0	-	-	-	-	-	-	-	-	-	-		<b>FAO and SFD</b>
	FAO management fee	-	1 1 3 1 8 7 7	-	-	-	-	-	-	-	-	-	-		<b>FAO</b>
	Dummy value to round up budget	-	1 3 3 9	-	-	-	-	-	-	-	-	-	-		-
	<b>Sub-total</b>	<b>833 027</b>	<b>1 4 2 5 8 0 3</b>	-	-	-	-	-	-	-	-	-	-	<b>2 258 829</b>	
<b>Grand Total</b>		<b>7 326 176</b>	<b>2 3 2 0 7 1 7</b>	<b>35 3 10 6</b>	<b>1 421 065</b>	<b>2 1 4 3 3 9</b>	<b>1 0 5 3 3 4 3</b>	<b>4 114 248</b>	<b>1 8 9 9 2 0 7</b>	<b>-</b>	<b>2 0 9 0 3 6 6</b>	<b>39 3 07 8</b>	<b>2 3 3 4 2 1</b>	<b>21 421 066</b>	