



GLOBAL ENVIRONMENT FACILITY
INVESTING IN OUR PLANET

Naoko Ishii
CEO and Chairperson

April 17, 2014

Dear LDCF/SCCF Council Member:

FAO as the Implementing Agency for the project entitled: *El Salvador: Climate Change Adaptation to Reduce Land Degradation in Fragile Micro-Watersheds Located in the Municipalities of Texistepeque and Candelaria de la Frontera*, has submitted the attached proposed project document for CEO endorsement prior to final approval of the project document in accordance with FAO procedures.

The Secretariat has reviewed the project document. It is consistent with the proposal approved by Council in November 2011 and the proposed project remains consistent with the Instrument and GEF policies and procedures. The attached explanation prepared by FAO satisfactorily details how Council's comments and those of the STAP have been addressed. I am, therefore, endorsing the project document.

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

Sincerely,


Naoko Ishii

Attachment: Project Document

Copy to: Country Operational Focal Point, GEF Agencies, STAP, Trustee



REQUEST FOR: CEO ENDORSEMENT
PROJECT TYPE: MEDIUM-SIZED PROJECT
TYPE OF TRUST FUND: MULTI-TRUST FUND

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PART I: PROJECT INFORMATION

Project Title: Climate Change Adaptation to Reduce Land Degradation in Fragile Micro-Watersheds located in the municipalities of Texistepeque and Candelaria de la Frontera			
Country(ies):	El Salvador	GEF Project ID: ¹	4616
GEF Agency(ies):	FAO	GEF Agency Project ID:	614715
Other Executing Partner(s):	Ministry of Agriculture and Livestock (MAG)	Submission Date:	February 12, 2014
GEF Focal Area (s):	Multi-focal Area	Project Duration(Months)	36
Name of Parent Program (if applicable):		Project Agency Fee (\$):	152,130
	<ul style="list-style-type: none"> ➤ For SFM/REDD+ <input type="checkbox"/> ➤ For SGP <input type="checkbox"/> ➤ For PPP <input type="checkbox"/> 		

A. FOCAL AREA STRATEGY FRAMEWORK²

Focal Area Objectives	Expected FA Outcomes	Expected FA Outputs	Trust Fund	Grant Amount (\$)	Co-financing (\$)
CCA-1	Outcome 1.2: Reduced vulnerability to climate change in development sectors	Output 1.2.1: Vulnerable physical, natural and social assets strengthened in response to climate change impacts, including variability.	SCCF	325,000	774,148
CCA-1	Outcome 1.3: Diversified and strengthened livelihoods and sources of income for vulnerable people living in target area	Output 1.3.1: Targeted individual and community livelihood strategies strengthened in relation to climate change impacts, including variability.	SCCF	325,000	1,266,226
CCA-2	Outcome 2.3: Strengthened awareness and ownership of adaptation and climate risk reduction processes at local level.	Output 2.3.1: Targeted groups participate in adaptation and risk reduction awareness activities	SCCF	250,000	1,371,745
LD-1	Outcome 1.2: Improved agricultural management, (increased land area with sustained productivity and reduced vulnerability of communities to climate variability)	Output 1.2: Types of Innovative SL/WM practices introduced at field level.	GEFTF	139,783	1,477,264
LD-1	Outcome 1.3: Sustained flow of services in agro-ecosystems.	Output 1.3: Suitable SL/WM interventions to increase vegetation cover in agro-ecosystems.	GEFTF	199,164	422,075
LD-3	Outcome 3.2: Integrated landscape management practices adopted by local	Output 3.2: INRM tools and methodologies are	GEFTF	182,423	703,116

¹ Project ID number will be assigned by GEFSEC.

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

	communities (application of integrated natural resource management (INRM) in the wider landscape).	developed and implemented.			
			Subtotal	1,421,370	6,014,574
			Project Management Cost	100,000	423,426
			Total project costs	1,521,370	6,438,000³

B. PROJECT FRAMEWORK

Project Objective:						
Project Component	Grant Type	Expected Outcomes	Expected Outputs	Trust Fund	Grant Amount (\$)	Confirmed Co-financing (\$)
1. Institutional strengthening to design and implement Fragile Micro-Watershed Management Plans (FMWMPs) that increase adaptive capacities to the adverse impacts of CC, based on a participatory and gender-sensitive approach.	TA	<p>1.1: Seven institutions present in the project intervention area have enhanced capacities to integrate CCA in fragile micro-watershed planning and management processes, based on inter-sector coordination, and a bottom-up and gender-sensitive approach.</p> <p><i>SCCF AMAT Indicator 2.2.1: Seven institutions with increased capacities</i></p> <p><i>SCCF AMAT Indicator 2.2.2: Capacity perception index: score 3. Women participants: 25-30%</i></p> <p>1.2: 50-75% of men, women, local authorities and institutions present in the project intervention area are aware of the adverse impacts of climate change, appropriate responses, and affirm their ownership of the processes of adaptation to climate change.</p> <p><i>SCCF AMAT Indicator 2.3.2: 50-75% of population affirming ownership of adaptation processes.</i></p> <p>1.3: Food production has</p>	<p>1.1.1: One Methodology and guidelines for developing cost-efficient FMWMPs, built on a consensus between the central government, the municipalities and the local population.</p> <p>1.1.2: Seven government agencies with enhanced capacities for prevention, response and recovery from natural disasters or extreme natural events (storms, droughts, hurricanes, etc.) in fragile watersheds in the project targeted areas (6 fragile micro-watersheds in 2 municipalities).</p> <p>1.2.1: 4 strategic alliances including 5 development actors and 5 local stakeholders are created to support the development and implementation of 6 FMWMPs in the municipalities of Texistepeque and Candelaria de la Frontera</p> <p>1.2.2: Six FMWMPs implemented and monitored in Texistepeque and Candelaria de la Frontera, through a participatory process (involving departmental, municipal and local authorities and civil society). The FMWMPs include concrete measures to reduce CC adverse impacts in the most vulnerable micro-watersheds at local level</p> <p>1.2.3: 750 households (of which 25-30% are female headed) are aware of</p>	SCCF	189,564	800,755

³ The Ministry of Agriculture (MAG) agrees to commit an annual cash co-financing of USD \$2 million, through the FPIG- PAF, for the three years of project implementation (2014, 2015,2016) . The amount of \$ 2 million can be budgeted for current years only, as national law prevents the MAG from committing financial resources for upcoming years until new year budgets are approved. These resources have been regularly allocated by MAG since 2005 and this practice is foreseen to be sustained in coming years.

		<p>increased by 10% and dietary habits have improved leading to a 2% decrease in child malnutrition in the project intervention area.</p> <p><i>SCCF AMAT Indicator 1.2.8: +10% change in projected food production in targeted area given existing and projected climate change</i></p> <p><i>SCCF AMAT Indicator 1.2.1.3: five climate- resilient agricultural practices introduced to promote food security</i></p> <p><i>SCCF AMAT Indicator 1.3.1: Households and communities have moderate access to livelihood assets (score: 4).. Female- headed households: 25-30%.</i></p>	<p>CC impacts and are trained in vulnerability identification (causes, practices, context) and risk reduction activities at the local level.</p> <p>1.3.1: 1200 households (25-30% female-headed) have production systems more climate resilient, and have enhanced livelihood assets through productive activities in the project targeted areas (basic grains, vegetable gardens, poultry).</p>			
<p>2. Soil quality enhancement based on the increase of vegetation cover, Integrated Natural Resource Management (INRM), suitable land-use and gender-sensitive management, recovering flow of agro-ecosystem services in fragile micro-watersheds.</p>	TA	<p>2.1: 40% of soils in targeted project areas have increased vegetation cover (fruit trees, forest trees, grass, and bush, among others) for soil and water protection and conservation.</p> <p><i>LD PMAT Indicator LD1.iii) Land area of production systems with increased vegetation cover: 1541 hectares</i></p> <p>2.2: 40% of soils in the project targeted areas are under INRM practices in the wider landscape resulting in sustained agricultural productivity (proxy indicator: 2.89 Ton of corn/ha/year) and reduced vulnerability for local communities.</p> <p><i>LD PMAT LD3.ii) Spatial coverage of integrated natural resource management practices in the wider landscape: 1541 hectares</i></p> <p><i>LD PMAT indicator 3.ii) 3 methodologies (agro-forestry</i></p>	<p>2.1.1: Supplied vegetation material for soil/water protection and conservation (living barriers, living hedges, gully control) through establishment and strengthening of agro-forestry nurseries at household, community and municipal level, in targeted micro-watersheds. USD 80,000 invested in inputs for soil conservation.</p> <p>2.2.1: Six Farmer Field Schools (FFS) established engaging 192 households (25-30% female-headed) in experimental learning in INRM, soil conservation and protection in targeted micro-watersheds.</p> <p>2.2.2: 128 Technical Demonstrative Families (DFs) (38 female-headed) assisted in adopting INRM techniques and good agricultural practices (GAP) in targeted micro-watersheds (technology and GAP adoption monitored gender-disaggregated)</p> <p>2.2.3: Five Good agricultural practices (GAP) disseminated among 1200 small-scale producers (25-30% women) in the targeted micro-watersheds, through the technical Demonstrative/ Irradiated Families</p>	GEFTF	521,370	2,602,455

		<i>systems, conservation agriculture and watershed management) of INRM applied in the wider landscape in the project intervention area.</i>	methodology (128 Demonstrative Families)			
3. Increasing water quality and quantity to diversify livelihoods and income sources of vulnerable sectors in targeted micro-watersheds, enhancing participatory and gender-sensitive management;	Inv	<p>3.1: 9,500 m³ of increased water availability in targeted areas through the improvement of rainwater collection infrastructure, the building of catchment and water conveyance systems for household and productive uses, and the protection of 10 water sources.</p> <p><i>SCCF AMAT Indicator 1.2.4: Increase in water supply in targeted areas: +9,500 m³</i></p> <p>3.2: Households and communities have more secure access to livelihood assets (water resources) in targeted areas</p> <p><i>SCCF AMAT Indicator 1.3.1 Households and communities have moderate access to livelihoods (score:3) Female-headed households: 30%.</i></p> <p><i>SCCF AMAT Indicator 1.2.1.5: two sustainable water management practices introduced to increase access to water irrigation for production uses: 1 community rainwater harvesting system; 12 domestic rainwater harvesting systems derived from multiple water conveyance</i></p>	<p>3.1.1: 187 households (25-30% women-led) in the targeted micro-watersheds actively involved in the protection of 10 water sources. 10 water sources are sustainably managed through protection and maintenance plans in targeted areas.</p> <p>3.1.2: 375 households trained and participating in shared decision-making, construction, management and maintenance of rainwater harvesting systems for multiple uses (irrigation and human consumption) in communities located in the targeted micro-watersheds</p> <p>3.2.1: 1 community rainwater harvesting system for productive use is built, managed and maintained in collaboration with 12 households, out of which 4 are female-headed.</p> <p>3.2.2: 12 domestic water conveyance systems derived from two multiple water conveyance systems are built in for productive and domestic uses in the targeted areas. 42 households with domestic rainwater harvesting systems for domestic use in targeted areas.</p>	SCCF	364,784	1,501,416
4. Improving disaster risk management (DRM) to	TA	4.1: 50-75% of target population have moderate awareness of predictable adverse impacts of CC and have adopted appropriate response measures.	4.1.1: 50% of rural households (out of which 25-30% are female-headed) and small rural producers in the selected micro-watersheds are involved in risk reduction, preparedness, response and disaster	SCCF	242,496	800,755

<p>increase adaptive capacity to climate change, in vulnerable sectors living in targeted micro-watersheds.</p>		<p><i>SCCF AMAT Indicator 2.3.1: 50-75% of target population have moderate awareness of predicted adverse impacts of CC and appropriate response measures (Score 2)</i></p> <p>4.2: Vulnerability and risk perception index disaggregated by gender have increased in targeted micro-watersheds.</p> <p><i>SCCF AMAT Indicator 1.2.14 Vulnerability and risk perception index disaggregated by gender has increased from 1/2 (extreme/high vulnerability) to 3/4 (medium/low vulnerability) in targeted micro watersheds.</i></p> <p><i>SCCF AMAT Indicator 2.2.2.1: 80 % of population covered by climate change risk measures (disaggregated by gender).</i></p> <p><i>SCCF AMAT Indicator 2.3.1.1: 3 Risk reduction and awareness activities introduced at local level, such as: Monitoring/Forecasting capacity (EWS, Vulnerability mapping system); ICT and information dissemination; Community Workshops for CC adaptation.</i></p>	<p>recovery, including contingency planning with a gender-sensitive perspective.</p> <p>4.2.1: 6 climate, biophysical and social risk maps prepared by local communities, covering the entire population, identified signposted, and conditioned safe places to protect the communities in case of emergency.</p> <p>4.2.2: Local communities (70-100 % of the population of targeted micro watersheds) integrated in municipal and departmental networks and structures for rapid response to extreme weather events. 6 municipal and departmental response mechanisms to extreme weather events integrating 70-90% of the population in targeted micro-watersheds</p> <p>4.2.3: Local and departmental governments are taking the lead in reducing vulnerability to CC through the design and implementation of two Action Plans for coping with natural disasters and weather emergencies, and to reduce climate-induced economic losses in Texistepeque, and Candelaria de la Frontera.</p>			
<p>5. Monitoring and Evaluation, and information dissemination</p>	<p>TA</p>	<p>5.1: Project implementation based on results-based management.</p>	<p>5.1.1: Project monitoring system providing six-monthly reports on progress in achieving project output and outcome targets 5.1.2: Midterm review and final evaluation reports 5.1.3: Project best practices and lessons learned disseminated via publications, project website and others (topics: watershed management and disaster risk</p>	<p>SCCF</p>	<p>103,156</p>	<p>309,193</p>

			management, mainstreaming of soil, water conservation and sustainable agriculture practices in local production systems).			
			Subtotal		1,421,370	6,014,574
			Project management Cost (PMC) ⁴		100,000	423,426
			Total project costs		1,521,370	6,438,000⁵

C. SOURCES OF CONFIRMED CO-FINANCING FOR THE PROJECT BY SOURCE AND BY NAME (\$)

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

Sources of Co-financing	Name of Co-financier (source)	Type of Co-financing	Co-financing Amount (\$)
National Government	Ministry of Agriculture and Livestock (MAG)- Food Production and Income Generation Subprogram (FPIGS) of the Family Agriculture Plan (FAP) implemented through the National Centre of Agriculture, Livestock and Forestry Technology (CENTA)	Cash	6,000,000
National Government	CENTA	In- kind	158,000
National Government	MAG - Environmental Strategy for Climate Change Adaptation and Mitigation in the Agriculture, Livestock, Forestry and Aquiculture Sector, implemented through the General Directorate of Forestry, River Basins and Irrigation Management (DGFCR)	In- kind	180,000
GEF agency	FAO	In- kind	100,000
Total Co-financing			6,438,000⁶

D. TRUST FUND RESOURCES REQUESTED BY AGENCY, FOCAL, AREA AND COUNTRY¹

GEF Agency	Type of Trust Fund	Focal Area	Country Name/ Global	(in \$)		
				Grant Amount (a)	Agency Fee (b) ²	Total c=a+b
FAO	SCCF		El Salvador	1,000,000	100,000	1,100,000
FAO	GEF TF	Land Degradation	El Salvador	521,370	52,130	573,500
Total Grant Resources				1,521,370	152,130	1,673,500

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

² Indicate fees related to this project

F. CONSULTANTS WORKING FOR TECHNICAL ASSISTANCE COMPONENTS:

Component	Grant Amount (\$)	Co-financing (\$)	Project Total (\$)
Local consultants	228,402	313,136	541,538
International consultants	0	36,000	36,000

G. DOES THE PROJECT INCLUDE A "NON-GRANT" INSTRUMENT?

NA

N/A

⁴ PMC should be charged proportionately to focal areas based on focal area project grant amount in Table D below

⁵ The same as footnote 3 above.

⁶ Ibid



FAO/GLOBAL ENVIRONMENT FACILITY

PROJECT DOCUMENT



PROJECT TITLE: Climate Change Adaptation to Reduce Land Degradation in Fragile Micro-Watersheds located in the municipalities of Texistepeque and Candelaria de la Frontera	
PROJECT SYMBOL: GCP/ELS/012/GFF and GCP/ELS/013/SCF	
Recipient Country: El Salvador	
Resource Partner: GEF and SCCF	
FAO project ID: 614715	GEF/SCCF Project ID: 4616
Executing Partner(s): Ministry of Agriculture and Livestock (MAG)	
Expected EOD (starting date): April, 2014	
Expected NTE (End date): March, 2017	
Contribution to FAO's Strategic Framework¹	<p>a. Strategic objective/Organizational Outcome: SO2: OO2; SO5: OO1, OO2, OO3, OO4.</p> <p>b. Regional Result/Priority Area: Food security; climate change and environmental sustainability; family farming²</p> <p>c. Country Programming Framework Outcome: CPF-1 (Family Farming, Nutrition and Poverty Alleviation), and CPF 3 (Natural resources management).</p>
GEF Focal Area/LDCF/SCCF: Land Degradation; SCCF Climate Change Adaptation	
GEF/LDCF/SCCF Strategic Objectives: LD-1, LD-3; CCA-1, CCA-2	
Environmental Impact Assessment Category (insert √): A B C √	

¹ For projects operated by country offices, it is necessary to link projects in FPMIS at OR level. For all other projects, linkage at product/service level is necessary

² Based on *Areas of Priority Actions for Latin America and the Caribbean for the Following Biennium (2014–2015)*, taking into account the summary of recommendations of regional technical commissions, 32nd Regional Conference for Latin America and the Caribbean. Buenos Aires, Argentina, 2012. Source: <http://www.fao.org/docrep/meeting/024/md240e.pdf>

Financing Plan: GEF/SCCF allocation:	USD 1 521 370
<u>Co-financing:</u>	
FAO (in-kind):	USD 100 000
Ministry of Agriculture and Livestock (MAG) - <i>Food Production and Income Generation Subprogram (FPIGS) of the Family Agriculture Plan (FAP)</i> implemented through CENTA (2014-2016) Cash contribution:	USD 6 000 000
CENTA in-kind contribution (2014-2016):	USD 158 000
MAG - <i>Environmental Strategy for Climate Change Adaptation and Mitigation in the Agriculture, Livestock, Forestry and Aquiculture Sector</i> , implemented through DGFCR. In-kind contribution:	<u>USD 180 000</u>
Subtotal Co-financing:	USD 6 438 000 ³
Total Budget:	USD 7 959 370

EXECUTIVE SUMMARY

El Salvador is the smallest and most densely populated country in Central America. Almost half of the country's population lives in poverty, particularly in rural areas where almost 60% of the population is poor. 40% of El Salvador's population lives in rural areas, and 74% of its total land mass is currently under cultivation. Much of the country's territory is currently exposed to rapid soil and water degradation, and its population is highly vulnerable to natural disasters, including changing weather patterns and extreme weather events associated to climate change (CC).

The combination of El Salvador's tropical climate, varied topography and geography generates a rich diversity of natural and agro-ecosystems. However, the ecosystems' capacity of providing valuable services is currently under great pressure due to the unsustainable use of natural resources (particularly soil and water), as well as to CC impacts. The Lempa River watershed is El Salvador's main water resource, covering practically half of the country's territory. The Lempa river watershed provides water to most of the country's population, including the capital city of San Salvador and its metropolitan area (which represents 32% of the country's population), and generates most of the country's hydroelectricity.

The department of Santa Ana is part of the Lempa River's upper-watershed. This area is considered part of the Central American "dry corridor," which has been affected by rainfall reduction and increased drought due to CC variability, as well as by an increase in extreme weather events leading to flooding and landslides. Within the department of Santa Ana, the municipalities of Texistepeque and Candelaria de la Frontera have been particularly affected by droughts and extreme weather events

³ The Ministry of Agriculture (MAG) of El Salvador agrees to commit an annual cash co-financing of USD 2 million, through the FPIG-PAF, for the three years of project implementation (2014, 2015, 2016) . The amount of USD 2 million can be budgeted for current years only, as national law prevents the MAG from committing financial resources for upcoming years until new year budgets are approved. These resources have been regularly allocated by MAG since 2005 and this practice is foreseen to be sustained in coming years.

including flooding and landslides, particularly in the following sub-basins: Atescatempa, Cusmapa, Guajoyo and Pampe (Municipality of Candelaria de la Frontera); and Barranca Honda, El Palmo, Ipayo and San Jacinto (Municipality of Texistepeque), all located in the upper Lempa River basin and considered highly vulnerable, based on the assessment of their hydro, topographic, and socio-economic features conducted during project preparation.

The proposed *Climate Change Adaptation to Reduce Land Degradation in Fragile Micro-Watersheds located in the municipalities of Texistepeque and Candelaria de la Frontera* project is a joint effort by the Ministry of Agriculture and Livestock, the Ministry of Environment and Natural Resources (MARN) of El Salvador, other national partners, FAO, the SCCF, and the GEF to reverse land degradation processes, reduce the vulnerability to the adverse impacts of CC and variability, and to increase adaptive capacity to respond to the impacts of CC and variability, with the participation of small-scale rural producers - linked to the Family Agriculture Plan (FAP)-, in targeted micro-watersheds of the Santa Ana Department.

The project strategy is to promote a shift away from the current context of unsustainable local agriculture and livestock production systems, weak institutional capacities, and high vulnerability to extreme weather events. To attain this aim, the Project will promote integrated natural resources management (INRM) and the introduction of more resilient production systems at local level. The adoption of INRM will enhance local population's adaptive capacities to face the negative impacts of CC and variability. In addition, the Project will strengthen institutional arrangements through multi-stakeholders' processes, promoting coordination between family farmers, community-based associations, local and national institutions.

The project's Global Environmental Objective is to contribute to arresting and reversing current global trends in land degradation, in particular desertification and deforestation, through the promotion of sustainable land and water management practices in areas with highly degraded natural resources and vulnerable to desertification in the Santa Ana Department. The project's Adaptation Objective is to reduce the vulnerability to the adverse impacts of CC and variability, and to increase adaptive capacity to respond to these impacts, with the participation of small scale rural producers – linked to the Family Agricultural Plan (FAP) – in targeted micro-watershed in the Santa Ana Department. The project's Development Objective is to increase and improve the provision of goods and services from agriculture and forestry in a sustainable manner, through the promotion of integrated natural resources management (INRM) and the reduction of land degradation; and to increase the resilience of livelihoods to threats and crises by mainstreaming climate change adaptation (CCA) and disaster risk reduction (DRR) into Fragile Micro-Watersheds Management Plans (FMWMPs); with the participation of small-scale farmers.

The project will be implemented through the following components:

Institutional strengthening in design and implementation of Fragile Micro-Watershed Management Plans (FMWMPs) that increase adaptive capacities to the adverse impacts of CC, based on a participatory and gender-sensitive approach;

Soil quality enhancement based on the increase of vegetation cover, Integrated Natural Resource Management (INRM), suitable land-use and gender-sensitive management, recovering flow of agro-ecosystem services in fragile micro-watersheds

Increasing water quality and quantity to diversify livelihoods and income sources of vulnerable sectors in targeted micro-watersheds, enhancing participatory and gender-sensitive management;

Improving disaster risk management (DRM) to increase adaptive capacity to climate change, in vulnerable sectors living in targeted micro-watersheds;

M&E and information dissemination;

The expected outcomes of the project are: (i) Seven institutions present in the project intervention area have enhanced capacities to integrate CCA in fragile micro-watershed planning and management processes, based on intersectoral coordination, and a bottom-up and gender-sensitive approach; (ii) 50-75% of men, women, local authorities and institutions present in the project intervention area *are aware of* the adverse impacts of climate change, appropriate responses, and affirm their ownership of the processes of adaptation to climate change. (Baseline: Men, women, local authorities and institutions in target areas have *little awareness* of adverse impacts of CC, and are *not participating* in adaptation processes); (iii) Food production has increased by 10% and dietary habits have improved leading to a 2% decrease in child malnutrition in the project intervention area (baseline: child malnutrition: 19.6% in Texistepeque, and 17.6% in Candelaria de la Frontera); (iv) 40% of soils in targeted project areas have increased vegetation cover (fruit trees, forest trees, grass, and bush, among others) for soil and water protection and conservation (baseline: 13% of soils in the project targeted areas have vegetation cover for soil and water protection and conservation: 501 hectares); (v) 40% of soils in the project targeted areas have been covered by INRM practices in the wider landscape resulting in sustained agricultural productivity (proxy indicator: 2.89 Tons of corn/ha/year) and reduced vulnerability for local communities (baseline: 0.3% of soils -12 ha- in the project targeted areas are covered by INRM practices in the wider landscape. Agriculture productivity: 2.75 Ton of corn/ha/year); (vi) 9,500 m³ of water available in targeted areas through the improvement of rainwater collection infrastructure, the building of catchment and water conveyance systems for household and productive uses, and the protection of 10 water sources; (vii) Households and communities have more secure access to livelihood assets; (viii) 50-75% of target population have moderate awareness (as defined in the SCCF/LDCF AMAT, disaggregated by gender) of predictable adverse impacts of CC and have adopted appropriate response measures; (ix) Vulnerability and risk perception index disaggregated by gender have increased from 1/2 (extreme/high vulnerability) to 3/4 (medium/low vulnerability) in targeted micro-watersheds; and (x) Project implementation based on results-based management.

TABLE OF CONTENT

GLOSSARY OF ACRONYMS	7
SECTION 1 – RELEVANCE (strategic fit and results orientation)	9
1.1 GENERAL CONTEXT	9
1.1.1 Rationale	19
1.1.2 FAO’s comparative advantages	28
1.1.3 Participants and other stakeholders	29
1.1.4 Lessons learned from past and related work, including evaluations	30
1.1.5 Links to national development goals, strategies, plans, policy and legislation, GEF/SCCF and FAO’s Strategic Objectives	31
SECTION 2 – PROJECT FRAMEWORK AND EXPECTED RESULTS	34
2.1 PROJECT STRATEGY	34
2.2 PROJECT OBJECTIVES	34
2.3 EXPECTED PROJECT OUTCOMES	35
2.4 PROJECT COMPONENTS AND OUTPUTS	38
2.5 GLOBAL ENVIRONMENTAL BENEFITS/ADAPTATION BENEFITS	50
2.6 COST EFFECTIVENESS (alternative strategies and methodologies considered)	52
2.7 INNOVATIVENESS	53
SECTION 3 – FEASIBILITY (fundamental dimensions for high quality delivery)	54
3.1 ENVIRONMENTAL IMPACT ASSESSMENT	54
3.2 RISK MANAGEMENT	54
3.2.1 Risks and mitigation measures	55
SECTION 4 – IMPLEMENTATION AND MANAGEMENT ARRANGEMENTS	57
4.1 INSTITUTIONAL ARRANGEMENTS	57
4.2 IMPLEMENTATION ARRANGEMENTS	63
4.3 FINANCIAL PLANNING AND MANAGEMENT	70
4.3.1 Financial plan (by component, outputs and co-financier)	70
4.3.2 GEF/LDCF/SCCF inputs	72
4.3.3 Government inputs	73
4.3.4 FAO inputs	73
4.3.5 Other co-financiers inputs	73
4.3.6 Financial management of and reporting on GEF/LDCF/SCCF resources	73
4.4 PROCUREMENT	74
4.5 MONITORING AND REPORTING	74
4.5.1 Oversight and monitoring responsibilities	74
4.5.2 Indicators and information sources	75
4.5.3 Reporting schedule	77
4.5.4 Monitoring and evaluation plan summary	79
4.6 PROVISION FOR EVALUATIONS	81
4.7 COMMUNICATION AND VISIBILITY	81

SECTION 5 – SUSTAINABILITY OF RESULTS	83
5.1 SOCIAL SUSTAINABILITY	83
5.2 ENVIRONMENTAL SUSTAINABILITY	84
5.3 FINANCIAL AND ECONOMIC SUSTAINABILITY	84
5.4 SUSTAINABILITY OF CAPACITIES DEVELOPED	85
5.5 APPROPRIATENESS OF TECHNOLOGY INTRODUCED	85
5.6 REPLICABILITY AND SCALING UP	86
APPENDICES	87
Appendix 1: Results Matrix	88
Appendix 2: Work plan (results based)	108
Appendix 3: Results Budget	117
Appendix 4: Risk Matrix	123
Appendix 5: Procurement Plan	126
Appendix 6: Terms of Reference (TORS) for Consultants	127
Appendix 7: Projects Steering Committee Draft Terms of Reference (TORS)	142
Appendix 8: Selected Fragile Micro-Watershed Maps	145
Appendix 9: Letters of Agreement (LOA)	149
Appendix 10: ESRF	163

GLOSSARY OF ACRONYMS

ACEs	Community-based Education Associations
ADESCOS	Community-based Development Associations
AMAT	Adaptation and Monitoring Assessment Tool (SCCF)
AWP/B	Annual Work Plan and Budget
BH	Budget Holder
CC	Climate Change
CCA	Climate Change Adaptation
CD	Capacity Development
CENTA	National Centre of Agriculture, Livestock and Forestry Technology
CEO	Chief Executing Officer (GEF)
DGFCR	General Directorate of Forestry, River Basins and Irrigation Management
DF	Demonstrative family
DRM	Disaster Risk Management
DRR	Disaster Risk Reduction
ECLAC	Economic Commission for Latin America and the Caribbean
EHPM	National Multi-purpose Household Survey of El Salvador
FAO	Food and Agriculture Organization of the United Nations
FAOSV	FAO Representation in El Salvador
FAP	Family Agriculture Plan
FFS	Farmer Field Schools
FMWMPs	Fragile Micro-watersheds Management Plans
FNC	First National Communication to UNFCCC
FPIGS	Food Production and Income Generation Subprogram
FPMIS	Field Project Management Information System
FYDP	Five-years Development Plan 2010-2015 (El Salvador)
GAP	Good Agricultural Practice
GDP	Gross Domestic Product
GEBs	Global Environmental Benefits
GEF	Global Environment Facility
GEFSEC	GEF Secretariat
GoELS	Government of El Salvador
HDI	Human Development Index
INRM	Integrated Natural Resources Management
IR	Irradiated Family
LAC	Latin America and the Caribbean
LD	Land Degradation
LTO	Lead Technical Officer
LTU	Lead Technical Unit
LUC	Land Use Change
MAG	Ministry of Agriculture and Livestock
MINSAL	Ministry of Health
MARN	Ministry of Environment and Natural Resources
M&E	Monitoring and Evaluation
NGO	Non-governmental Organization
NR	Natural Resources
NRC	Climate, Energy and Tenure Division (FAO)
NRM	Natural Resources Management
PANSAL	National Action Program to Combat Desertification and Drought in El Salvador
PIF	Project Identification Form (GEF)
PIR	Project Implementation Review

PMAT	Portfolio Monitoring and Assessment Tool (GEF Land Degradation Projects)
PMCU	Project Management Coordination Unit
PPG	Project Preparation Grant (GEF)
PPR	Project Progress Report
PREP	National Program for Ecosystem and Landscape Restoration
PRODOC	Project Document
PSC	Project Steering Committee
PY	Project Year
SCCF	Special Climate Change Fund
SLM	Sustainable Land Manage
SLWM	Sustainable Land and Water Management
SO	FAO Strategic Objective
STAP	Scientific and Technical Advisory Panel
TCI	Investment Centre Division (FAO)
TNR	Third National Report to the UNCCD
TOR	Terms of Reference
UNCCD	United Nations Convention to Combat Desertification
UNDAF	United Nations Development Assistance Framework
UNDP	United Nations Development Program
UNFCCC	United Nations Framework Convention on Climate Change
UNICEF	United Nations Children Fund
USD	United States Dollar
WFP	World Food Program

SECTION 1 – RELEVANCE (strategic fit and results orientation)

1.1 GENERAL CONTEXT

a) General development context related to the project

El Salvador is the smallest (21,000 km²) and most densely populated country in Central America (6.3 million people, equivalent to 300 people/km²). It is bordered by the Pacific Ocean, Guatemala and Honduras. 40% of its population lives in rural areas, and 74 % of its total land mass, equivalent to 1,532,000 Ha, is currently under cultivation (FAOSTAT 2011). El Salvador is classified as a middle-income country by the UNDP's Human Development Index (HDI: 0.680). However, when adjusted by income distribution inequality, its value is reduced by 26.6% (HDI: 0.499). According to latest official estimates, 47.5% of the population is poor (EHPM 2011), and according to ECLAC (2009), 17% lives in extreme poverty (cannot cover their basic food needs). Chronic malnutrition affects 19% of children under five (UNICEF, 2005-2009). Furthermore, most progress on poverty reduction has been achieved in urban areas, while rural areas remain mostly poor: 58% of the rural population is poor, and 25% lives in extreme poverty (ECLAC 2009). Extreme poverty especially affects households whose only income source comes from agriculture. Rural women are one of the social groups most affected by poverty, due to the lack of employment opportunities, access to credit and training. It is estimated that one in three Salvadoran households are headed by women, a percentage that increases in rural areas, as a result of war and male migration (an estimated 2.5 million Salvadorans have migrated and reside abroad, mostly in USA).

With regards to environment and natural resources, the combination of El Salvador's tropical climate with its varied topography and geography (coastal plain, central plateau and volcanic range, northern mountains) gives it a rich diversity of natural and agro-ecosystems. Its relief is composed by low central plateau (400 to 800 m) cut by river valleys and covered with numerous volcanoes, some of which are still active. The highest part of the country is located in the North, including the massif of *Monte Cristo* (2418 m) and *Cerro El Pital* (2730 m). The narrow coastal strip bordering the Pacific Ocean has a maximum width of 25 km. The Lempa River, which is partially navigable, is the main river in the country, and its watershed covers 49% of El Salvador's territory. In altitudes under 800 m, the land is *tierras calientes* ("hot lands"), term used in Latin America to describe lands with a distinct tropical climate, where agriculture activities are concentrated on the cultivation of basic grains and tropical crops, such as sugar cane. There are also temperate lands (800-1800 m) and cold lands (>1800 m). Annual temperature variation is small, with maximum temperatures in April (32° C) and minimum values in December-January (18° C). On the contrary, rainfall varies monthly depending on seasonality, with a pronounced six-months rainy season (May-October) and dry season (November-April), and an annual average rainfall of 1,823 mm (standard deviation: 172,4 mm). However, total rainfall values have decreased and annual average temperature has increased in the last three decades, caused potentially by global warming. The critical period known as *canícula* brings together these two climatic phenomena (absence of rain and intense heat) and usually affects El Salvador – during 7-25 days in late July - early August.

Much of the country's territory is currently exposed to rapid soil and water degradation, and its population is highly vulnerable to natural disasters, including changing weather patterns and extreme weather events associated to climate change (CC). According to the Global Facility for Disaster Reduction and Recovery Annual Report 2010, El Salvador tops the list of most vulnerable countries: 88.7% of its territory is considered a high risk zone, where 95.4% of its population is located and 96.4% of its gross domestic product is generated. Most of El Salvador's territory is mountainous, including active volcanoes. Many areas have suffered severe deforestation and are highly vulnerable to land erosion. At present, forest cover is scarce: 21% including shaded coffee and mangrove forests (MARN, 2013).

The Lempa River watershed is El Salvador's main water resource, covering practically half of the country's territory (as well as part of Guatemala and Honduras). The Lempa river watershed provides water to most of the country's population, including the capital city of San Salvador and its metropolitan area (which represents 32% of the country's population), and generates most of the country's hydroelectricity.

The department of Santa Ana is part of the Lempa River's upper-watershed. This area has been particularly affected by rainfall reduction and increased drought due to climate variability, and is therefore considered part of the Central American "dry corridor". Within the department of Santa Ana, the "dry corridor" especially affects the municipalities of Texistepeque and Candelaria de la Frontera, with increased drought and *canícula* in the following sub-basins: Atescatempa, Cusmapa, Guajoyo and Pampe (Municipality of Candelaria de la Frontera); and Barranca Honda, El Palmo, Ipayo and San Jacinto (Municipality of Texistepeque), all located in the upper Lempa River basin and considered highly vulnerable, based on the assessment of their hydro, topographic, and socio-economic features conducted during this project preparation⁴.

Texistepeque has a population of 18,143 people (2,245 in urban areas, and 15,898 in rural areas). There are 2,691 rural producers, of which 2,334 are small-scale, and 357 have access to the market. 2,575 rural producers cultivate basic grains. Extreme poverty rate is at 21.6%, and 13.6% of children under five are undernourished. Candelaria de la Frontera has 24,042 inhabitants (6,307 in urban areas, and 17,735 in rural areas). There are 2,633 rural producers, of which 2,138 are small-scale and the remaining 496 are trade-oriented. 2,444 rural producers grow basic grains. Extreme poverty rate is at 19.8%, and 14.6% of children under five are undernourished (IV Population and Housing Census 2007, Agriculture Census 2007-2008, and UNDP 2009).

Both municipalities have economies based on basic grains and livestock production, which are the main income sources for rural households. Local food security, municipal food

⁴The criteria used for site selection included: technical capacity in managing water systems (i.e. existence of irrigation systems and potable water systems), geographical indicators (i.e. settlements affected by floods, size of the micro-watershed), biophysical indicators (i.e. soil types, areas with land-use conflicts, vegetation cover), socio-economic and institutional indicators (i.e. livelihood diversification patterns, population size, literacy rate, existence of local committees, NGO presence, institutional presence).

markets, and job generation are linked to oscillations in the local agriculture sector. They are highly threatened by climate variability and inflation (WFP, 2011). As in the broader context, climate risks here are linked to excess or deficit rainfalls, longer *canículas*, floods and frequent droughts, while social risks are related to food and input prices increases. Recent economic losses have been caused mainly by droughts (30.9%), plagues (29%), floods (26.6%), and others (13.5%). Local households have responded to these climatic events by doing nothing (40.9%), working in another economic activity (33.7%), saving in food purchases (17.5%), being helped by friends/relatives (6.1%), and selling land/animals (1.8%) (Agriculture Census 2010). Vulnerable households in the selected sites typically react to climate events by changing habits like selling food reserves and livestock, diminishing meal times, informal trade, and migrating to search for new jobs. Some of these responses are against their own food security and might reduce their capacity to face climate-induced crises in the future.

b) Land Degradation and Climate Change (CC) vulnerability

Land degradation and impacts on global environmental benefits

Agro-ecosystems and forest ecosystems in the rural areas of El Salvador provide a series of global and local environmental benefits, such as the provision of food and income, water catchment and filtration, biodiversity conservation, and carbon sequestration. Major threats are currently being posed to the provision of these global and local environmental benefits, due to the deteriorated state of natural resources, including deforestation and soil degradation, and in extreme cases, desertification. Most of El Salvador's land is suitable for forest cover and if allowed would revert back into forest (through natural regeneration processes). Hillsides represent 65% of the total territory and only 46% of the (965,860 has.) is suitable for conventional agriculture production, while a minor 17% could be cultivated with intensive practices. In addition, soil is generally shallow (less than 50 cm) with variable internal stoniness that limit the full growth of plant-root systems and reduce water storage capacity (CENTA-FAO-Netherlands, 2000). As a result, hillside-based agriculture makes rural production economically and environmentally risky, even if the average soil fertility is still medium-high. The combination of climate variability, fragile watersheds and soil conditions may create production losses of 10 tons/year (in lands sloped less than 15%) and up to 30 tons/year (in lands sloped 35-50%) (*El Salvador Forestal*).

However, demographic pressure, unequal land tenure, poverty and civil war have compelled farmers to cultivate on the slopes of the mountains where traditional crops of maize, beans and sorghum are grown, usually with little or no soil management and conservation practices. In addition, unsustainable agriculture practices, land over-exploitation (61% of land/soil exceeded), pressures from competing land uses (e.g. human settlements) (CENTA-FAO 1997, et al) and the use of wood for cooking in traditional stoves are contributing to that agro-ecosystems and forest ecosystems are highly degraded, especially in mountain areas. Extensive cattle production systems aggravate the situation.

Local communities in the Department of Santa Ana widely apply traditional agricultural practices (mainly clearing and burning) in the mountainsides, leaving soils without vegetative cover early in the rainy season. These practices increase people's vulnerability to

natural disasters (floods and landslides), and lead to water mismanagement, water shortages in the dry season, lower water quality, sedimentation, and pressures on downstream ecosystems. Water resources are also suffering from soil erosion and siltation of rivers and dams, as well as contamination from run-off water containing agrochemical fertilizers and pesticides, and untreated domestic sewage and solid wastes. 90% of the country's rivers are contaminated, posing additional challenges for sustainable development (UNDP, 2006). Furthermore, land use change (LUC) and rainfall patterns are in particular affecting water balance in the East and Northwest of the country, where the level of water availability *per capita* is low. Water for human consumption is also complicated by that 29,2% of water resources comes from abroad (Guatemala and Honduras), 62% comes from groundwater, and only the remaining 8.2% is superficial water.

According to El Salvador's Third National Report (TNR) to the UNCCD (2006), the country's situation with regards to Land Degradation is assessed as follows: i) agricultural lands are highly eroded as a result of unsustainable land uses; ii) watersheds and natural forests are severely under pressure; iii) awareness should be raised among decision-makers and people to deal with droughts; iv) projects and activities aimed to enhance socio-environmental conditions in areas affected by droughts, are needed; v) participatory and consensual processes should be encouraged to create capacities and institutional development that will contribute to the implementation of Action Programs, based on the National Action Program to Combat Desertification and Drought in El Salvador (PANSAL).

According to the baseline studies conducted as part of the preparation of the present project, the human causes of LD in Texistepeque and Candelaria de la Frontera (the project area) include: i) unsustainable soil management (cultivation in highly unsuitable/vulnerable soils⁵, missing or insufficient soil conservation, runoff and erosion control measures⁶); ii) inadequate crop and rangeland management (reduction of plant cover⁷ and residues, inappropriate application of manure, fertilizer, herbicides, pesticides and other agrochemicals⁸ or waste, nutrient mining, shortening of the fallow period in shifting cultivation⁹); iii) deforestation and removal of natural vegetation (conversion to agriculture, forest/grassland fires¹⁰); iv) over-exploitation of vegetation for domestic use (excessive

⁵ In the selected sub-basins in Candelaria de la Frontera, 72%-97% of the total land area is used for basic grain production in soil classes IV, V and VII (in El Salvador, soils have been classified using USDA criteria under which soil types IV, V and VII are considered unsuitable for cultivation of basic grains); in Texistepeque, this ranges from 20-82% of the total land area.

⁶ According to the baseline study, soil loss is mainly due to water erosion (intense rainfall concentrated in certain areas) and is estimated at an average of 12-30 tons/Ha/year.

⁷ On average, only 13% of the total land area in the project area has vegetation cover.

⁸ According to the baseline study, 100% of producers in the project pilot areas use agrochemical fertilizers, pesticides and herbicides, such as *Paraquat*, without adequate protection measures, thus affecting the environment and their own health.

⁹ Due to increasing population pressures over land, the practice of *barbecho* or a 5-year fallow period in parcels cultivated with basic grains has been completely abandoned since before the 1960s.

¹⁰ Traditional agriculture and livestock practices in the project area include clearing and burning before the start of the rainy season to prepare lands for basic grain cultivation, as well as, burning of pastures for land renovation and to eliminate competition from invasive plants.

gathering of fuel wood, local timber, fencing materials¹¹); v) overgrazing (excessive cattle/hectare, too long or extensive grazing periods in limited land areas¹²); vi) industrial activities and mining (waste deposition); vii) discharges from sanitary sewage disposal and excessive runoff; and viii) water cycle disturbance that lead to lower infiltration rates/increased surface runoff. The natural causes of LD in the project area are: temperature changes, seasonal rainfall change, and heavy/extreme rainfall occurrence. The indirect causes/drivers identified in the baseline studies¹³ include: population pressures, land tenure¹⁴, poverty, lack of education, lack of awareness, lack of access to knowledge, extension and support services; poor governance mechanisms, lack of institutional capacities, and political decisions.

Vulnerability to climate change and variability

At present, extreme weather events (storms and droughts) are the main CC threats in El Salvador. In the future, expected increase in temperature and decrease in rainfall combined with increase in climate variability¹⁵ will also pose significant challenges. According to MARN (2013), El Salvador contributes only 0.04% to the global emissions of greenhouse gases, but is one of the countries most severely affected by extreme weather events¹⁶. These events, directly affecting El Salvador, increased from one in the 1960s and 1970s, to eight in the 2000s. Before the 1980s the storms were originated in the Atlantic Ocean. Since 1980, the storms have formed in the Eastern Pacific Ocean and come ashore further South causing major damage in El Salvador, while the Atlantic hurricanes have also changed paths, having a greater impact on the country. Due to these changes, El Salvador has faced an increased number of major disasters, with three occurring between November 2009 and October 2011 (Low Pressure System E96/Ida, Tropical Storm Agatha, and Tropical Depression 12E), which together caused loss and damages totaling USD 1,300 million (current dollars), equivalent to 6% of annual GDP (MARN, 2013).

The vulnerability to the changing climate is worsened by the country's demographic characteristics. As mentioned above, El Salvador has the highest population density in Central America and future scenarios indicate that population growth will duplicate between 1995-2020, and will double up again by 2100. According to El Salvador's First

¹¹ Wood extraction for firewood sale and other uses is an important activity in the project area. Most families use firewood for domestic cooking.

¹² Uncontrolled cattle grazing is common in the project areas. Livestock management systems are extensive, consisting of 8-12 heads of cattle/Ha, without any management practices such as rotation and renovation of pastures, leading to degradation of pastures.

¹³ Solano, 2012.

¹⁴ According to the baseline study, almost 50% of producers are not landowners but tenant farmers (lease lands for cultivation).

¹⁵ Future climate scenarios are key pictures in relation to CC vulnerability and CC adaptation needs. According to the study *The Economics of Climate Change in Central America: Summary 2010* (ECLAC, 2010), future climate scenarios for El Salvador indicate there would be a clear upward trend in temperatures. Depending on the scenarios (reduced emissions due to increased mitigation measures versus business as usual) temperature increases may range from +0.53°C to +0.77°C by 2020; +1.40°C to +2.03°C by 2050; and +2.63°C to +4.73°C by 2100. Rainfall scenarios do not register a clear trend up to 2050, but there is a downward trend ranging from -13% to -32% of mean annual rainfall by 2100.

¹⁶ According to the Global Climate Risk Index produced by Germanwatch, El Salvador ranked first among 177 countries affected by extreme weather events in 2009 and ranked fourth in 2011 (MARN, 2013).

National Communication (FNC) to the UNFCCC, this demographic pressure will increase demand for food in the same proportion (FNC, 2000). Maize, rice, and beans are the staple diet of the population and, therefore, the main source of protein and calories, contributing to over 50% of the daily calorie intake per capita, especially in rural areas. Subsistence farmers are the main growers of corn and beans, generally in marginal lands, with poor access to technology and high vulnerability to CC. In addition, the urban population depends heavily on corn and beans produced by those farmers (FNC, 2000). In this context, national basic grain production is usually insufficient to supply the domestic market, even in the absence of the expected CC impacts. CC impacts aggravate food deficits already present in the baseline scenario. Climate variability and grass losses (*poaceae/gramineae*) directly affect GDP, which largest share is agricultural including basic grains production. It is estimated that the national GDP (in values of 2007) may go down by -2% to -8% in the near future, and cumulatively decrease around -2% to -4% by 2100, depending on the severity of climate variability (ECLAC, 2010). The social impacts of CC include reduced crop productivity, impacts on health, nutrition, education and poverty levels. Droughts and *canícula* severely reduce household subsistence incomes and food security and impact directly on the staple food basket and inflation rate (consumer price index), depreciating real wages, and reducing purchasing power. In addition, changes in diet heavily influence the levels of mortality, morbidity and life expectancy (FNC, 2000).

At human level, the vulnerability to climate change is driven by two additional problems in El Salvador: i) the degradation of land and other natural resources, particularly water, that put into risk the livelihoods of poor people in rural areas; and ii) a series of socio-economic vulnerabilities: high poverty levels, low education levels and low institutional capacity for CC adaptation, unsustainable natural resource management (NRM), that are particularly evident at local (municipal and community) level. The baseline studies, prepared during the project design process, demonstrated how Candelaria de la Frontera and Texistepeque are particularly affected by these socio-economic vulnerabilities (see subsection 1.d below). Livelihoods in both municipalities are highly dependent on basic grain production (maize and sorghum)¹⁷, and informal jobs. The linkage between dependence on subsistence agriculture, unsustainable land management and drought effects explain how these targeted municipalities are highly vulnerable to CC.

As part of project preparation, an assessment was carried out to map vulnerability within selected sub-basins¹⁸. Vulnerability was defined in terms of land overexploitation, or the use of unsuitable land types for the cultivation of basic grains. According to the resulting baseline study maps, the most vulnerable micro-watersheds in the selected sub-basins are: Río Santa Gertrudis, Quebrada Mojarras Blancas, Río El Jute, in the municipality of Candelaria de la Frontera; Río San Jacinto, Río Cujucuyo, Quebrada Guarnecia in the municipality of Texistepeque (see maps 1, 2, 3 and 4 in Appendix 8).

¹⁷ In the project area small-scale farmers apply the following system: in May they sow maize. Then, during the drying stage (when the corn crop stalks are bended), they sow sorghum. According to the baseline study developed during this project preparation, the average annual productivity of maize and sorghum crops are 2.75 tons/ha/year (in the project area). Of these, an average of 1.4 tons/ha/year are used for self-consumption.

¹⁸ Atescatempa, Cusmapa, Guajoyo and Pampe (Municipality of Candelaria de la Frontera); and Barranca Honda, El Palmo, Ipayo and San Jacinto (Municipality of Texistepeque).

The socio-economic assessment conducted as part of this project preparation detected that a major barrier for CC adaptation in Texistepeque and Candelaria de la Frontera (particularly in the selected fragile micro-watersheds) is the lack of awareness of the human-induced degradation processes. Households and producers interviewed were not aware of the negative impacts caused by the intensive land use for basic grain cultivation, the lack of soil and water conservation practices and technologies, and the increased deforestation of the few remaining forest areas in local communities, used to obtain fuel wood for domestic cooking. In addition, both municipalities suffer local institutional vulnerabilities, linked to the absence of disaster risk management strategies, weak monitoring and surveillance systems, weak regulatory frameworks, and weak local coordination systems (see further description in subsection 1.d.i)

c) Institutional and policy framework

The main central government institutions related to LD and CCA in El Salvador include the Ministry of Agriculture and Livestock (MAG) and the Ministry of the Environment and Natural Resources (MARN).

MAG has authority over agriculture, livestock, forestry and fisheries sectors¹⁹ and its institutional chart includes a General Directorate of Forestry, River Basins and Irrigation Management (DGFCR²⁰). The DGFCR is responsible for generating and distributing information and providing technical and legal assistance on forests, soil and water resources, as well as implementing programs contributing to the sustainable development of these resources. Within the DGFCR, the Irrigation and Drainage Division is responsible for administrating and regulating the irrigation and drainage systems. Also within the DGFCR, a Climate Change Division has recently been created (July 2012) responsible for implementing the newly defined *Environmental Strategy for Climate Change Adaptation and Mitigation in the Agriculture, Livestock, Forestry and Aquaculture Sector* (MAG 2012).

Additionally, the National Centre of Agriculture, Livestock and Forestry Technology (CENTA²¹) is a semi-autonomous decentralized government agency ascribed to MAG. CENTA has a Technical Transfer Department, and includes a network of Extension Agencies which provide technical outreach services to local farmers.

MAG's flagship program is the Family Agriculture Plan (FAP). The FAP follows an integrated natural resources management (INRM) approach, focused on watersheds and territorial planning, with the following components: i) The National Supply Program for Food Security and Nutrition, which includes two Sub-Programs: a) the Food Production and Income Generation Subprogram, implemented by FAO; and b) the Supply

¹⁹MAG's authority is defined by the following national laws: Forestry Act (*Ley Forestal*), Irrigation and Drainage Act (*Ley de Riego y Avenamiento*), General Act for Management and Promotion of Fisheries and Aquaculture (*Ley General de Ordenación y Promoción de Pesca y Acuicultura*), and Act of Plant and Animal Health (*Ley de sanidad vegetal y animal*).

²⁰ For its name in Spanish, *Dirección General de Ordenamiento Forestal, Cuencas y Riego*.

²¹ For its name in Spanish, *Centro Nacional de Tecnología Agropecuaria y Forestal*

Subprogram; ii) the Family Farming Program for the Production Chain; iii) the Liaison Program with Industry and Trade and iv) the Program for Agricultural Innovation.

MARN is the environmental authority of El Salvador, backed by the national Environment Law. It oversees the country's commitments to the UNCDD and UNFCCC and other multilateral environmental conventions. It has a Department of Climate Change and Strategic Affairs. MARN has recently updated the National Environmental Policy (2012) with two central goals: reverse environmental degradation, and reduce vulnerability to climate change. The latter also emphasizes the central role of Environmental Units (established within each Ministry, government line agency, and municipality) in integrating and monitoring environmental principles in planning processes.

The MARN's main initiative is the National Program for Ecosystem and Landscape Restoration (PREP²²). This program has four components which are aimed at: i) promoting sustainable agriculture; ii) restoration and conservation of critical ecosystems under new governance schemes in mangrove areas, forests and wetlands; iii) the use of natural infrastructure in harmony with physical infrastructure; and iv) working partnerships between government and local stakeholders. MARN and MAG have recently entered into an inter-institutional agreement to reaffirm technical synergies between PREP and FAP (July 2012).

MARN has also recently created a comprehensive Climate Observation and Early Warning System to systematically monitor weather and other potentially catastrophic natural events such as earthquakes and volcanic eruptions. The Climate Observation and Early Warning System includes an Integrated Hazards Center linked to the national civil protection system, including regional (Department level) and Municipal civil protection committees.

d) Problems the project will address

i) Vulnerability to CC and lack of adaptation capacities in Candelaria de la Frontera and Texistepeque

The project will address two main problems related to the CC impacts at local level: the vulnerability level and the lack of adaptation capacities. As mentioned above, the baseline studies conducted for the preparation of this project confirmed that the population living in Candelaria de la Frontera and Texistepeque, and in particular the communities located in the most fragile micro-watersheds, are highly vulnerable to CC and have low adaptation capacities to deal with droughts, extreme weather events and natural disasters (including floods, landslides, and mudslides). As in the national context, the root causes of vulnerability at local level are predominantly linked to the socio-economic and institutional conditions: 58% of the rural population lives in poverty²³. Rural livelihoods are based on

²² For its name in Spanish, *Programa Nacional de Restauración de Ecosistemas y Paisajes*

²³ In the municipality of Texistepeque, 82.6% of the population lives in rural areas. 16.2% of children under 7 are low height and low weight. Average schooling is 4 years. 17.9% of the population receive remittances from abroad (mainly from the USA). 64% of households have access to water inside the house, 17.6% of households have access to garbage collection, and 49% of households use firewood for cooking. In the municipality of Candelaria de la Frontera, 64% of the population lives in rural areas. 15.8% of children under

traditional agriculture (basic grains) and livestock (extensive cattle) production, managed through unsustainable soil and water practices. There is a predominance of small-scale subsistence farmers. The communities' needs add negative pressures on the already exhausted natural resources. There is low water availability, quantity and quality for both domestic and productive uses. Local institutions have low capacities to implement CCA strategies, to promote the sustainable management of natural resources, or to foster efficient action plans for disaster risk management.

Additionally, other elements contribute to create a highly vulnerable socio-economic environment: the huge quantity of local producers are dedicated to the cultivation of basic grains (85%); 94% of workers are employed under temporary contract arrangements; and in cases of damage to crops due to extreme weather, only 18% achieve recovery with their own resources. The low availability of food and insufficient consumption of grains and other foods affect the nutritional status of the population in general, and children in particular. Local food availability is more limited due to the impact of extreme weather events in the region. Financial losses due to droughts range from USD 900 to USD 1,500 per family per year. At country level, financial losses range from USD 4.8 million to USD 8 million per each episode of drought. Considering that over 70% of households in rural municipalities have an average income of USD 200/month, these losses represent between 38% and 63% of total household revenues. In the last ten years three episodes of severe droughts have occurred, causing total losses of about USD 14-24 million between 2003 and 2012. In the case of floods and landslides, during 2011 severe storms and excessive rainfalls caused losses of about USD 266,271 in Candelaria de la Frontera and USD 321,307 in Texistepeque; landslides alone caused damages for about USD 160,516 in Candelaria de la Frontera, while for Texistepeque no significant damage was reported. In total, in a year of excessive rainfalls, losses and damages in both municipalities amount to an average of USD 748,094²⁴.

The project will also address the vulnerabilities and low adaptation capacities linked to the unsustainable water resources management. In terms of water availability, the current situation is highly precarious due to the deteriorated state of the existing water collection infrastructure and community-based water systems, as well as the lack of irrigation infrastructure. Due to climate change and variability, both municipalities have reported a 10-30%²⁵ decrease in water resources in the last 10 years. Groundwater sources are being depleted, wells have been dried up by -44%, and water in streams and rivers have reduced by -52.5% in the last decade²⁶.

7 are low height and low weight. Average schooling is 4.4 years. 13.4% of people are receiving remittances from abroad (mainly from the USA). 65.2% of households have access to water inside the house, 19% of households have access to garbage collection services, and 41.3% of households use firewood for cooking. (UNDP-FUNDAUNGO, 2009). Community-based associations and local committees for civil protection and natural resource management are established, however, technical and inter-institutional capacities are extremely weak.

²⁴ Baseline assessment conducted by the Disaster Risk Management Specialist as part of the project preparation process (L. Romano, 2012).

²⁵ Baseline assessment conducted by the Water Resources Management Specialist as part of the project preparation process (G. Cuenca, 2012)

²⁶ Ibidem.

Regarding the natural causes of vulnerability, the project will support the building of more resilient agricultural and livelihoods systems that allow local population to face the expected worsening impacts of CC in the Northern area of El Salvador, namely the increased climate variability, rainfalls reduction, more prolonged and intense *caniculas*, increased torrential rains, and occurrence of hurricanes and tropical storms originated in the Pacific Ocean.

ii) Land degradation in Candelaria de la Frontera and Texistepeque

The project will also address the unsuitable management practices that put pressures on natural resources in Candelaria de la Frontera and Texistepeque, and will promote the adoption of best practices. In both municipalities, unsustainable land and water management practices include:

- **Cultivation of basic grain crops on clean slopes:** This is the typical mountain agriculture system used in the region, where steep slopes and land prone to erosion are cultivated with corn, beans and sorghum. Farmers usually apply rudimentary technologies for planting, such as sowing by spar or pike. Soil vegetation is burned late in the dry season (March-April), leaving vulnerable soils exposed to the first rainfalls in May. Due to the rugged slopes, soils are easily eroded by heavy seasonal rains. The baseline study has detected that no conservation measures are applied by farmers²⁷.
- **Uncontrolled grazing:** Widespread in some fields of the pilot area in both municipalities. Livestock systems are extensive, with an average of 8-12 cattle/ha, usually without any management practice such as pasture rotation or renovation. It is one major cause of pasture and grasslands degradation in the project intervention area²⁸.
- **Wood extraction:** cutting and selling firewood is an important economic activity in the project intervention areas, after agriculture and livestock production. Rural households, mainly women, use firewood for cooking²⁹.
- **Deforestation:** The small-scale rural producers eliminate the few secondary forests that remain in the project intervention areas, for selling firewood and timber. It is a key driver for land use change (from forest to crop fields and pastures, and unproductive lands)³⁰.

²⁷ Baseline assessment conducted by the Sustainable Land Management Specialist as part of the project preparation process (S. Solano, 2012).

²⁸ Ibidem.

²⁹ Ibidem

³⁰ Ibidem

- **Use of agrochemicals:** 100% of the producers in the project intervention areas applied *Paraquat* and other agrochemical products. Knowledge is very low regarding the use of chemicals, damaging the environment and the farmers' health³¹.
- **Reduction of crop residues and cover plants:** Farmers and ranchers in the project intervention area usually clear the land to cultivate by using herbicides, or in the worst case, extensively burning croplands and pastures. This practice has produced a large reduction of vegetative cover in these areas, where only 13.01% of land has vegetative cover (average for the two municipalities of Texistepeque and Candelaria de la Frontera)³².
- **Soil eroding management:** Cultivating in low organic matter slopes without conservation measures leave soils absolutely exposed to the heavy and concentrated rainfalls between May and November. According to the baseline study, soil losses in the project intervention areas are estimated at 12-30 tons/Ha/year³³.

1.1.1 Rationale

a) *Baseline projects and investments for the next 3-5 years addressing the identified threats on GEB and causes and mitigating CC vulnerabilities (main co-financing sources of the project)*

The Government of El Salvador (GoELS) is developing various actions to support the adaptation to climate change and rehabilitation of degraded lands, including the MAG's FAP and its Environmental Strategy for Climate Change Adaptation and Mitigation in the Agriculture, Livestock, Forestry and Aquiculture Sector, and the MARN's PREP, which is focused on the restoration of natural and agro-ecosystems and landscapes in the Lempa River basin, in three pilot areas located in the upper, middle and lower watershed.

The GoELS launched in 2010 its *Five-Year Development Plan (FYDP) 2010-2014*, which is focused on sustainable food production for the domestic market and reducing sector imbalances. The FYDP selected three target areas to work on CCA: disaster risk management, climate threats affecting the most vulnerable population, and critical ecosystem restoration. They are managed through the implementation of regional and sector strategies for sustainable water management, sustainable agriculture production, and biodiversity conservation and use. The Food Production and Income Generation Subprogram (FPIGS)-FAP is part of the FYDP.

The FPIGS-FAP is developing the following activities in the geographical area of the proposed project: i) promoting the management of crop stubble in field surface; ii) developing agroforestry systems; iii) planting permanent crops; iv) disseminating practices for improving water infiltration into soil; and v) protecting water sources. These good

³¹ Ibidem

³² Ibidem

³³ Ibidem

agricultural practices (GAPs) are strengthening individual and community livelihoods in relation to CC and variability impacts. In addition, the FPIGS is promoting the increase of productive capital and crop diversification among small-scale farmers, which will reduce their vulnerability to CC and will diversify and strengthen their livelihoods and sources of income. Moreover, the FPIGS is supporting the dissemination of knowledge among rural subsistence households on sustainable land and water management (SLWM), water conservation and CC adaptation, setting the basis for adaptation and risk reduction awareness activities that will be developed by the proposed project.

The Environmental Strategy for Climate Change Adaptation and Mitigation in the Agriculture, Livestock, Forestry and Aquiculture Sector (2012) is implemented by MAG, as part of the Family Agriculture Plan (FAP), through the DGFCR. The strategy applies a watershed management approach and aims at establishing a climate-resilient and competitive agriculture, livestock, forestry and aquiculture sector, by: i) reducing the vulnerability of rural areas to natural disasters, especially in the area of the Lempa river basin, ii) mainstreaming climate change adaptation in food security action plans, iii) building and promoting institutional knowledge, capacity and coordination within the MAG for environmental management.

The GoELS recently updated its National Environmental Policy (MARN, 2012), and launched the PREP as its flagship program, aimed at reducing economic loss and damage from extreme weather events; furthering adaptation to climate change; enhancing land-based carbon sinks; improving water management and availability, and enhancing biodiversity conservation. The main goal is to restore degraded landscapes and ecosystems in one million hectares, half the territory of El Salvador, starting with selected priority zones. The program is organized around three strategic components. The first PREP component is related to the proposed SCCF/GEF project, since it aims at establishing an agricultural system that is more climate-resilient and biodiversity-friendly, recognizing that the greatest area of land in the country is heavily based on unsustainable practices such as full tillage, burning off fallow growth, and intensive use of agrochemicals. These practices deplete and contaminate soil and water sources, destroy biodiversity, and make the rural landscape highly vulnerable to climate variability and climate change. Sustainability and climate resilience will be promoted through the expansion of agro-forestry, soil and water conservation practices, reduced use of agro-chemicals; enhancement of pastures and partial-stabling of livestock. Expected outcomes are improved soil fertility and water retention, infiltration and regulation of the water cycle; a significant increase in permanent vegetation cover; enhanced conservation of biodiversity and agro-biodiversity; and expanded mitigation of climate change through the sequestration of carbon in soil and permanent vegetation (MARN 2013).

b) *Remaining barriers to address threats on GEB and CC vulnerabilities*

The baseline assessments and studies developed during this full project document preparation identified five main barriers that are preventing the strategies for sustainable land management, reduction of vulnerabilities, and climate change adaptation from being implemented:

1. Weak institutional framework, including lack of intersectoral coordination and low institutional capacities at the local (municipal and community) level.

At present, the local institutional and regulation framework for micro-watershed planning and sustainable natural resource management is not clearly defined, and there is an absence of methodology and guidelines. There is little coordination between central government agencies and other sectors responsible for CCA, and local governments and communities. Additionally, there is a limited institutional capacity at the local (municipal and community) level for mainstreaming CCA into their current planning and development framework, and technical capacities are low in relation to watershed planning and disaster risk reduction (DRR).

In both municipalities, local and community-level institutions, there are at municipal and sub-municipal level (*cantón*) civil protection committees and disaster risk committees (the latter only in Candelaria de la Frontera). However, coordination amongst community, municipal and higher government level institutions is extremely weak generating inadequate responses to climate events disconnected from farmers' needs.

2. Traditional agriculture/livestock practices and deforestation in fragile micro-watersheds, and lack of soil and water conservation measures, reduce agro-ecosystem services, soil quality and land productivity, and worsen land degradation

Pressures on natural resources and agro-ecosystems are especially visible in the denuded hills where small-scale family producers cultivate staple grains. Most of farmers clear and burn off fallow growth, and intensively use agro-chemicals. Texistepeque and Candelaria de la Frontera also have important livestock sectors, particularly cattle, which severely impact on soil quality, due to the traditional system of land ownership. Land owners generally have cattle, and lease their lands to small-scale basic grain producers. After the grain harvest, the livestock producers pay for using the remaining dry stock (maize and sorghum) to feed their cattle. This agro/livestock production system generates further soil compaction and destruction, and accelerates land degradation.

In the framework of FAP, CENTA and MAG have introduced improved technology in the field, distributed hybrid seeds of maize and beans, and delivered technical extension services for using chemical fertilizers. FAP aims to facilitate the access of small-scale and subsistence farmers to the domestic market, enhancing their livelihoods.

Although MAG and CENTA have provided technical assistance in Santa Ana, land degradation trends have not stopped. FAP is based on a productivity approach and the sustainable management of natural resources is not explicitly included in its field interventions. This one-side approach (e.g. increasing production) constitutes a barrier that prevent the adoption of SLM practices in the Department of Santa Ana.

3. Mismanagement of local water resources, including lack of planning and management capacity, leads to infiltration reduction, deforestation of water catchment areas, contamination of superficial and underground resources, and deterioration and lack of infrastructure.

According to the baseline study³⁴ local water resources are highly vulnerable to expected climate variability and change. Water collecting infrastructure linked to community sources is highly deteriorated. Most existing systems have surpassed their useful life, leading to low per capita water availability for domestic and productive uses. In addition, irrigation systems are completely absent in both municipalities. Water availability is also impaired by sources contamination and deforestation of critical watershed catchment areas, reducing infiltration capacity.

Climate change affects water quality and availability as well as rural population's livelihoods in both municipalities, mainly through two phenomena which have intensified in the last years: 1) periods of prolonged drought or *canícula* during the rainy season; and 2) periods of torrential rains which increase the number of floods and landslides, with damage to crops and infrastructure.

At the human level, mismanagement is related to the lack of engagement: local producers and communities are not actively involved in the sustainable management of local water resources. Therefore, local management capacities should be strengthened, combined with investments to create and/or rehabilitate water systems, including rainwater collection and distribution systems for multiple purposes (domestic use and irrigation).

4. Lack of disaster preparedness and risk management capacities at local and community levels.

As identified by the baseline assessment³⁵, the households living in selected micro-watersheds in Candelaria de la Frontera and Texistepeque are highly vulnerable to natural disasters and extreme weather events. Many of these human settlements are located in flood prone areas, and in areas prone to landslides³⁶.

The lack of disaster risk management plans or strategies at municipal and community level worsens the already high vulnerability to extreme events. The barriers that the Project will intend to overcome to reduce CC vulnerabilities are:

- **Institutional weaknesses³⁷**: such as excessive bureaucracy, centralized decision-making disconnected from local population's needs, weak *ad hoc* networks for emergency responses, lack of preventive and mitigation action plans, prioritization of

³⁴ Baseline assessment conducted by the Water Resources Management Specialist as part of the project preparation process (G. Cuenca, 2012)

³⁵ Baseline assessment conducted by the Disaster Risk Management Specialist as part of the project preparation process (L. Romano, 2012).

³⁶ In Texistepeque about 350 households, including around 2,450 people are directly exposed to landslides and floods; in the case of Candelaria de la Frontera, exposure affects 400 households and 2,800 people. Baseline assessment conducted by L. Romano, 2012.

³⁷ L. Romano, 2012.

post-disaster interventions and reconstruction of damaged physical assets (i.e.: infrastructure and housing) over livelihoods recovery interventions and landscape restoration;

- **Ideological and cultural features**³⁸: such as fatalistic views and traditional interpretations of disasters in which these phenomena are conceived as “natural” or divine signs against which no action can be taken to prevent and mitigate them. These visions prevail even within the imaginary of those performing civil protection actions, for which disasters are still considered “natural” phenomena. These issues were reflected in the workshops with residents and local institutions, carried out as part of the preparation process for this project document;
- **Lack of working information systems and low awareness levels**³⁹: lack of early warning systems and rapid response mechanisms for extreme weather events at municipal and community levels; lack of basic information at municipal and community levels (such as community hazard maps); low level of awareness and risk perception; and low level of awareness about the strategic importance of saving schemes to deal with emergencies.

c) Incremental and additional reasoning (added value of the GEF and SCCF financing)

To address the above mentioned barriers and achieve global environmental benefits and adaptation benefits, the GEF and SCCF resources will be incrementally and additionally invested to the above mentioned baseline initiatives, as detailed below (for detailed component description, please see Section 2.4):

Component 1: Institutional strengthening in design and implementation of Fragile Micro-Watershed Management Plans (FMWMPs) that increase adaptive capacities to the adverse impacts of CC, based on a participatory and gender-sensitive approach

In order to overcome barrier #1 (see sub-section 1.1.1b), Component 1 will support the strengthening of institutional capacities that will facilitate the incorporation of CCA priorities into local development frameworks. In addition, to address the lack of intersectoral coordination, Component 1 will support the creation and/or enhancement of existing coordination mechanisms at local level, that will involve the local/departmental branches of MAG-DGFCR, CENTA, MARN, MINSAL, plus the municipal governments of Texistepeque and Candelaria de la Frontera, community-based producers associations, and population living in selected fragile micro-watersheds. The aim of these mechanisms is to empower local authorities and communities in the management of natural resources while being actively involved in defining Fragile Micro-Watersheds Management Plans (FMWMPs) and receiving adequate training.

³⁸ *Ibidem.*

³⁹ In most cases, communities most at risk of being affected by a natural disaster are invisible to national agendas and are excluded from disaster risk prevention and mitigation action plans. Post-disaster interventions designed and executed almost unilaterally by donors or by the government, are implemented without taking into account the needs and proposals of beneficiaries. *Ibidem.*

The SCCF financing will be additional to the baseline activities of the General Directorate of Forestry, River Basins and Irrigation Management, of the Ministry of Agriculture (DGFCR-MAG). In the coming three years DGFCR-MAG will provide, through the *Environmental Strategy for Climate Change Adaptation and Mitigation in the Agriculture, Livestock, Forestry and Aquaculture Sector*, an estimated USD 46 374 in co-financing in staff time, travel costs, office space and utilities, and meeting facilities

In addition, coordination will be sought with local staff promoters from the Ministry of Health (MINSAL) for the use of MINSAL data platforms and statistic systems to monitor malnutrition indexes to achieve the health-related indicator targets of outcome 1.3 (see detailed description in sections 2.3 and 2.4).

The SCCF financing will also be additional to CENTA baseline activities. CENTA will in the coming years continue to implement the FGPIS-FAP at field level, financed by the MAG and will provide USD 670 000 cash. Additionally, CENTA will provide USD 70 958 in-kind co-financing from its Regular Budget funded by MAG, in staff time (extension agents at local level, and departmental chiefs), local travel costs, office space and utilities, access to and use of the data management system of MAG to monitor field indicators related to rural production diversification, and meeting facilities, to contribute to achieving target indicators related to livelihoods enhancement of outcome 1.3 (see detailed description in sections 2.3 and 2.4).

The additional financing of USD 191 743 from the SCCF will in Component 1 focus at the development and strengthening of the institutional framework for CCA by: i) providing part-time technical assistance through the Institutional Specialist and the Rural Diversification Specialist, and through the short-term Nutritionist (see details in sections 2.3 and 2.4); ii) training government agencies in natural disaster prevention, response and recovery in the fragile micro-watersheds in relation to extreme climate events (storms, hurricanes, droughts, etc.) and in participatory and gender-sensitive design and implementation of fragile micro-watershed management plans (FMWMPs); iii) providing technical assistance for the development and implementation of 6 FMWMPs through participatory and gender-sensitive processes involving departmental, municipal and local authorities in discussions of CC adverse impacts at local level to be addressed by CCA measures in the FMWMPs for the most vulnerable micro-watersheds; iv) training and providing technical assistance to households in CC impacts and vulnerability identification, and facilitating their participation in risk reduction activities at local level; and iv) promoting climate resilient production systems among households to enhance their livelihood assets through productive activities (see more details in sections 2.3 and 2.4).

Component 2: Soil quality enhancement based on the increase of vegetation cover, Integrated Natural Resource Management (INRM), suitable land-use and gender-sensitive management, recovering flow of agro-ecosystem services in fragile micro-watersheds.

In order to overcome barrier #2 (see sub-section 1.1.1b), Component 2 will promote the adoption and dissemination of soil, land, forest and water conservation practices in local agricultural and livestock production systems, through the demonstrative/irradiated families

approach, combined with the establishment of Farmer Field School (FFS) in the project intervention areas.

The GEF resources will be incremental to CENTA activities continuing implementation of the FGPIS-FAP at field level, financed by the MAG and will provide cash co-financing by USD 2 490 381.

Additionally, through its Regular Budget financed by MAG, CENTA will provide USD 76 650 in-kind in staff time (extension agents at local level, and departmental chiefs time), local travel costs, office space and utilities, access to and use of MAG's data management system to monitor field indicators related to vegetative cover and adoption of good agricultural practices, and meeting facilities, to contribute to achieving outcomes 2.1 and 2.2 (see detailed description in Sections 2.3 and 2.4).

The GEF resources will also be incremental to DGFCR-MAG activities. In the coming three years, the DGFCR-MAG, through the *Environmental Strategy for Climate Change Adaptation and Mitigation in the Agriculture, Livestock, Forestry and Aquaculture Sector* will provide an estimated USD 15 424 in staff time, travel costs, office space and utilities, and meeting facilities

With the incremental financing of USD 519 191 from the GEFTF, Component 2 will support CENTA to carry out field activities aimed at reducing soil erosion and unsuitable land use through: i) the provision of vegetative materials for soil conservation (living barriers, living hedges, gully control), while supporting the establishment of domestic, community and municipal agroforestry tree nurseries in targeted micro-watershed (USD \$80,000 invested); ii) the establishment of six FFS to develop local capacities in INRM, soil conservation and protection in targeted micro-watersheds; iii) the delivery of technical assistance to demonstrative families to implement good agricultural and INRM practices, and to disseminate these practices among small-scale producers in targeted micro-watersheds (see more details in Sections 2.3 and 2.4).

Component 3: Increasing water quality and quantity to diversify livelihoods and income sources of vulnerable sectors in targeted micro-watersheds, enhancing participatory and gender-sensitive management

In order to address barrier #3 (see sub-section 1.1.1b), Component 3 will provide resources for investments for small-scale water infrastructure in project intervention areas, both for domestic and production purposes. Furthermore, Component 3 will promote the strengthening of water management capacities at local and municipal levels.

This will be additional to CENTA activities. In the coming three years CENTA will provide USD 1 481 416 in cash co-financing through the FGPIS-FAP financed by the MAG, including CENTA-FAP staff time (extension agents at local level, and departmental chiefs), local travel costs, office space and utilities, access to and use of MAG's data management system to monitor field indicators related to the adoption of sustainable water management for irrigation uses, to help achieve outcomes 3.1 and 3.2 (see detailed description in Section 2.3 and 2.4).

The additional financing of USD 364 784 from SCCF will through Component 3 increase water quality and quantity to diversify livelihoods and income sources of vulnerable sectors in targeted micro-watersheds by: i) involving families and communities in the targeted micro-watersheds in the protection and sustainable management of 10 water sources; ii) training households in shared decision-making as well as construction, management and maintenance of rainwater catchment systems for multiple uses (irrigation and domestic uses) in communities located in the targeted micro-watersheds; iii) building water catchment systems benefiting participating households with increase in water resource availability; iv) setting water conveyance systems for productive use in targeted micro-watersheds; v) providing part-time technical assistance through the Participatory Watershed Management Specialist.

Component 4: Improving disaster risk management (DRM) to increase adaptive capacity to climate change, in vulnerable sectors living in targeted micro-watersheds

In order to overcome barrier #4 (see sub-section 1.1.1b), Component 4 will be directed towards increasing local capacities for disaster risk management and integrating vulnerable households and communities located in the fragile micro-watersheds into the local and national civil protection system.

In the next three years, coordination will be sought with the MARN that will continue to implement the PREP initiative through its local staff in Santa Ana, local staff in Civil Protection Committees, and staff supporting the Municipal Environmental Units, for the implementation of DRM systems at local level, including early warning strategies and monitoring systems. The objective of the DRM systems is to reduce risks through the design of risks maps, to facilitate the strengthening of local civil protection committees, and in general to achieve outcomes 4.1 and 4.2 (see detailed description in Sections 2.3 and 2.4).

The SCCF financed activities will be additional to CENTA activities. Throughout project implementation, the CENTA will continue to implement the FGPIIS-FAP at field level, financed by the MAG, and will provide USD 723 584 in cash co-financing, including CENTA-FAP staff time (extension agents at local level, and departmental chiefs), local travel costs, office space and utilities, to facilitate the adoption of rural production strategies that make households more resilient and responsive to extreme weather events and natural disasters, and allow them to rapidly recover when facing climate-induced emergencies. It will help achieve outcome 4.1 (see detailed description in Sections 2.3 and 2.4).

Throughout the three years of project implementation, The DGFCR-MAG through the *Environmental Strategy for Climate Change Adaptation and Mitigation in the Agriculture, Livestock, Forestry and Aquaculture Sector* will provide USD 57 171 in co-financing in staff time (its local staff in Santa Ana, and its staff dealing with watersheds in the national office), local travel costs, office space and utilities, contributing with technical assistance and logistics to the workshops included in output 4.1.1 (see detailed description in Sections 2.3 and 2.4).

The municipal governments of Candelaria de la Frontera and Texistepeque will collaborate through staff working in Municipal Environmental Units, and are intended to provide meeting facilities for supporting municipal and departmental response networks to natural disasters, and the participatory design of actions plan for weather emergencies (see more details in Sections 2.3 and 2.4).

The additional financing of USD 242 496 from SCCF will through Component 4 strengthen ownership and awareness processes by involving rural households and small-scale producers living in targeted micro-watersheds in disaster risk reduction, preparedness, response and recovery, including contingency planning, and enhancing vulnerable group and gender-sensitive management, including: a) dissemination of relevant, clear and user-friendly information related to CC local threats among local stakeholders; b) implementation of one monitor and surveillance system in each targeted micro-watershed for disseminating risk information on a timely basis; c) collection and dissemination of information on extreme weather events and climate-induced risks in coordination with the national Climate Observation and Early Warning System, in order to build risk maps based on a participatory approach; and d) design and implementation of response mechanisms in each target municipality, to improve the response to natural and weather emergencies in coordination between small-scale rural producers, local government and departmental and national authorities. In addition, Component 4 will finance a Disaster Risk Reduction Specialist that will support municipal governments and MARN local staff in: e) providing technical assistance to six communities of targeted micro-watersheds in the process of designing their climate, biophysical and social risk maps covering the entire population and identifying signposted and conditioned local safe places to protect themselves in case of emergency; f) promoting the integration of local communities in municipal and departmental networks and structures for rapid respond to extreme weather events; and g) supporting local and departmental governments in taking the lead on reducing vulnerability to CC through the design and implementation of Action Plans for coping with natural disasters and weather emergencies, and to reduce climate-induced economic losses in project pilot areas (see more detailed description in sections 2.3 and 2.4).

Component 5: M&E and information dissemination

Further to the four technical components a fifth component has been prepared for project monitoring, evaluation, and systematizing and dissemination of lessons learnt that might be useful for future SLM, INRM and CCA initiatives in the country and in other countries. Accordingly, component 5 will support project M&E, and will address the creation and/or improvement of institutional M&E capacities of executing partners, particularly MAG-DGFCR and CENTA divisions in Santa Ana.

Throughout the three years of project implementation CENTA will provide USD 240 000 in cash co-financing through the FGPIIS-PAF, including staff time (CENTA-FAP staff assigned to Santa Ana Department and to CENTA) and access to and use of MAG's monitoring systems to assess and track project indicators designed to measure outcomes 1.3, 2.1, 2.2, 3.1, 3.2 and 4.1 and 4.2. MAG and CENTA staff will be trained through

learning-by-doing to develop their own internal results based project management and M&E capacities and apply them after project termination.

The DGFCR-MAG, through the *Environmental Strategy for Climate Change Adaptation and Mitigation in the Agriculture, Livestock, Forestry and Aquaculture Sector*, will provide USD 49 192 in-kind co-financing including staff time, local travel costs, office space and utilities, contributing with technical assistance in tracking the above mentioned project indicators.

Coordination will be sought with MARN to monitor outcomes 4.1 and 4.2. MARN local staff will be trained as well.

The additional and incremental financing of USD 103,156 from the SCCF and GEFTF will support through Component 5: i) the design and operation of the project M&E system based on results-based management (see details in Section 4), providing systematic information on progress in meeting project outcome and output targets; ii) the conduction of a mid-term review and a final project evaluation, including the adjustment of project implementation and sustainability strategies to eventual recommendations; and iii) the systematization of three specific best practices and lessons learned, and the related publications on: (a) the use of Farmer Field Schools, and the demonstrative family approach to disseminate GAPs and INRM practices; (b) the watershed management as approach to mainstream CCA strategies into community and municipal planning; (c) the tested project DRR strategies, potentially replicable in similar vulnerable tropical contexts with highly eroded natural resources, and high rural poverty rates; and (d) the role of institutions in the awareness-raising processes on CCA and DRR, achieving food security and implementing the INRM approach, at local level in rural areas. In addition, Component 5 will finance the monitoring tasks included in the TORs of the Project Coordinator (see Appendix 6 of the Project Document), the part-time Bilingual Project Assistant (see TORs in Appendix 6), and the M&E short-term specialist (who will design the project's M&E system, see Section 2 and Appendix 6 of the Project Document for details).

1.1.2 FAO's comparative advantages

The Food and Agriculture Organization (FAO) is the lead United Nations (UN) agency for agriculture, fisheries, forestry and rural development. Its mandate is to offer member states the technical and policy capability to raise their levels of nutrition, improve agricultural productivity, better the lives of rural populations and contribute to the growth of the world economy while safeguarding natural resources.

At country level, the FAO Country Office in El Salvador (FAOSV) has supported the Government of El Salvador (GoELS) since 1978 in implementing projects and initiatives of natural resources management, rural development, and food and nutritional security. Later in 1994 and on, FAOSV joined forces with MAG and CENTA to implement projects of sustainable micro-watershed management. These experiences generated findings were applied and validated in the Spanish-funded project implemented by FAO and MAG *“Support to Rehabilitation and Sustainable Production of Micro-watersheds in consequence of Hurricane Stan and the eruption of Ilamatepec Vulcan, in the Department*

of Ahuachapán” (GCP/ELS/008/SPA, concluded in 2012). In this context, FAOSV has developed a broad field expertise and has validated working models that are replicable throughout the country and Central America, and similar tropical countries. At present, FAOSV is supporting the GoELS in implementing an Inter-ministerial Coordination Platform on Natural Resources and CC, inserted in the framework of FAP and related initiatives. It is foreseen that FAO will provide technical and financial assistance for launching the Platform, by means of a Technical Cooperation Programme (TCP) facility.

At regional level, the FAO Sub-Regional Office in Panama (FAOSLC) has an extensive field and normative expertise to support project implementation in Central American countries. FAOSLS has a dedicated Land and Water Officer. At FAO Headquarters, the Natural Resources, Climate and Tenure Division (NRC) has a broad normative knowledge based on its long experience providing technical assistance to FAO member countries in their responses towards the challenge of climate change. NRC is focused on the development of adaptive capacities of the agriculture and forestry sectors to the effects of climate change, and the implementation of DRR strategies at country level. NRC supported the GoELS and FAOSV as Lead Technical Unit in the implementation of the project GCP/ELS/008/SPA, and will serve as LTU for the present project as well. The FAO-GEF Coordination Unit in Headquarters has the expertise to overview the whole project cycle and to provide quality assurance and independent supervision functions for project implementation, including supervision missions.

1.1.3 Participants and other stakeholders

Key project participants include local communities and their organizations (i.e. community-based development associations–ADESCOs, community-based education associations–ACEs, churches, women networks, water boards, micro-watershed management committees); local farmers and their organizations (including agriculture and livestock producers associations); municipal governments (i.e. municipalities of Texistepeque and Candelaria de la Frontera) and their committees (i.e. Civil Protection committees, Food and Nutritional Security committee); central government institutions (MAG, MARN, Ministry of Governance and Civil Protection, MINSAL, Ministry of Education-MINED), particularly those present in the territory (CENTA regional and local offices, national public schools, health clinics, extension and outreach services agencies, civil protection services); and NGOs such as the Red Cross. FAO will participate as implementing agency, providing technical backstopping and financial/administrative support for project execution. The role of institutional stakeholders is further described in Section 4 below.

Other stakeholders include the Trifinio Municipal Association (*Asociación de Municipios Trifinio*), a supra-municipal organization which in addition to the municipalities of Candelaria de la Frontera and Texistepeque includes the municipalities of Metapan, Masahuat, Santa Rosa Guachipilin, San Antonio Pajonal, and Santiago de la Frontera; as well as the Lempa River Tri-national Municipal Association (*Mancomunidad Trinacional Fronteriza Río Lempa*), which includes municipalities from Guatemala and Honduras, and the Plan Trifinio Tri-national Commission (*Comisión Trinacional del Plan Trifinio – CTPT*). These three initiatives are further detailed in Section 4, as well as coordination mechanisms with the present project.

1.1.4 Lessons learned from past and related work, including evaluations

The design of the proposed project has considered tested good practices and lessons learned from the project “*Sustainable Agriculture Program in Slope Areas - Phase I and II*”, carried out by FAO and MAG in 41 micro-watersheds of El Salvador (1994-2003); as well as from the project “*Support for Rehabilitation and Sustainable Production of Micro-watersheds affected by Hurricane Stan and the eruption of Ilamatepec Volcano, in the Department of Ahuachapán*” (FAO and MAG, 2008-2012), implemented in 12 micro-watersheds located in seven municipalities in the department of Ahuachapán, which included mechanisms for disaster response, as well as CCA measures. The project approach is based on lessons learned, best practices and tested approaches from the above-mentioned FAO projects, as follows:

- An outreach strategy based on “Demonstrating Families” (*Familias Demostradoras*) and “Irradiated Families” (*Familias Irradiadas*), in which the CENTA technical extension team assist selected families and their farms (demonstrating families willing to learn and teach other farmers) in learning and adopting new technologies and practices creating demonstration examples. The selected farmers then demonstrate/teach other family groups (Irradiated Families), allowing for a greater coverage of project interventions as well as a more integrated rural development vision.
- Development and implementation of micro-watersheds management plans, through a participatory process which promotes the productive and sound management of natural resources, and which serve as inputs for strengthening the process of governance in the territories covered by the micro-watersheds, through the promotion of citizen participation and the involvement of Community-based Development Associations (ADESCOs) in close cooperation and coordination with the municipality.
- Another important contribution to technology transfer is the Farm-Home Plan with a gender-sensitive approach, which serves as a planning and management instrument that seeks to integrate living and production spaces. Its content is divided into two parts: the home and the farm.
- Adoption of the Farmer Field School (FFS) methodology, through which technologies for natural resource management, basic grains and vegetable production are transferred, and the knowledge and analytical skills for decision-making of CENTA technical extension teams, demonstrating families and irradiated families in the farm-household system are strengthened.
- The promotion of agroforestry finds support in traditional production systems, which usually include the management of scattered trees or fences, a practice that must be strengthened due to its contribution to enhanced carbon sequestration, vegetation cover and combating LD, and the availability of firewood and other wood products for family use.

1.1.5 Links to national development goals, strategies, plans, policy and legislation, GEF/SCCF and FAO's Strategic Objectives

a) Alignment with national development goals and policies

The project is consistent with the national policies designed by the GoELS to face rapidly increasing climate-related disasters. The GoELS has set environmental management, adaptation to climate change and disaster risk reduction as high priorities in order to reduce both short-term and long-term losses (MARN, 2013). The public policies that establish an overall framework for the project are the new National Environmental Policy (MARN 2013), as well as the Environmental Strategy for Climate Change Adaptation and Mitigation in the Agriculture, Livestock, Forestry and Aquiculture Sector (MAG 2012), which is part of the Family Agriculture Plan (FAP). (See more details in sub-section 1.1.1 above).

b) Alignment with El Salvador's NAP (UNCCD) and the Communication to the UNFCCC

The project is aligned with El Salvador's Third National Report (TNR) to the UNCCD (2006), since it will address the following land degradation drivers (identified by the TNR): i) unsustainable land uses that cause high erosion in agricultural lands; ii) severe pressure on watersheds and natural forests; iii) low awareness of decision-makers and people that face droughts; iv) poor socio-environmental conditions in areas affected by droughts. In addition, the project is aligned with the National Action Program (NAP) to Combat Desertification and Drought in El Salvador (PANSAL) since it will promote participatory and consensual processes for capacity and institutional development, as identified by NAP as a way for the implementation of Action Programs. (See more details of NAP and TNR in subsection 1.1 above).

The project is also aligned with the el Salvador's First National Communication (FNC) to UNFCCC. The FNC recognizes that: i) average annual temperature augmented in the last three decades; ii) the *canicula* (or "dog days", referring to the hottest and most sultry days of summer in the northern hemisphere, usually between early July and early September) got worse, affecting food production and water resources utilization; iii) soil quality and quantity degradation impact on basic grains productivity and food security. Given that, the FNC strongly recommends the adoption of policy measures to increase adaptation to CC and variability in El Salvador, such as: a) better water supply and irrigation systems, to reduce the effects of seasonality on the production while preventing soil moisture losses; b) land with added vegetative cover, to keep soil humidity and reduce water erosion; c) early warning systems, including weather forecasting technology; d) technical and financial assistance to support rural producers; e) best agricultural practices, to preserve biodiversity and natural resources; f) strengthened institutions, to promote human development and reduce food insecurity. The proposed project aims to face challenges posed by CC and variability, whereas mainstreaming national priorities like poverty alleviation and food security for rural people. Each project component is aimed to respond to the CCA adaptation measures suggested by the FNC. Component 1 will address measure "f"; while component 2 will be focused on measures "b)", "d)", and "e)"; component 3 will implement measure "a)", and component 4 will concentrate on measure "c)".

c) Alignment with GEF focal area and LDCF/SCCF strategies

The project will contribute to the implementation of the GEF Land Degradation (LD) Focal Area strategy. Component 2 will support the objectives 1 and 3 (LD-1⁴⁰ and LD-3⁴¹) by: i) increasing vegetative cover while enhancing soil quality in piloting micro-watersheds; ii) applying the integrated natural resource management approach (including conservation areas) to improve soil fertility; iii) fostering suitable land uses to recover flows of agro-ecosystem services in fragile ecosystems. The expected outcomes and outputs of Component 2 are detailed in sub-section 2.4.

As described in sub-section 1.1.b), the project is also consistent with the El Salvador's TNR to UNCCD, as well as with the priorities and perspectives adopted by the National Action Program to Combat Desertification and Drought in El Salvador (PANSAL).

El Salvador is a signatory to the UNFCCC as a non-Annex I country. This project is consistent with SCCF eligibility criteria since it addresses key priorities identified in El Salvador's First National Communication (FNC) to UNFCCC, 2000. Project components 1, 2 and 4 will contribute to the implementation of SCCF strategies in targeted fragile micro-watersheds of the municipalities of Texistepeque and Candelaria de la Frontera. Component 1 will address the objective 2 of the LDCF/SCCF Adaptation Strategy (CCA-2)⁴² specifically outcomes 2.2⁴³ and 2.3⁴⁴, by strengthening adaptive capacities to reduce risks and respond to climate variability of national and local institutions that will develop and implement Fragile Micro-Watershed Management Plans (FMWMPs), as well as strengthening awareness and ownership of CCA and disaster risk reduction processes at the local level. The project will also support the development and implementation of the FMWMPs based on participatory and gender-sensitive approaches. FMWMPs will broaden adaptive capacities for DRR to reduce vulnerability in targeted rural areas that are highly exposed to impacts of CC and variability. Component 1 will also support the objective CCA-1⁴⁵, in particular its outcomes 1.2⁴⁶ and 1.3⁴⁷, by reducing vulnerability of development sectors and diversifying and strengthening livelihoods and sources of income for vulnerable people in targeted micro-watersheds. In addition, Component 3 will address objective CCA-1 outcomes 1.2 and 1.3 by increasing water quality and quantity to diversify

⁴⁰ Agriculture and Rangelands: Maintain or improve flow of agro-ecosystem services sustaining the livelihoods of local communities (LD-1, Focal Area Results Framework, GEF-5, 2010).

⁴¹ Integrated Landscapes: Reduce pressures on natural resources from competing land uses in the wider landscape (LD-3, Focal Area Results Framework, GEF-5, 2010).

⁴² *Increase Adaptive Capacity to respond to the impacts of climate change, including variability, at local, national, regional and global level* (CCA-2, SCCF/LDCF Results Framework, GEF-5, 2010)

⁴³ *Strengthened adaptive capacity to reduce risks to climate-induced economic losses.* Ibidem

⁴⁴ *Strengthened awareness and ownership of adaptation and climate risk reduction processes at local level.* Ibidem

⁴⁵ *Reduce vulnerability to the adverse impacts of climate change, including variability, local, national, regional, and global level* (CCA-1, SCCF/LDCF Results Framework, GEF-5, 2010),

⁴⁶ *Reduced vulnerability to climate change in development sectors.* Ibidem

⁴⁷ *Diversified and strengthened livelihoods and sources of income for vulnerable people in targeted areas.* Ibidem

livelihoods and income sources for vulnerable sectors in piloting micro-watersheds. This component will include agro-forestry practices, water sources protection, and the establishment of rainwater collection and water harvesting systems. Last, Component 4 will focus at objective CCA-1 outcome 1.2 and objective CCA-2 outcome 2.3⁴⁸ by: i) disseminating risk management practices through planned, consensual, integrated and participative processes, to reduce risk conditions and ensure sustainable development in front of threats posed by natural disasters and extreme weather events; ii) encouraging alliances between local stakeholders, development agents, municipalities and central government agencies to develop these processes; and iii) raising awareness to disseminate successful strategies and lessons learned in piloting areas, which might be replicated in the wider region by local and national authorities.

d) Alignment with FAO Strategic Framework and Objectives

The project is aligned with FAO's Strategic Objective 2 (SO-2: *Increase and improve provision of goods and services from agriculture, forestry and fisheries in a sustainable manner*), Organizational Outcome 2 (OO2: *Producers and natural resource managers adopt practices that increase and improve the provision of goods and services in the agricultural sector production systems in a sustainable manner*); and with FAO's Strategic Objective 5 (SO-5: *Increase the resilience of livelihoods to threats and crises*), Organizational Outcome 1, 2, 3 and 4 (OO1: *Countries and regions adopt and implement legal, policy and institutional systems and regulatory frameworks for risk reduction and crisis management*; OO2: *Countries and regions provide regular information and early warning against potential, known and emerging threats*; OO3: *Countries reduce risks and vulnerability at household and community level*; and OO4: *Countries and regions affected by disasters and crises prepare for, and manage effective responses*).

The project is consistent with Component 5 “*Environmental Sustainability and DRR*” of the United Nations Development Assistance Framework (UNDAF) 2012-2017 for El Salvador, which sets as national priorities: i) integrated management of environmental risks, with a long-term perspective; ii) rebuilding infrastructure; and iii) recovering social and production systems that have been damaged by natural phenomena and anthropic action, by stimulating the design and implementation of strategies, plans and mechanisms of DRR, sustainable NRM, ecosystem recovery and CCA, with an active role of the Central Government. Furthermore, the project is consistent with FAO Regional thematic priority areas that include climate change and environmental sustainability, food security and family farming⁴⁹ as well as, El Salvador's FAO Country Programming Framework (CPF), which places particular emphasis on family farming (CPF1), and natural resources management, climate change and disaster risk management (CPF3).

⁴⁸ *Strengthened awareness and ownership of adaptation and climate risk reduction processes at local level.*
Ibidem

⁴⁹ Based on *Areas of Priority Actions for Latin America and the Caribbean for the Following Biennium (2014–2015)*, taking into account the summary of recommendations of regional technical commissions, 32nd Regional Conference for Latin America and the Caribbean. Buenos Aires, Argentina, 2012. Source: <http://www.fao.org/docrep/meeting/024/md240e.pdf>

SECTION 2 – PROJECT FRAMEWORK AND EXPECTED RESULTS

2.1 PROJECT STRATEGY

The project strategy is to promote a shift away from the current context of unsustainable local agriculture and livestock production systems, weak institutional capacities, and high vulnerability to extreme weather events. For this aim, the Project will promote integrated natural resources management (INRM) and the introduction of more resilient production systems at local level. The adoption of INRM will enhance local population's adaptive capacities to face the negative impacts of CC and variability. In addition, the Project will strengthen institutional arrangements through multi-stakeholders' processes, promoting coordination between family farmers, community-based associations, local and national institutions.

The Project will support the implementation of awareness-raising, capacity development, technical assistance, and investment interventions, as well as inter-institutional coordination. It will include specific interventions at the community, farm and household levels, which will have a demonstrative effect on the benefits of CCA and INRM activities. The project approach will include the promotion of agro-forestry, soil and water conservation and other sustainable agriculture practices that increase food productivity, reduce agrochemical use, and improve resilience of agro-ecosystems; enhancement of pastures; protection and reforestation of critical watershed areas and local water sources; and investments in rainwater collection and water distribution systems for domestic and productive use. The Project will also help integrate local institutions and communities into the national civil protection system.

The Project strategy is based on the concept that the *micro-watersheds* and *watersheds* are the best territorial and organizational units for natural resources planning and management. This is a lesson learnt from many initiatives that FAO has supported in El Salvador⁵⁰ and Latin America in the last two decades. The watershed management has proven effectiveness in achieving reductions in soil degradation and promoting effective CCA at the local (municipal and community) level. Local governance mechanisms are built upon the watershed management, linking the household and the institutional levels, and promoting participatory decision-making within and between municipalities.

2.2 PROJECT OBJECTIVES

Global Environmental Objective:

To contribute to arresting and reversing current global trends in land degradation, specifically desertification and deforestation, through the promotion of sustainable land and water management practices in areas with highly eroded natural resources and vulnerable to desertification in the Santa Ana Department.

⁵⁰ See the FAO Ahuachapán Project <http://www.fao.org/climatechange/71215/en/> which apply a methodology based on the micro-watershed and watershed management.

Adaptation Objective:

To reduce the vulnerability to the adverse impacts of CC and variability, and to increase adaptive capacity to respond to the impacts of CC and variability, with the participation of small-scale rural producers - linked to the Family Agriculture Plan (FAP)-, in targeted micro-watersheds of the Santa Ana Department.

Project Development Objective⁵¹:

To increase and improve the provision of goods and services from agriculture and forestry in a sustainable manner, through the promotion of integrated natural resources management (INRM) and the reduction of land degradation; and to increase the resilience of livelihoods to threats and crises by mainstreaming climate change adaptation (CCA) and disaster risk reduction (DRR) into Fragile Micro-Watersheds Management Plans (FMWMPs); with the participation of small-scale farmers.

Specific Project Objective:

The goal of the proposed project is to mainstream CCA and DRR into the FMWMPs, and to reduce land degradation and unsuitable land/water use, through INRM and the participation of small-scale rural producers in targeted micro-watersheds of Texistepeque and Candelaria de la Frontera.

2.3 EXPECTED PROJECT OUTCOMES

Outcome 1.1: Seven institutions present in the project intervention area have enhanced capacities to integrate CCA in fragile micro-watershed planning and management processes, based on intersectoral coordination, and a bottom-up and gender-sensitive approach. Outcome 1.1 will be monitored through the SCCF AMAT tracking tool as follows. Targeted project values will be:

- **Indicator 2.2.1:** Seven institutions present in targeted areas (municipal governments of Texistepeque and Candelaria de la Frontera, Civil Protection Committees, CENTA agencies at the local and departmental level, MAG-DGFCR, MARN, MINSAL local health units) have *increased capacity* to adapt to climate change, disaster risk reduction and response mechanisms to deal with the effects of climate variability. (Baseline: The institutions present in targeted project areas have *weak capacities* to adapt to climate change, disaster risk reduction and response mechanisms to deal with the effects of climate variability)
- **Indicator 2.2.2:** Score 3 in the Capacity Perception Index: Substantial training in practical application (e.g. vocational training). Disaggregated by gender: 35% of female participants. [(Baseline: Score 2 in the Capacity Perception Index: Initial awareness raised (e.g. workshops, seminars). Disaggregated by gender: 25% of female participants].

Outcome 1.2: 50-75% of men, women, local authorities and institutions present in the project intervention area *are aware of* the adverse impacts of climate change, appropriate responses, and affirm their ownership of the processes of adaptation to climate change. (Baseline: Men, women, local authorities and institutions in target areas have *little*

⁵¹ In line with FAO Strategic Objectives (SOs)

awareness of adverse impacts of CC, and are *not participating* in adaptation processes). Outcome 1.2 will be monitored through the SCCF AMAT tracking tool as follows. Targeted project values will be:

- Indicator 2.3.2: 50-75% of population affirming ownership of adaptation processes. (Baseline: 0% of population affirming ownership of adaptation processes).

Outcome 1.3: Food production has increased by 10% and dietary habits have improved leading to a 2% decrease in child malnutrition in the project intervention area. (Baseline: Child malnutrition: 19.6% in Texistepeque, and 17.6% in Candelaria de la Frontera). Outcome 1.3 will be monitored through the SCCF AMAT tracking tool as follows. Targeted project values will be:

- Indicator 1.2.8: +10% change in projected food production in targeted area given existing and projected climate change (Baseline: 0% change in projected food production in targeted area given existing and projected climate change);
- Indicator 1.2.1.3: Five climate resilient agricultural practices introduced to promote food security. (Baseline: Zero climate resilient agricultural practices introduced to promote food security);
- Indicator 1.3.1: Households and communities have *moderate access* to livelihood assets (Score 3: Moderate access to livelihood assets). Disaggregated by gender: 30% of female participants. (Baseline: Households and communities have *poor access* to livelihood assets (Score 2). Female participation: 30%).

Outcome 2.1: 40% of soils in targeted project areas have increased vegetation cover (fruit trees, forest trees, grass, and bush, among others) for soil and water protection and conservation. (Baseline: 13% of soils in the project targeted areas have vegetation cover for soil and water protection and conservation: 501 hectares). Outcome 2.1 will be monitored through the LD-PMAT tracking tool as follows. Targeted project values will be:

- Indicator LD-1.iii) Land area of production systems with increased vegetation cover: 1541 hectares. (Baseline: Land area of production systems with increased vegetation cover: 501 hectares)

Outcome 2.2: 40% of soils in the project targeted areas are under INRM practices in the wider landscape resulting in sustained agricultural productivity (proxy indicator: 2.89 Ton of corn/ha/year) and reduced vulnerability for local communities. (Baseline: 0.3% of soils -12 ha- in the project targeted areas are under INRM practices in the wider landscape. Agriculture productivity: 2.75 Ton of corn/ha/year). Outcome 2.2 will be monitored through the LD-PMAT tracking tool as follows. Targeted project values will be:

- Indicator LD-3.ii): Spatial coverage of integrated natural resource management in the wider landscape: 1,541 ha. (Baseline: Spatial coverage of integrated natural resource management in the wider landscape: 578 ha).
- Indicator LD-3.ii): Three methodologies (agro-forestry systems, conservation agriculture and watershed management) of INRM applied in the broader landscape in the project targeted areas. (Baseline: 0 methodologies of INRM applied in the broader landscape)

Outcome 3.1: 9,500 m³ of increased water availability in targeted areas through the improvement of rainwater collection infrastructure, the building of catchment and water conveyance systems for household and productive uses, and the protection of 10 water sources. Outcome 3.1 will be monitored through the SCCF AMAT tracking tool as follows. Targeted project values will be:

- Indicator 1.2.4: Increase in water supply targeted areas: +9,500 m³. (Baseline: Current water supply: 6750 m³ of water. 18 m³/household/year * 375 families, 175 women-led)⁵²;
- 3 sustainable water management practices introduced to increase access to water for irrigation and domestic uses (both at household level), including the protection of 10 water sources, improvement of water collection/storage infrastructure, rainwater harvesting and conveyance systems for household use. (Baseline: 0 sustainable water management practices)

Outcome 3.2: Households and communities have more secure access to livelihood assets (water resources). Outcome 3.2 will be monitored through the SCCF AMAT tracking tool as follows. Targeted project values will be:

- Indicator 1.3.1: Households and communities have *moderate access* to livelihood assets (Score 3: Moderate access to livelihood assets). Disaggregated by gender: 25-30% of female participants. (Baseline: Households and communities have *poor access* to livelihood assets (Score 2). Female participation: 25-30%).
- Indicator 1.2.1.5: 2 sustainable water management practices introduced to increase access to irrigation water under existing and projected climate change: 1 rainwater collection and multiple-use community system; 12 individual systems for productive use derived from 2 water conveyance systems. (Baseline: Cero sustainable water management practices introduced to increase access to irrigation water under existing and projected climate change).

Outcome 4.1: 50-75% of target population have moderate awareness (as defined in the SCCF/LDCF AMAT, disaggregated by gender) of predictable adverse impacts of CC and have adopted appropriate response measures. Outcome 4.1 will be monitored through the SCCF AMAT tracking tool as follows. Targeted project values will be:

- Indicator 2.3.1: 50-75% of targeted population have awareness of predicted adverse impacts of climate change and appropriate responses. Score 2: Moderate awareness level (50-75% of the population). (Baseline: Score 1: No awareness level. 10% of target population have awareness correct).

Outcome 4.2: Vulnerability and risk perception index disaggregated by gender have increased from 1/2 (extreme/high vulnerability) to 3/4 (medium/low vulnerability) in targeted micro-watersheds. Outcome 4.2 will be monitored through the SCCF AMAT tracking tool as follows. Targeted project values will be:

- Indicator 1.2.14: Vulnerability and risk perception index disaggregated by gender is scored 3/4 (medium/low vulnerability) in targeted micro-watersheds.(Baseline: score 1/2 (Extreme/high), disaggregated by gender)

⁵² Data was collected through a survey conducted by the Water Resources Management Specialist during the full project preparation, financed by PPG resources. (G.Cuenca, 2012).

- Indicator 2.2.2.1: 80 % of target population covered by climate change risk measures (disaggregated by gender). (Baseline: 0% of target population covered by climate change risk measures, disaggregated by gender).
- Indicator 2.3.1.1: 3 Risk reduction and awareness activities introduced at local level, such as: Monitoring/Forecasting capacity (EWS, Vulnerability mapping system); ICT and information dissemination; Community Workshops for CC adaptation. (Baseline: 0 risk reduction and awareness activities introduced at local level).

Outcome 5.1: Project implementation based on results-based management. The outputs corresponding to outcome 5.1 are detailed in Section 2.4 below.

2.4 PROJECT COMPONENTS AND OUTPUTS

Project overview

To achieve the objectives and expected outcomes indicated above, the project has been structured into five components with their respective outputs as described below.

Component 1: Institutional strengthening in design and implementation of Fragile Micro-Watershed Management Plans (FMWMPs) that increase adaptive capacities to the adverse impacts of CC, based on a participatory and gender-sensitive approach.

The assumption of this Component is that there is a high level of involvement and participation of local institutions in micro-watershed coordination and monitoring mechanisms. Targeted households and local stakeholders are motivated to participate in awareness-raising campaigns and workshops on CC negative impacts at local level. If no major extreme natural and weather events occur during PY1, households will be not decapitalized and will not lose food and nutritional security at the start of project implementation. At policy level, the national government (CENTA, MAG, MARN) supports project objectives since they are in line with national policy and priorities.

The objectives of Component 1 are to strengthen institutions and local capacities enabling them to integrate CCA into participative FMWMPs; and to diversify income sources and increase livelihoods resilience in project intervention areas.

The Project will provide technical assistance and process support to the municipal governments of Candelaria de la Frontera and Texistepeque, Civil Protection Committees, MINSAL local health promoters, and local/departmental staff of CENTA, MAG-DGFCR and MARN, aimed at developing their capacities and knowledge on CCA and DRM. Outputs and activities for Component 1 are as follows:

Output 1.1.1: Methodology and guidelines for developing cost-efficient FMWMPs, built on a consensus between the central government, the municipalities and the local population

Activities:

In the first project year (PY1), two multi-stakeholder consultation workshops will be held with representatives of central government authorities, local governments and local population, in order to agree on and design one methodology and guidelines for the development of FMWMPs in the project intervention area. At the end of PY1 one multi-stakeholder validation workshop will be carried out to agree the final methodology and guidelines for the development of FMWMPs. In the second project year (PY2), these methodology and guidelines will be included in the multi-stakeholders negotiation and design process of 3 cost/efficient FMWMPs. In the third project year (PY3), these methodology and guidelines will be included in the multi-stakeholders negotiation and design process of 3 additional cost/efficient FMWMPs (total: 6 FMWMPs).

Output 1.1.2: Government agencies with enhanced capacities for prevention, response and recovery from natural disasters or extreme natural events (storms, droughts, hurricanes, etc.) in fragile watersheds in the project targeted areas (6 fragile micro-watersheds in 2 municipalities).

Activities:

In PY1, 50 technical staff from seven institutions present in the territory⁵³ will be trained through 3 workshops in climate change adaptation topics: i) disaster risk management; ii) meteorological monitoring and forecasting (early warning systems); iii) vulnerability and risk mapping systems; iv) resilient livelihoods; v) soil and water conservation, including erosion control; vi) water storage; and vii) others. Women participants will be at least 25% of the total audience. In PY2, 50 additional technical staff from the same seven institutions present in the territory⁵⁴ will be trained through 3 workshops in those climate change adaptation topics. In PY3, 50 additional technical staff from the same seven institutions present in the territory⁵⁵ will be trained through 2 workshops in those climate change adaptation topics (total number of workshops: 8, total staff trained: 150 people). From PY1 until the 1st quarter of PY3, targeted capacity-development and training materials including participatory tools will be designed, applied, and revised based on the inputs provided by workshop participants. Training evaluation forms will be designed to be completed by all workshop participants in PY1, PY2 and PY3.

In addition, the project will provide technical assistance and promote intersectoral and inter-institutional coordination, through strategic alliances between local development actors in both municipalities, created to support the implementation of CCA measures as part of the development of the FMWMPs, in which specific responsibilities (including supervision, execution and monitoring) are assigned to particular institutions present in the project intervention areas. This will be achieved through the following outputs:

⁵³ Including the municipalities of Texistepeque and Candelaria de la Frontera, Civil Protection Committees, CENTA Agencies (Departmental and local/municipal level), MAG, MARN, Local and Departmental Health Units (Ministry of Health - MINSAL) and Public Schools (Ministry of Education - MINED).

⁵⁴ Idem

⁵⁵ Idem

Output 1.2.1: 4 strategic alliances including 5 development actors and 5 local stakeholders are created to support the development and implementation of 6 FMWMPs in the municipalities of Texistepeque and Candelaria de la Frontera

Activities:

In the 1st quarter of PY1, 5 representatives from the local civil society and 5 development actors will be identified by the Part-time Institutional Specialist, in consultation with the Project Coordination and the PMCU. After that, in PY1, consultation meetings will take place to create 4 strategic alliances that include 5 representatives from the local civil society and 5 development (2 alliances per municipality). Each alliance will be based on a signed agreement. The aim of the strategic alliances will be to support the development and implementation of 6 FMWMPs (see output 1.2.2). In PY2 and PY3, the 4 strategic alliances will have regular meetings to support the validation, implementation and monitoring of 6 FMWMPs.

Output 1.2.2: Six FMWMPs implemented and monitored in Texistepeque and Candelaria de la Frontera, through a participatory process (involving departmental, municipal and local authorities and civil society). The FMWMPs include concrete measures to reduce CC adverse impacts in the most vulnerable micro-watersheds at local level

Activities:

In PY1, 6 multi-stakeholder consultation workshops will be organized to design 6 FMWMPs (3 FMWMPs in each municipality), involving institutions present in the territory and local stakeholders in the project intervention area. The design processes will apply a bottom-up and gender-sensitive approach. In PY1, the monitoring system for the implementation of the FMWMPs will be designed by the Part-time Institutional Specialist, in consultation with the Project Coordination and the PMCU. In the 1st quarter of PY2, one multi-stakeholder consultation workshop will be organized to validate the 6 FMWMPs through a participative process and gender-sensitive approach. After that, in PY2 the FMWMPs will be implemented in 6 selected micro-watersheds, following the mentioned approaches. In PY3, 6 FMWMPs will be implemented, and monitored through the monitoring system developed in PY1.

Output 1.2.3: 750 households (of which 25-30% are female headed) aware of CC impacts and trained in vulnerability identification (causes, practices, context) and risk reduction activities at the local level.

Activities:

In 1st and 2nd quarter of PY1, the Part-Time Institutional Specialist will design training material and modules, including participatory tools, for men, women, local authorities and institutions present in targeted areas, to increase their awareness on the adverse impacts of climate change, vulnerability identification (i.e. causes, practices and context), and to help them develop appropriate responses and affirming their ownership of adaptation processes. He/she will also design knowledge-based surveys and evaluations forms. After that, in PY1 3 workshops will be organized with 150 households (25-30% female-led) who will be trained on climate change impacts and vulnerability identification, including risk reduction

activities at local level. In PY2, 350 additional households (25-30% female-led) will be trained on climate change impacts and vulnerability identification through 3 workshops, including risk reduction activities at local level. In PY2, two one-day awareness-raising campaigns will be organized with community leaders to disseminate CCA and DRM knowledge at community level. In PY3, 250 additional households (25-30% female-led) will be trained on climate change impacts and vulnerability identification through 3 workshops involving risk reduction activities at local level (total: 750 households trained, 9 workshops conducted).

The Project will provide technical assistance to fulfil local training needs and disseminate livelihood diversification strategies among small-scale producers and families in the project intervention area. These strategies will include the implementation of improved basic grain production systems, backyard birds, and orchard modules. The improvement of livelihood assets will be accompanied by targeted training to women on health, food and nutrition issues, such as breastfeeding, basic hygiene and food manipulation, water treatment for safe human consumption, child care during episodes of sickness, among others. More resilient agricultural systems will contribute to food security, which in turn will make families less vulnerable when facing unexpected climate events. Specifically, this will be achieved through the following output:

Output 1.3.1: 1200 households (25-30% female-headed) who have production systems more climate resilient, and have enhanced livelihood assets through productive activities in the project targeted areas (basic grains, vegetable gardens, poultry).

Activities:

In the 1st and 2nd quarter of PY1, the Part-Time Agriculture Diversification Specialist and CENTA will design targeted training material on climate-resilient agriculture practices, including participatory tools. Also during the 1st and 2nd quarter of PY1, the Short-Term Nutritionist will design targeted material and deliver technical training to the MINSAL local officers on methodologies for measuring and monitoring food security and child malnutrition indicators⁵⁶. These methodologies will be included in the household surveys usually conducted by the MINSAL health promoters in project intervention areas, and in the monthly reports on child malnutrition also prepared for project monitoring⁵⁷.

After that, in PY1 capacity development activities will be implemented at field level to promote the introduction of more resilient production systems among 300 households (of which 25-30% female-headed) in the project intervention areas. Livelihoods will be improved through diversification of productive activities (improved basic grain production systems, implementation of backyard birds and orchard modules). Monthly reports will be prepared by the CENTA extension agents, and will be uploaded to the MAG monitoring system. In addition, regular monitoring field visits will be conducted by the Part-Time Agriculture Diversification Specialist, CENTA and the Project Coordinator. In PY2, the same capacity development activities will be implemented at field level to promote the introduction of more resilient production systems among 500 additional households (of

⁵⁶ See outcome 1.3, Project Results Framework, Appendix 1.

⁵⁷ *Ibidem*

which 25-30% female-headed) in the project intervention areas. In PY3, the same capacity development activities will be implemented at field level to promote the introduction of more resilient production systems among 400 additional households (of which 25-30% female-headed) in the project intervention areas (Total: 1200 households with enhanced adaptive capacities, 25-30% women-led).

In the 1st and 2nd quarter of PY3, the Short-Term Nutritionist will provide with technical guidance to MINSAL local staff to monitor project achievements regarding child malnutrition, generating reliable statistics and information data for the PMCU (to be included in the project terminal report).

Component 2: Soil quality enhancement based on the increase of vegetation cover, Integrated Natural Resource Management (INRM), suitable land-use and gender-sensitive management, recovering flow of agro-ecosystem services in fragile micro-watersheds.

CENTA and FAO implemented rural projects in this project area in the last decade and tested outreach methodologies that proved to be successful in disseminating INRM practices among small-scale farmers. Small-scale farmers and local households have been involved in the design of Component 2 and are willing to participate in field activities. The two municipal governments have engaged in the project preparation process and have committed their support for field actions at local level and community levels. CENTA will carry out field project interventions, through its dedicated and expert field staff in Santa Ana.

The objective of Component 2 is to improve soil quality in selected micro-watersheds, through INRM, to increase vegetative cover, to promote appropriate land uses; and to recover agro-ecosystems services in fragile watersheds.

The Project will provide technical support and incentives (plant materials including forest trees, fruit trees, and improved pastures) to local households, communities and small-scale farmers in targeted fragile micro-watersheds to increase vegetative cover in 40% of the soils in project intervention area (equivalent to 1541 hectares). The interventions will be based on INRM considerations under a micro-watershed level focus and applying a gender-sensitive participatory approach. The Project will use the Demonstrative Family/Irradiated Family methodology, supported by Field Farmer Schools (FFS) located in each of the six selected micro-watersheds. Outputs and activities for Component 2 are as follows:

Output 2.1.1: Supplied vegetation material for soil/water protection and conservation (living barriers, living hedges, gully control) through establishment and strengthening of agro-forestry nurseries at household, community and municipal level, in targeted micro-watersheds. Project target: 40% of soils in the project targeted areas (1541 ha) with vegetation cover through an investment of USD 80,000.

Activities:

In the 1st quarter of PY1, CENTA in collaboration with the Project Coordinator will identify the sites for the implementation of agro-forestry nurseries and planting of

vegetative material. After that, in PY1 USD \$30,000 will be invested in the purchase of local and external inputs and plant materials for soil conservation, providing vegetative cover for 200 hectares: 125,000 forest trees in living fences and barriers, 11,000 fruit trees and 181 hectares of pasture.

In the 1st quarter of PY2, CENTA and the Project Coordinator will identify additional sites for the implementation of agro-forestry nurseries and planting of vegetative material. After that, in PY2, additional USD 30,000 will be invested (total investment: USD 60,000) to acquire local and external inputs and provision of plant materials for soil conservation, including vegetative cover for 956 additional hectares: 169,000 additional forest trees hedges (294,000 total) and 11,000 additional fruit trees (22,000 total) and 181 hectares of additional pasture (total pastures: 362 ha).

In the 1st quarter of PY3, CENTA and the Project Coordinator will identify additional sites for the implementation of agro-forestry nurseries and planting of vegetative material. After that, in PY3 additional USD 20,000 will be invested (total investment: USD 80,000) to acquire local and external inputs and provision of plant materials for soil conservation in 385 additional hectares with additional 205,200 forest trees for living barriers (374,200 trees in total), 11,000 additional fruit trees (33,000 trees in total) and 155 hectares of grass (total: 517 hectares of grass). All purchases will be executed by the FAO Representation in El Salvador, with the support of the Budget and Operations Officer (see Appendix 6).

In PY1, PY2 and PY3, CENTA and the Project Coordinator will identify non-native plant species, and will support small-scale farmers and family farmers in the preparation of the sites for the establishment of agro-forestry nurseries and planting vegetative material. As well, CENTA and the Project Coordinator distribute inputs and vegetative materials among small-scale producers (see Appendix 2 for details).

Output 2.2.1: Six Farmer Field Schools (FFS) established and 192 households engaged in experimental learning in INRM, soil conservation and protection in targeted micro-watersheds.

Activities:

In the 1st and 2nd quarter of PY1, CENTA in collaboration with the Project Coordinator will identify the communities and families that will be involved in the establishment of 6 FFS, including the location of learning sites. Then, CENTA and the Project Coordinator will prepare the target technical training material, including evaluation forms. In the 3rd and 4th quarter of PY1, 2 FFS will be established, engaging 64 families of small-scale rural producers in experimental learning in protection and conservation of soils in the selected micro-watersheds (25-30% women-led families). In PY2, two additional FFS will be implemented, engaging 64 additional families of small-scale rural producers in experimental learning in INRM, soil conservation and protection in the selected micro-watersheds. In PY3, two additional FFS will be implemented, engaging 64 additional families of small-scale rural producers in experimental learning in protection and conservation of soils (total: 6 FFS, 192 families engaged in experimental learning of which 25-30% women-led). CENTA and the Project Coordinator will conduct field monitoring visits at the end of PY1, PY2 and PY3.

Output 2.2.2: 128 Technical Demonstrative Families (DFs) assisted in adopting INRM techniques and good agricultural practices (GAP) in targeted micro-watersheds (technology and GAP adoption monitored gender disaggregated)

Activities:

In the 1st and 2nd quarter of PY1, CENTA in collaboration with the Project Coordinator will design targeted technical assistance programme, materials, and modules for DFs on INRM techniques and GAPs, including training evaluation forms. Afterwards, in PY1 targeted workshops and learning-by-doing activities will be organized to support capacity development of 43 DFs (25-30% female-headed) to apply GAPs and INRM techniques in targeted micro-watersheds. The aim of these CD activities is to stimulate the adoption of good practices and natural resources management at family level, and to promote their dissemination to other families living in the same communities. In PY2, the same targeted technical assistance workshops and learning-by-doing activities will be conducted involving 43 additional DFs (25-30% female-headed). In PY3, there will be included other 42 DFs (25-30% female-headed). (Total: 128 DFs with enhanced capacities and GAP adopted, of which 38 are female-led).

Output 2.2.3: Five Good agricultural practices (GAP) disseminated among small-scale producers (men and women) in the targeted micro-watersheds, through the technical Demonstrative/ Irradiated Families methodology

Activities:

In coordination with output targets 2.2.2 (see below), CENTA will accompany the Demonstrative Families to disseminate their acquired knowledge and developed capacities on good agricultural practices to other Irradiated Families (IFs) living in their communities. Using this methodology, in PY1 1 GAPs will be disseminated through demonstrative families (DFs) among 300 households (25-30% female-headed) in the selected micro-watersheds. These GAPs will include 15 plots of vegetables, 40 drip irrigation systems for intensive farming and 75 poultry modules. In PY2, three additional GAP will be disseminated through DFs among 500 additional households (total: 4 GAPs implemented, 900 producers) in the selected micro-watersheds. The GAPs will totalize 30 plots of vegetables, 80 drip irrigation systems for intensive farming 150 poultry modules. In PY3, one additional GAP will be implemented by 400 additional families in the selected micro-watersheds. Total irradiated families will sum 1200 households (25-30% female-headed), and the 5 GAPs implemented will represent 45 plots of vegetables, 120 drip irrigation systems for intensive farming and 225 poultry modules by the end of PY3. At the end of PY1, PY2 and PY3 CENTA and the Project Coordinator will conduct field monitoring visits and will generate technical reports on the GAPs implemented during the year.

Component 3: Increasing water quality and quantity to diversify livelihoods and income sources of vulnerable sectors in targeted micro-watersheds, enhancing participatory and gender-sensitive management.

In the project intervention areas, some lands out of the communities and towns are dedicated to the production of basic grains and big livestock (mainly cattle), while in towns and communities women typically have domestic backyards where grow vegetables and

small livestock (backyard birds, one or two pigs). The domestic production serves for subsistence goals, influencing deeply on family's food security. Water availability will help both small-scale production in dedicated fields for trade purposes, and domestic production for self-consumption. In addition, water conveyance systems will bring water within the houses, facilitating healthier cooking among women.

Women networks have actively participated in the design of Component 3, and sustainability of outcomes 3.1 and 3.2 is directly linked to their role during project implementation.

The domestic rainwater harvesting systems will derive from multiple water conveyance systems possibly located out of the towns or communities. Water will be conducted through a simple grid. The communities have been consulted and actively participated in the design of these outputs and sustainability will depend on their involvement during project implementation.

The objective of Component 3 is to increase water availability in targeted areas through the improvement of water resources management, diversifying the livelihoods of vulnerable sectors and their adaptive capacity to climate change impacts, specially droughts.

The Project will provide investment and technical support to local households, communities and small-scale farmers living in targeted fragile micro-watersheds to protect and sustainably manage local water resources, including water systems for domestic and productive uses. More available water resources will generate more resilient local livelihoods. As detailed in Section 2.1, Component 3 will adopt the watershed focus and a gender-sensitive participatory approach. The outcomes of Component 3 will be achieved through the following outputs and activities:

Output 3.1.1: 187 households (25-30% women-led) in the targeted micro-watersheds actively involved in the protection of 10 water sources.

Activities:

In the 1st and 2nd quarter of PY1, the Part-Time Participatory Watershed Management Specialist will design training material for targeted communities and households involved in the protection of water sources. He/she will also design targeted surveys to assess the effective households' and communities' involvement (gender disaggregated) in these activities.

After that, in PY1, learning-by-doing activities will be organized with 74 households (30% female-headed) for protecting selected 4 water sources. In addition, multi-stakeholder consultations will be conducted to design and validate the protection, maintenance and management plans the 4 water sources, involving those 74 households. In PY2, learning-by-doing activities will be organized with additional 57 households (30% female-headed) for protecting other 3 selected water sources. In addition, multi-stakeholder consultations will be conducted to design and validate the protection, maintenance and management plans those 3 water sources, involving the 57 households. In PY3, learning-by-doing activities will be organized with additional 56 households (30% female-headed) for

protecting other 3 selected water sources. In addition, multi-stakeholder consultations will be conducted to design and validate the protection, maintenance and management plans those additional 3 water sources, involving the 56 households. (Total: 187 households, 30% headed by women, 10 protected water sources).

Output 3.1.2: 375 households trained in shared decision-making, construction, management and maintenance of rainwater harvesting systems for multiple uses (irrigation and human consumption) in communities located in the targeted micro-watersheds.

Activities:

In the 1st and 2nd quarter of PY1, the Part-Time Participatory Watershed Management Specialist will design training material for targeted households. In PY1, 10 learning-by-doing activities and workshops will be organized with 128 households to develop their capacities in decision-making, construction, management and maintenance of rainwater catchment systems for multiple uses (irrigation and domestic use) in the communities located in selected micro-watersheds. The methodology Demonstrative Family/ Irradiated Families (DF/IF) will be applied to disseminate the knowledge throughout the communities. The households will participate in the management of individual and community rainwater catchment systems. In PY2, 10 learning-by-doing activities and workshops will be organized with 150 additional households. The methodology DF/IF will be applied. The households will participate in the management of individual and community rainwater catchment systems. In PY3, 10 learning-by-doing activities and workshops will be organized with 97 additional households. The methodology DF/IF will be applied. The households will participate in the management of individual and community rainwater catchment systems. Gender-sensitive approaches will be applied to the whole process, involving a total of 175 households led by women by the end of PY3. (Total: 30 learning-by-doing activities and workshops, 375 households involved).

Output 3.2.1: 1 community rainwater harvesting system for productive use is built, managed and maintained in collaboration with 12 households, out of which 4 are female-headed

Activities:

In PY1, one community-level rainwater collecting system for multiple-uses will be built in targeted project areas with the participation of 12 households (4 female-headed). In PY2, the construction of this community-level rainwater collection system will be finished and the system will be sustainably managed by those 12 households. In PY3, the community-level rainwater collection system will be sustainably managed and a maintenance plan will be operated by 12 households. This system will supply water to community-based or out-of-towns lands where water availability is really low, helping the farmers and families to cultivate crops and growing fruit trees that will help increase their food security and adaptation capacities. This output will be based on the capacity development activities of output 3.1.2 (i.e. how to manage rainwater harvesting systems) , output 2.1.1 (i.e. vegetative material provided), and output 2.2.1 (i.e. FFS training on INRM, soil conservation and protection among households).

Output 3.2.2: 12 domestic water conveyance systems derived from two multiple water conveyance systems are built in for productive and domestic uses in the targeted areas. 42 households with domestic rainwater harvesting systems for domestic use in targeted areas. (Baseline: 0 water conveyance systems. 12 households with domestic rainwater harvesting systems)

Activities:

In the 1st and 2nd quarter of PY1, the Part-Time Participatory Watershed Management Specialist and CENTA will identify the households where rainwater harvesting and conveyance systems will be built. In PY1, 6 domestic water conveyance systems for productive and domestic uses, deriving from 1 water conveyance system, will be built in the project targeted areas. In addition, 10 households will participate in building 10 domestic rainwater harvesting systems for domestic use in targeted areas (Total: 22 households). In PY2, 6 additional domestic water conveyance systems for productive use deriving from 1 additional water conveyance system will be built in the project targeted areas (total: 12 systems from 2 conveyance systems). 10 additional households will participate in building 10 domestic rainwater harvesting systems for domestic use in targeted areas (total: 32 households). In PY3, 12 domestic water conveyance systems for productive and domestic uses deriving from 2 water conveyance systems will be operative and maintained in the project areas. A total of 42 households will have domestic rainwater harvesting systems for domestic use by the end of PY3, in targeted project areas.

Component 4: Improving disaster risk management (DRM) to increase adaptive capacity to climate change, in vulnerable sectors living in targeted micro-watersheds.

The municipal governments of Candelaria de la Frontera and Texistepeque have Civil Protection Units, that are weak and will be strengthened through Component 4. Local women networks, schools, community-based organizations, producers associations and the municipal environmental units have been involved in the design of Component 4, and are expected to actively participate and facilitate the awareness-raising and DRM activities to achieve outcomes 4.1 and 4.2

The objective of Component 4 is to strengthen capacities for disaster risk management and climate change adaptation in selected areas in the municipalities of Texistepeque and Candelaria de la Frontera. This will be achieved through the following outputs and activities:

Output 4.1.1: 50% of rural households (out of which 30% are female-headed) and small rural producers in the selected micro-watersheds are involved in risk reduction, preparedness, response and disaster recovery, including contingency planning with a gender-sensitive perspective.

Activities:

In PY1, 15% of rural households (of which 20% are headed by women) in the targeted watersheds will be engaged in 10 workshops on disaster risk reduction (DRR), preparedness, response and recovery. In PY2, 35% of rural households (25% of which are

women-led) in selected watersheds will be involved in 10 additional workshops on DRR, preparedness, response and recovery. By the end of PY3, 50% of rural households (of which 30% are female-headed) in selected watersheds will have been involved in 10 additional workshops on DRR, preparedness, response and recovery (total: 30 workshops). The training material and programme will target different needs and actors, and will be disaggregated by gender. The workshops will end with simple evaluation forms and knowledge tests, to monitor the increasing capacities of participants and allowing timely revisions of the programme, if needed.

Output 4.2.1: 6 climate, biophysical and social risk maps prepared by local communities, covering the entire population, identified signposted, and conditioned safe places to protect the communities in case of emergency.

Activities:

In PY1, 6 community-based workshops will be organized to design 2 risk maps (including climate, biophysical and social aspects) with 2 communities including 750 rural families (300 female-led). Maps will take into account the entire population, and establishing signaling systems and safe places for local evacuations in case of emergencies. In PY2, 6 community-based workshops will be organized to design two additional risk maps with 2 additional communities, including the entire population, and establishing signaling systems and safe places for local evacuations. By the end of PY3, 6 community-based workshops will be organized to design two additional risk maps with 2 additional communities (including the entire population, and establishing signaling systems and safe places for local evacuations (total: 6 communities).

Output 4.2.2: Local communities (70-100 % of the population of targeted micro watersheds) integrated in municipal and departmental networks and structures for rapid response to extreme weather events

Activities:

In PY1, two municipal and departmental emergency response mechanisms to extreme weather events will be developed, covering 20-40% of the population in selected watersheds. In PY2, two additional municipal and departmental emergency response mechanisms to extreme weather events will be developed, covering 41-69% of the population in selected watersheds. In PY3, two additional municipal and departmental emergency response mechanisms to extreme climatic events will be developed, covering 70-90% of the population in selected watersheds (total: 6 municipal and departmental response mechanisms). The disaster response coordination plans and mechanisms will be agreed through multistakeholders' consultations.

Output 4.2.3: Local and departmental governments are taking the lead in reducing vulnerability to CC through the design and implementation of two Action Plans for coping with natural disasters and weather emergencies, and to reduce climate-induced economic losses in Texistepeque, and Candelaria de la Frontera.

Activities:

In PY1, 2 action plans to respond to natural disasters and extreme weather events, and to reduce climate-induced economic losses, will be *designed* in Texistepeque, and Candelaria de la Frontera. In PY2, the two action plans will be *implemented* in Texistepeque, and Candelaria de la Frontera. In PY3, the two action plans will be implemented and monitored in Texistepeque, and Candelaria de la Frontera. It is expected that the Action Plans will be accompanied by budget allocations at municipal/departamental level, to address natural disasters and weather emergencies. In PY1, the design process of the action plans will follow a participatory modality (i.e. meeting, workshops).

Component 5: M&E and information dissemination

CENTA has dedicated field staff that will support the project implementation, in particular, Component 2 and 3. FAO will execute the project budget and is providing technical backstopping to the overall project cycle. The M&E system will be design by the short-term M&E Specialist. Project data, disaggregated by gender, in Component 2 and 3 will be inserted in the MAG information platform by the CENTA field staff. The local health promoters of MINSAL will be trained by the project to collect data information on child malnutrition and food security at household levels in project targeted areas. MINSAL has developed targeted surveys to collect this information that will be used during project implementation.

The objective of Component 5 is to effectively monitor and evaluate project progress indicators, monitor risk mitigation measures and design new measures to face unexpected risks, and extract lessons learned (including successes and failures) of project implementation, that will be disseminate in the LAC region, and worldwide, for projects to be implemented in similar regions or climate zones. The outcomes of Component 5 will be achieved through the following outputs and activities:

Output 5.1.1: Project monitoring system providing six-monthly reports on progress in achieving project output and outcome targets

Activities:

In PY1, the Project Coordinator will be responsible for preparing a Project Progress Report (six-monthly) supported by the Project Bilingual Assistant and in close coordination with the PMCU representatives. The PPR includes the project results framework with project outputs and outcomes indicators, baseline and six-monthly target indicators, the monitoring of the risk matrix, and will identify potential risks and mitigation measures to reduce those unexpected risks. At the end of PY1, the Project Coordinator supported by the Project Bilingual Assistant and in close coordination with the PMCU will provide appropriate inputs to the Lead Technical Officer (LTO). The LTO-FAO will be responsible for preparing the Project Implementation Report (PIR, yearly). The PIR includes the project results framework with project outputs and outcomes indicators, baseline and yearly target indicators, the monitoring of the risk matrix, and will identify potential risks and mitigation

measures to reduce those unexpected risks. In PY2 and PY3 the process will be the same as in PY1.

Output 5.1.2: Midterm and final evaluation reports

Activities:

After 18 months of project implementation, a mid-term project review will be conducted by an external consultant, who will work in consultation with the project team including the FAO-GEF Coordination Unit, the LTO, and other partners.

At the end of project implementation (36th month) a final project evaluation will be conducted by an international external consultant under the supervision of the FAO Independent Evaluation Office, in consultation with the project team including the FAO-GEF Coordination Unit, the LTO, and other partners.

Output 5.1.3: Project best practices and lessons learned

Activities:

In PY1, a publication will be issued on project experiences and best practices on integrated and participatory watershed management. In PY2, a publication will be issued on project best practices and lessons learned on mainstreaming of soil and water conservation and other sustainable agriculture practices in local production systems and DRM. In PY3, publication will be issued on comprehensive project lessons learnt, including successes and failures. All publications will be uploaded to the project website, and will be distributed through (limited) printed copies to local partners and government staff .

2.5 GLOBAL ENVIRONMENTAL BENEFITS/ADAPTATION BENEFITS

Global environmental benefits (GEBs): 1200 households of rural small-scale producers (project beneficiaries), their communities, women networks, CENTA and MAG local/departmental staff, local officers of the municipal governments of Candelaria de la Frontera and Texistepeque, will be supported by the Project to develop their capacities on sustainable land management (SLM) and reduction of land degradation in the project targeted areas, including the reception of vegetative material to cover their degraded soils. These stakeholders will help deliver the following GEBs:

- 40% of soils (equivalent to 1541 hectares) in the project intervention areas have increased their vegetative cover (fruit trees, forest trees, grass, shrubs). Therefore, soil and water resources have been protected and conserved, and land degradation has been decreased;
- 40% of lands in the project intervention areas (1541 hectares) are managed by applying integrated natural resources management (INRM) in wider landscape. Agro-ecosystem services have been restored. Agricultural productivity has been sustainably increased (proxy indicator: 2.89 ton of corn per Ha/year), and community vulnerability has been reduced. GEBs measured by applying the GEF LD PMAT scores: Land area of production systems with increased vegetation cover: 1541 ha (Indicator 1.iii); Spatial coverage of integrated natural resource management in the wider landscape: 1541 hectares (indicator 3.ii); Three methodologies (agro-forestry systems, conservation agriculture and watershed

management) of INRM applied in the broader landscape in the project intervention area (indicator 3.ii).

Baseline: 13% of soils in the project intervention area has vegetation cover soil and water for protection and conservation (fruit trees, forest trees, grass, and bush, among others); food productivity: 2.75 ton/Ha/year for corn. GEF LD PMAT tracking tool: Land area of production systems with increased vegetation cover: 501 hectares (Indicator 1.iii); Spatial coverage of integrated natural resource management in the wider landscape: 0.3% of land (12 hectares) (indicator 3.ii); zero methodologies of INRM applied in the broader landscape in the project intervention area (indicator 3.ii).

Adaptation benefits: 1200 households of rural small-scale producers (project beneficiaries), their communities, women networks, Civil Protection Committees, CENTA, MAG, and MARN local/departmental staff, local officers of the municipal governments of Candelaria de la Frontera and Texistepeque, will be supported by the Project to develop their capacities on CCA and DRM. The Project will generate the following adaptation benefits for them, monitored through the SCCF AMAT tracking tool:

- 7 institutions present in project intervention areas with increased adaptive capacity to reduce risks and response to climate variability (Indicator 2.2.1);
- Capacity perception index. Score 3: Substantial training in practical application. Female participation: 35% (Indicator 2.2.2);
- 50-75% of population affirming ownership of adaptation processes (Indicator 2.3.2);
- +10% change in projected food production in targeted area given existing and projected climate change (Indicator 1.2.8);
- 5 climate resilient agricultural practices introduced to promote food security (Indicator 1.2.1.3);
- Households and communities have moderate access to livelihood assets (Score: 3) Female participation: 30% (Indicator 1.3.1);
- Increase in water supply targeted areas: 9500 m³ (Indicator 1.2.4);
- 2 sustainable water management practices introduced to increase access to irrigation water under existing and projected climate change (Indicator 1.2.1.5)⁵⁸;
- Targeted population awareness of predicted adverse impacts of climate change and appropriate responses. Score: 2. Moderate awareness level (50-75% of the population) (Indicator 2.3.1.1);
- Vulnerability and risk perception index disaggregated by gender has increased from 1/2 (extreme/high vulnerability) to 3/4 (medium/low vulnerability) in targeted micro watersheds (Indicator 1.2.14);
- 80 % of population covered by climate change risk measures (disaggregated by gender) (Indicator 2.2.2);
- 3 Risk reduction and awareness activities introduced at local level⁵⁹ (Indicator 2.3.1.1)

⁵⁸ See sections 2.3 and 2.4, description of outcomes and outputs of Component 3.

⁵⁹ See sections 2.3 and 2.4, description of outcomes and outputs of Component 4.

- Child malnutrition reduced by -2%⁶⁰.

Baseline: 7 institutions present in the project intervention area have weak capacities to adapt to climate change, disaster risk reduction and response mechanisms to deal with the effects of climate variability; Capacity perception index: score 2 (initial awareness raised), female presence: 25%; Men, women, local authorities and institutions in target areas have little awareness of adverse impacts of CC, and are not participating in adaptation processes; 0% of population affirming ownership of adaptation processes; Child malnutrition: 19.6% (Texistepeque), 17.6% (Candelaria de la Frontera); 0% change in projected food production in targeted area given existing and projected climate change; zero climate resilient agricultural practices introduced to promote food security; Households and communities have poor access to livelihood assets (score: 2), female participation: 30%; current water supply: 6750 m³; 0 sustainable water management practices introduced to increase access to irrigation water under existing and projected climate change; <50% of targeted population awareness of predicted adverse impacts of climate change and appropriate responses (level 1: No awareness level correct); vulnerability and risk perception index: 1/2 (extreme/high vulnerability); 0% of population covered by climate change risk measures (disaggregated by gender); and 0 risk reduction and awareness activities introduced at local level⁶¹.

2.6 COST EFFECTIVENESS (alternative strategies and methodologies considered)

During full project preparation diverse strategies and methodologies were analysed with a view in their cost/effectiveness and suitability for the national context⁶². In order to reduce land degradation, strengthen adaptive capacities, and reduce people's vulnerability, the following strategies and methodologies have been selected for project implementation:

- a) Raising awareness among families, communities and small-scale local producers, of the necessary shift towards sustainability in soil and water management practices, and the application of appropriate technologies such as: i) seeds adapted to high temperatures (i.e. CENTA-*Pasaquina* corn, and CENTA *Chaparrastique* and *Pipil* beans); ii) changing planting dates to reduce heat waves impacts; and ii) using supplementary irrigation water where available.
- b) Promoting soil and water conservation and diversification of local production systems, to reduce dependence on single crops - which will constrain the risk of climate-induced economic losses.
- c) Promoting and implementing agroforestry systems, including basic grains with fruit trees in individual terraces and forest trees in living barriers and hedges, as well as establishing tree nurseries at schools, family farms and municipalities, and provide specific incentives (vegetative material) for the promotion of perennial crops.
- d) Implementing sustainable territorial and landscape management in order to locate crops and infrastructure according to the capacity of land use, thus promoting the best land uses.

⁶⁰ See sections 2.3 and 2.4, description of outcomes and outputs of Component 1.

⁶¹ For more details, see Project Results Framework (Appendix 1), and sections 2.3 and 2.4 above.

⁶² The analyses were conducted by the Institutional Specialist, the Sustainable Land Management Specialist, and the Water Resources Management Specialist, all financed by PPG resources. S.Ventura, 2012; S. Solano, 2012; G.Cuenca, 2012.

- e) Promoting agricultural and land use practices that serve to maintain, and where possible increase, the content of soil organic matter, which in project intervention areas is very low, to reduce soil degradation partly caused by climate change.
- f) Encouraging the ongoing use of positive traditional practices, such as sowing with handspike or pike, no-till agriculture with stubble as ground cover, and promote other conservation practices such as: i) cover crops; ii) soil management techniques including integrated nutrient planning; iii) use of biochar, crop rotations, planting hedgerows and living barriers on hillsides. Such practices could capture between 200 and 1000 kg of soil carbon per hectare/year.

These strategies were selected through field analysis and based on the previous studies in the Central American region. All practices listed above have been classified as cost/efficient in the study conducted by the University of Connecticut (2003)⁶³, that included a comparative analysis with the use of degrading traditional practices. This study cites Carcamo et al (1994)⁶⁴, who found that a slight decrease in erosion is feasible to achieve with changes in production systems and the use of contour plowing. Moreover, López-Pereira et al (1994)⁶⁵ evaluated the adoption of stone walls, ditches and live barriers for small farmers in South-Eastern Honduras. This study shows that an effective crop rotation, with appropriate level of fertilization and the use of conservation technologies, can improve the income of small-scale farmers in more than 50%. The report by the University of Connecticut indicates that in the case of El Salvador, on average the farms that adopted conservation methods increased maize production by 20%, beans by 15% and sorghum by 17%. This increase was achieved after four years of its adoption.

2.7 INNOVATIVENESS

The project will be innovative in the use of a micro-watershed planning and INRM processes as means for engagement with critical stakeholders, including central government agencies, local governments and community-based organizations, and with vulnerable population, mainly subsistence family farmers.

The project will also be innovative in the promotion of sustainable land management (SLM) demonstration practices and technologies at the community/family farm level, which irradiate other subsistence family farmers in the micro-watershed area. The use of these SLM practices/technologies should also serve to inform future programs, projects and activities at all levels involved in the micro-watershed planning and INRM processes (including the central government, local governments and community-based organizations).

⁶³ *Análisis del Impacto Económico de Tres Proyectos de Manejo de Recursos Naturales en América Central, Informe Final*. Boris E. Bravo-Ureta, Horacio Cocchi, Daniel Solis, Teodoro E. Rivas. International Affairs Office, University of Connecticut. October 2003. Inter-American Development Bank, Technical Cooperation: 01-08-01-1-RS.

⁶⁴ Cárcamo, J., J. Alwang y G. Norton. "On-site Economic Evaluation of Soil Conservation Practices in Honduras", *Agricultural Economics* 11(1994): 257-269.

⁶⁵ López-Pereira, M., J. Sanders, T. Baker y P. Preckel. "Economics of Erosion-Control and Seed-Fertilizer Technologies for Hillside Farming in Honduras", *Agricultural Economics* 11(1994): 271-288.

SECTION 3 – FEASIBILITY (FUNDAMENTAL DIMENSIONS FOR HIGH QUALITY DELIVERY)

3.1 ENVIRONMENTAL IMPACT ASSESSMENT

Following FAO's *Environmental Impact Assessment (EIA): Guidelines for FAO Field Projects*⁶⁶, the proposed Project is classified under category C⁶⁷, and therefore does not require a full scale EIA. The Environmental and Social Review Form⁶⁸ is attached in Appendix 10.

3.2 RISK MANAGEMENT

Project risks have been identified and analyzed during the full project preparation and mitigation measures have been incorporated into the project design (see sub-section 3.2.1 below). The Project Management Coordination Unit (PMCU, composed of MAG, MARN, CENTA, FAO, and the Project Coordinator – see details in Section 4) will be responsible for the day-to-day management of these risks and the effective implementation of mitigation measures. A Monitoring and Evaluation (M&E) system will be designed in Project Year 1 (PY1) by a short-term M&E Specialist, under the general oversight of the PMCU (see Section 4). The M&E system will serve to monitor project outcomes and outputs indicators, project risks and mitigation measures. The PMCU will also be responsible for monitoring the effectiveness of mitigation measures and adjusting mitigation strategies as needed, and identify and manage any eventual new risks not foreseen during project development, in dialogue with other project partners.

The six-monthly Project Progress Report (PPR, see sub-section 4.5.3) is the main tool for project risk monitoring and management. These reports include a section on systematic follow-up of risks and mitigation actions identified in previous reporting periods. The PPRs also include a section for identification of eventual new risks or risks that still need attention, their rating and mitigation actions, as well as the responsibility for monitoring those actions, and the expected timeline. FAO will monitor the project risk management closely and follow up if needed by providing support for the adjustment and

⁶⁶ See <http://www.fao.org/docrep/016/i2802e/i2802e.pdf>

⁶⁷ Category C projects should have minimal or no potential negative environmental or social impacts, either individually or cumulatively. They should not be controversial in terms of the interests of key stakeholders. According to FAO's guidelines (see previous footnote), in these projects no further environmental and/or social analysis or assessment is required. This is an indicative list of projects under Category C, which is periodically updated by FAO based on experience: i) Natural resource assessments and monitoring; ii) Environmental and sustainable development analysis; iii) Monitoring and evaluation exercises; iv) Research and extension in agriculture, forestry and fisheries; v) Capacity development, communication and outreach programmes, including training; vi) Minor construction activities and maintenance of installations; vii) Institutional development, including norms and standards; viii) Support to the development of income-generating activities at household or Farmer-Based Organization (FBO) level (i.e. small-scale "cottage industries"); ix) Distribution of agricultural inputs to vulnerable or disaster-affected households (seeds, fertilizer, tools, small livestock) that are already known by the target groups and which are available locally; among others.

⁶⁸ Ranking under Category C should be certified by the FAO Lead Technical Officer (LTO). The FAO LTO has carefully filled-in the FAO Environmental and Social Review Form – see Appendix 10

implementation of risk mitigation strategies. Reporting on risk monitoring and rating will also be part of the annual Project Implementation Review (PIR) prepared by FAO and submitted to the GEF Secretariat (see sub-section 4.5.3).

3.2.1 Risks and mitigation measures

Risk identified during PIF preparation have been further analysed. Additional risks have been identified and analysed as part of the project risk assessment. Table 3.1 below summarizes all risks identified, their rating, and the mitigation measures that have been developed and incorporated in the full project design.

Table 3.1:
Risks and proposed mitigation measures to the Project *Climate Change Adaptation to Reduce Land Degradation in Fragile Micro-Watersheds located in the municipalities of Texistepeque and Candelaria de la Frontera*

Risk	Rating	Risk Mitigation measures
Local climate risk in targeted areas: high-probability of occurrence of extreme natural and weather events, which may de-capitalize households and increase food/nutritional insecurity	H	The proposed project will mitigate this risk by supporting the implementation of CCA measures and inducing coordination to support emergency responses.
Local climate risk in targeted areas: high-probability of extreme weather events and natural disasters, which may cause contingencies and emergencies in affected areas. Worsened impacts due to high local vulnerability to such events.	H	The proposed project will mitigate the impacts of extreme weather events and natural disasters by setting emergency response planning, and micro-watersheds protection and management plans.
Institutional risks: absence of contingency plans to cope with extreme weather events and natural disasters, which may create non-coordinated and unsuitable responses.	M	The project will mitigate this risk by supporting emergency planning, coordinating disaster risk reduction (DRR) plans with key stakeholders, fostering mechanisms for sustainable natural resources management and ecosystems recovery, and implementing CCA measures
Institutional risk: Decrease in project ownership and support from governmental agencies	L	The government agencies (MARN, MAG, CENTA, municipal governments) have been fully involved in the full project preparation and are expected to be fully involved in project implementation through the PMCU. FAO will provide technical assistance..The project design takes into consideration the need of achieving results in the short-term to show the importance of project objectives, results, and activities to local and national governmental agencies.
Political risk: Conflicts and differences among political parties might affect	M	The Project will promote continuous awareness-raising among all key actors about

Risk	Rating	Risk Mitigation measures
project implementation.		the importance of project objectives beyond political differences. It will also support the close involvement of local governments through strategic alliances and agreements.
Institutional risk: Low involvement and participation of local institutions in micro-watershed coordination and monitoring mechanisms.	M	The Project will encourage local participation, empowerment and ownership to support the coordination mechanisms related to watershed management (see Component 1). Specific cooperation agreements and letters of understanding will be endorsed by local institutions and local stakeholders for the support of FMWMPs. Detailed responsibilities and commitments to support the implementation of the actions will be clearly defined in the FMWMPs.
Political risk: Lack of continuity of the political party currently in office in local government may erode local interest in project implementation.	M	The participation, involvement and empowerment of existing local committees (such as OBSAN and civil protection committees) will be strengthened. These committees are composed of diverse institutions rooted in the territory, and this will ensure that actions would be continued even in the case of political alternation in the two municipal governments. Local institutions and community-based organizations participating in the civil protection committees will be strengthened, independently of which political party takes office.
Social risk: Lack of participation of beneficiaries	L	Awareness-raising campaigns and workshops on the local negative impacts of CC will be conducted involving institutions and local stakeholders. The local approach will stimulate local participation, since problems to be addressed are highly known and visible in local population's everyday life. Local communities and family farmers/small-scale producers will be supported through technical assistance and rural incentives (plant materials, investments in water systems), stimulating the diversification and their livelihoods assets and income sources. Direct adaptation benefits will increase and incentive the participation of project beneficiaries.

H= High (greater than 60 per cent of probability that the outcome/result will not be achieved)

M= Medium (30 to 60 per cent of probability that the outcome/result will not be achieved)

L= Low (probability of less than 30 per cent that the outcome/result will not be achieved)

SECTION 4 – IMPLEMENTATION AND MANAGEMENT ARRANGEMENTS

4.1 INSTITUTIONAL ARRANGEMENTS

a) *General institutional context and responsibilities*

Government of El Salvador

The Project will be technically executed by the Government of El Salvador represented by the Ministry of Agriculture and Livestock (MAG)⁶⁹, the Ministry of Environment and Natural Resources (MARN)⁷⁰, and the National Centre of Agriculture, Livestock and Forestry Technology (CENTA)⁷¹. In addition, the local municipalities of Texistepeque and Candelaria de la Frontera, and the local communities located in 6 micro-watersheds in the Lempa river watershed in Texistepeque and Candelaria de la Frontera will participate in the project implementation. FAO will be responsible for the financial and operational execution of the project in addition to being the GEF implementing agency providing supervision and technical advice services to the project. (see figure 4.1 below).

The MAG will be the lead government counterpart and the Project Executing Partner with technical responsibility for the Project. The Project Management Coordination Unit (PMCU) will be composed of the national focal points of MAG, MARN, and CENTA, which will ensure coordination and collaboration with the municipalities of Texistepeque and Candelaria de la Frontera for project implementation. FAO will provide procurement and contracting services to the project using FAO rules and procedures, will provide financial management services of SCCF/GEF resources, as well as supervision and technical guidance for the overall implementation process. Project implementation will follow a participatory approach, involving local communities, associations for community development (ADESCOS), women groups, municipal and community-based Civil Protection Committees, churches, and local water boards. In addition, the Project will coordinate actions at local level with schools and health promoters (MINSAL).

The MAG is the national authority for agriculture, livestock, forestry and fisheries⁷². MAG is responsible for implementing the Environmental Strategy for Climate Change Adaptation and Mitigation in Agriculture, Livestock, Forestry and Aquaculture Sectors (2012), as part of the Family Agriculture Plan (FAP).

The MAG's coordinating role of the Project will be primarily through its General Directorate of Forestry, River Basins and Irrigation Management (DGFCR⁷³), within which a Climate Change Division has been recently created (July 2012). The MAG-DGFCR is

⁶⁹ MAG for its acronym in Spanish: *Ministerio de Agricultura y Ganadería*

⁷⁰ MARN for its acronym in Spanish: *Ministerio del Ambiente y Recursos Naturales*

⁷¹ CENTA for its acronym in Spanish: *Centro Nacional de Tecnología Agropecuaria y Forestal*

⁷² MAG's authority is defined by the following national laws: Forestry Law (*Ley Forestal*), Irrigation and Drainage Law (*Ley de Riego y Avenamiento*), General Law for Management and Promotion of Fisheries and Aquaculture (*Ley General de Ordenación y Promoción de Pesca y Acuicultura*), and Law on Plant and Animal Health (*Ley de sanidad vegetal y animal*).

⁷³ DGFCR, for its acronym in Spanish: *Dirección General de Ordenamiento Forestal, Cuencas y Riego*

responsible for: i) generating and distributing information, and providing technical and legal assistance on forests, soil and water resources; and ii) implementing programs contributing to the sustainable development of forests, water and soil resources in El Salvador. Within the MAG-DGFCR, the Irrigation and Drainage Division is in charge of administrating and regulating the irrigation and drainage systems. DGFCR will be the Project Technical Focal Point on behalf of MAG.

The MAG-DGFCR and FAO will be responsible for providing technical assistance, supervision and monitoring of Project Component 1 (except outcome 1.3). In addition, a **part-time Institutional Specialist**⁷⁴ (financed by SCCF resources) will support the PMCU to achieve and monitor the project outcomes 1.1 and 1.2 (Project Component 1). In particular, he/she will: i) lead the preparation of the targeted capacity-development (CD) and training materials for the involved institutions; ii) design the surveys that will assess how public officers and technical officers participating in the Project CD activities have acknowledged the concept of climate change adaptation, and their ownership level; iii) systematize the methodologies and guidelines that will serve as basis for the FMWMPs design (agreed by the institutions); iv) systematize the participatory tools and methodologies used during the FMWMPs design, discussion and implementation; and v) design the monitoring system for the FMWMPs. He/she will work in close coordination with the PMCU, the Project Coordinator and the two municipalities.

The CENTA is a semi-autonomous decentralized government agency ascribed to MAG. CENTA has a Technical Transfer Department, including a network of Extension Agencies which provide technical outreach services to local farmers. CENTA, supported by FAO, has been implementing the Family Agriculture Plan /Food Production and Income Generation Subprogram (FAP-FPIGS) in the project region, through its local extension agencies. The regional branch of CENTA responsible for covering Santa Ana will be the Technical Focal Point on behalf of CENTA.

The CENTA and FAO will be responsible for providing technical assistance, supervision and monitoring of Component 1 (outcome 1.3: production diversification indicators). In addition, a **part-time Agriculture Diversification Specialist**⁷⁵ (financed by SCCF resources) will be located within CENTA to strengthen the capacities of CENTA local and departmental extension agents/chiefs. He/she will support the implementation of more resilient production systems at household level. The scope is to incentivize and promote the adoption of agro-livestock diversified options for improving productivity (+10% in project area) and local livelihoods (see project outcome 1.3, Project Results Framework, Appendix 1). He/she will report and monitor SCCF indicators identified in project outcome 1.3 (see Appendix 1).

The MAG-DGFCR and CENTA will be responsible for providing technical assistance, supervision and monitoring of project components 2 and 3. FAO will sign **two Letters of Agreement**⁷⁶ (LoA) with CENTA for the implementation of Component 2 (financed by

⁷⁴ Detailed TORs in Appendix 6, N° 4

⁷⁵ Detailed TORs in Appendix 6, N° 6

⁷⁶ Detailed LOAs in Appendix 9, N° 1 and 2

GEFTF resources). Each LoA will last 18 months. In this framework, two additional technical extension agents will work within CENTA's institutional structure to help create internal capacities and give sustainability to project results. CENTA will provide in-kind co-financing as staff time: two technical extension agents, two part-time Extension Agency Chiefs (local branches of CENTA in Candelaria de la Frontera and Texistepeque), transportation and gasoline for motorbikes used by four technical extension agents (two paid by CENTA, two additional financed by GEFTF resources) for field visits; office space for six technical extension agents, two part-time Extension Agency Chiefs; the MAG-CENTA platform for monitoring impact indicators (already used by the technical extension agents to upload the results of field visits, including impact indicators at household level and disaggregated by gender).

Component 3 will provide SCCF investment resources for the construction of community and individual rainwater harvesting and water catchment and conveyance systems. CENTA will provide technical assistance for the dissemination of good water management practices and training of local population. In addition, a **part-time Participatory Watershed Management Specialist**⁷⁷ (financed by SCCF resources) will support the internal capacity strengthening of CENTA and DGFCR to implement, monitor and ensure the sustainability of the project results generated by Component 3. In particular, he/she will: i) Support CENTA and MAG-DGFCR in the provision of technical assistance to project households, aimed at introducing sustainable management practices in project intervention areas; ii) Design training material for targeted communities and households; iii) Design and conduct targeted surveys to assess the effective households' and communities' involvement; iv) Design a trimester technical report template on sustainable water management practices to be completed by CENTA extension agents through their regular field visits to the project intervention areas; v) Support CENTA and MAG-DGFCR in providing technical assistance and training to project households; vi) Design and conduct six-monthly water quality and quantity tests in project intervention areas, to track changes caused by project implementation; vii) Conduct *in situ* verification of infrastructure building and operation and maintenance; viii) Prepare semester monitoring reports; ix) Participate in the TWGs providing technical advice to the PMCU on issues related to participatory watershed planning processes, mechanisms for community-based monitoring systems, tracking water quality and quantity, and project outcomes sustainability.

FAO will provide technical backstopping to CENTA and MAG-DGFCR for the implementation of components 2 and 3.

The MARN is the national environmental authority, which mandate is supported by the national Environment Law. The MARN acts as GEF Operational Focal Point and it is responsible for the coordination of all GEF activities in El Salvador. MARN oversees the national commitments to the UNCDD and UNFCCC and other multilateral environmental conventions. It includes a Department of Climate Change and Strategic Affairs. In addition, MARN is responsible for implementing the National Program for Ecosystem and Landscape Restoration (PREP) along the Lempa river basin, which also covers the project pilot areas.

⁷⁷ Detailed TORs in Appendix 6, N° 7

The MAG-DGFCR in coordination with MARN will be responsible for providing technical assistance, supervision and monitoring of project Component 4. They will be technically supported by FAO and a **Disaster Risk Reduction (DRR) Specialist**⁷⁸ (financed by SCCF resources), who will help the regional branches of MARN and MAG-DGFCR, and the municipal governments, build internal capacities for disaster risk reduction, setting meteorological forecasts at local level, preparation, response and recovery skills to face natural emergencies, designing and disseminating biophysical and social risks maps. The DRR Specialist will coordinate the organization of awareness-raising activities with vulnerable population living in targeted micro-watersheds, as described in the project results framework (see Appendix 1, Component 4), in close consultation with the PMCU. The main task of the DRR Specialist will be to support a broad extension of capacity development actions in Component 4 that ensure the sustainability of project results.

In addition, the DGFCR and MARN will be responsible for providing supervision and monitoring of project Component 5. In the first semester of PY1, a **short-term Monitoring and Evaluation (M&E) Specialist**⁷⁹ (financed with GEF and SCCF funds) will support DGFCR and MARN in designing and establishing the M&E system of the Project. The **Project Coordinator** will support the PMCU (see 4.2 below) to perform the field base impact monitoring throughout the whole Project, using the M&E system designed by the M&E Specialist in PY1. The Project Coordinator will also be responsible for monitoring project risks, coordinating the implementation of risk mitigation measures identified in Section 3 (see above), and raising first concerns about unexpected risks that may appear during project implementation (reported in the Project Progress Reports-PPRs) (see Sub-section 4.2 below). FAO will help the MAG-DGFCR develop institutional capacities on project risk monitoring and application of risk mitigation measures. All these created capacities will allow the government agencies to assess, monitor and cope with unexpected risks even after project termination, providing sustainability to project results.

The MINSAL is responsible for monitoring public health indicators, including child malnutrition statistics. At the regional level, MINSAL health related activities are supervised by a Regional Health branch, which is supported at the departmental level by the Supervision Teams which form part of what is known as the Integrated Basic Health System (SIBASI).⁸⁰ Nutrition professionals are available at this level, which are responsible for providing technical advice; establishing and executing training plans for health personnel in order to strengthen capacities for attention in the area of nutrition; generate research processes; supervision and program evaluation, among others.

In the municipalities covered by the project, Health Units work with limited resources, as these municipalities are not covered by the Health Reform which is extensively being developed by MINSAL, and there are currently no Specialized Health Teams to give an integrated service to the population. Therefore, to access services in the areas of Nutrition,

⁷⁸ Detailed TORs in Appendix 6, N° 9

⁷⁹ Detailed TORs in Appendix 6, N° 8

⁸⁰ SIBASI, for its acronym in Spanish: *Sistema Basico de Salud Integral*.

Psychology, Physiotherapy, Internal Medicine and Gynecology, they must attend the health units located in the city of Santa Ana, which is the department head.

CENTA and FAO (in coordination with the MINSAL) will be responsible for providing technical assistance, supervision and monitoring the achievement of outcome 1.3 (project Component 1). A **short-term Nutritionist**⁸¹ (financed by SCCF resources) will work in close coordination with MINSAL and FAO on the reduction by -2% of child malnutrition in the project intervention area (see project outcome 1.3, Project Results Framework, Appendix 1). In PY1, she/he will train the MINSAL local officers on methodologies for measuring and monitoring food security and child malnutrition indicators. She/he will also support the capacity strengthening of nutritionists placed in the MAG-Western Region that will be financed through a loan provided by the Central American Bank for Economic Integration (CABEI) (PY1: 3 months). In PY3, he/she will support the MINSAL for monitoring the project achievements regarding child malnutrition, generating reliable statistics and information data for the PMCU (to be included in the project terminal report) (PY3: 2 months).

As local governments, the municipalities of Texistepeque and Candelaria de la Frontera are responsible for integrating the principles of conservation, development and sustainable use of natural resources in local planning processes, in coordination with the central government, as established in the Municipal Code (*Código Municipal*) and the national Environmental Law. According to the latter, local governments are required to establish a Municipal Environmental Unit (MEU), which both municipalities have already. In this context, municipalities can formulate local environmental policies in consultation with local communities, and may issue local ordinances or other legal instruments within the framework of the Constitution. It is foreseen that the MEUs could, as a result of the institutional strengthening component, serve as outreach agents for CCA and INRM activities initiated by this project.

The governments of Texistepeque and Candelaria de la Frontera will actively participate in the PMCU, and will support the organization of workshops and capacity-building activities with local population, households, women, and local civil protection committees, as needed for the achievement of expected project outcomes.

b) Coordination with other ongoing and planned related initiatives

The DGFCR, CENTA, MARN and FAO will work in close collaboration with other executing agencies to identify opportunities and facilitate mechanisms that enhance synergies with projects supported by other donors or the Government of El Salvador. These efforts will be facilitated through: i) informal communication between DGFCR, MARN, CENTA, FAO, and other agencies operating in project intervention areas and their borders; ii) sharing data and dissemination material between projects and initiatives; iii) strengthening existing committees and fora composed of representatives of government agencies, private sector, producers associations, and civil society, to address issues of common concern such as disaster risk management, food security, and agricultural

⁸¹ Detailed TORs in Appendix 6, N° 5

productivity, among others; iv) reinforcing coordination mechanisms with existing committees, in particular with the local Civil Protection Committees.

The project will coordinate actions with the Trifinio Municipal Association⁸², that along with the Lempa River Tri-national Municipal Association are framed into the Plan Trifinio Tri-national Commission (CTPT⁸³), financed by the governments of Guatemala, Honduras and El Salvador, as well as international bi-lateral and multi-lateral cooperation (Austria, Germany, EU, IADB, others). The Trifinio Municipal Association is implementing related policy initiatives and projects: i) *Indivisible Territory*⁸⁴, aimed at strengthening institutions to create land use planning and management capacities at the regional and sub-regional level. Planned activities include the creation of a regional Land Use Planning and Management Office located in Candelaria de la Frontera, financed by the CTPT, which will cover 8 municipalities (including Candelaria de la Frontera and Texistepeque), and can serve to complement project components 1, 3 and 4; ii) *Forests are Forever*⁸⁵: aimed at strengthening institutions to promote forest protection and watershed management capacities. This initiative includes the project “*Tropical forest protection and watershed management in the Trifinio region*” financed by Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH on behalf of the German Federal Ministry of Economic Cooperation and Development (BMZ). Actions will be coordinated between *Forests are Forever* and project components 1, 2 and 3; iii) *Zero Hunger*⁸⁶, aimed at strengthening institutions to create local policy strategies that increase food and nutritional security. Actions will be coordinated between *Zero Hunger* and project Component 2.

In the municipality of Candelaria de la Frontera the project will coordinate actions with the following initiatives: i) the Observatory for Food and Nutritional Security (OBSAN⁸⁷), which operates as part of the Trifinio Municipal Association, within the framework of the Central American Integration System (SICA) and the Regional Programme for Food and Nutrition in Central America II (PRESANCA II- 2013-2016). PRESANCA II is financed by the European Union, the Spanish Agency for International Cooperation for Development (AECID), the United Nations Program for Development (UNDP) and the Government of Finland. In Candelaria de la Frontera, PRESANCA II strives to reinforce local institutional capacity to manage food insecurity events through participatory policies. OBSAN/PRESANCA II will complement project component 1; iii) the projected Municipal Plan for Disaster Risk Management, for which the municipal government has requested financing from the Social Investment Fund for Local Development of El Salvador (FISDL⁸⁸, 2014-2016). Planned activities include the creation of a disaster risk management unit. Coordination with FISDL will serve to support project components 1 and 4; iv) the

⁸² The municipalities of Texistepeque and Candelaria de la Frontera are members of the Trifinio Municipal Association

⁸³ For its acronym in Spanish: *Comisión Trinacional del Plan Trifinio*.

⁸⁴ In Spanish, its name is *Territorio Indivisible*.

⁸⁵ *Bosques para Siempre*

⁸⁶ *Hambre Cero*

⁸⁷ For its acronym in Spanish: *Observatorio de Seguridad Alimentaria*.

⁸⁸ For its name in Spanish: *Fondo de Inversión Social para el Desarrollo Local*

Trinational Program for Food and Nutritional Literacy 2014 (ALFASAN⁸⁹), framed into Plan Trifinio and *Hambre Cero*, ALFASAN strives to provide knowledge on food security and nutrition to 3,896 people in the municipality of Candelaria de la Frontera. Coordination with ALFASAN will contribute towards project Component 1.

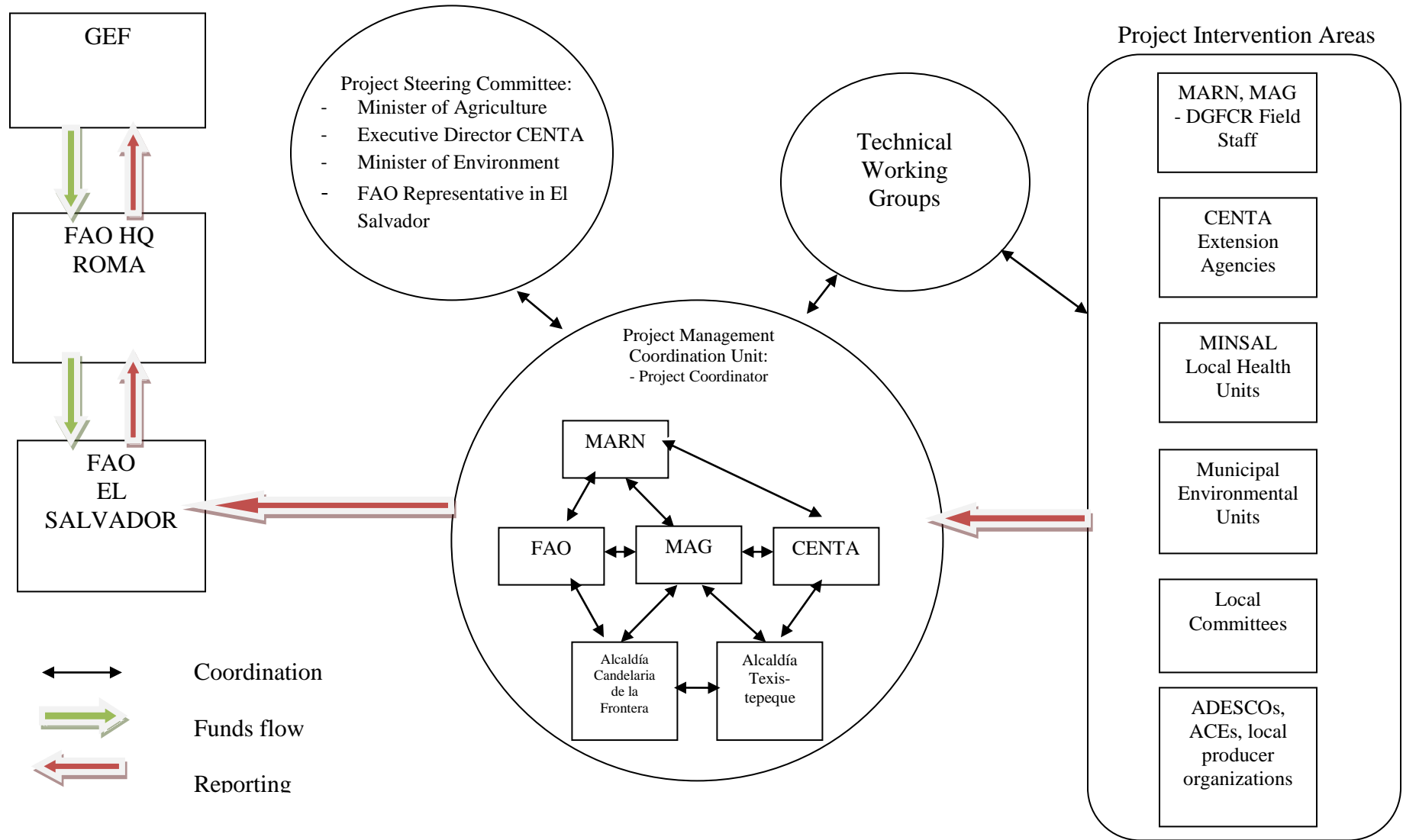
4.2 IMPLEMENTATION ARRANGEMENTS

The Food and Agriculture Organization of the United Nations (**FAO**) will be the GEF Agency responsible for supervision and provision of technical guidance during project implementation. In addition, FAO will act as financial and operational Executing Agency, and will delivery procurement and contracting services to the project using FAO rules and procedures, as well as financial services to manage SCCF/GEF resources. The project will be technically executed by the MAG, represented by the DGFCR, and CENTA, in coordination with MARN, MINSAL and local governments.

A **Project Steering Committee (PSC)** will be set up to provide oversight of and coordinate the planning of project implementation (see below). Stakeholders committees and technical working groups (TWGs) will be established as needed under the different components. The Project will be managed through the institutional structure depicted in Figure 4.1 below.

⁸⁹For its name in Spanish: *Programa Trinacional de Alfabetización para la Seguridad Alimentaria y Nutricional*

Figure 4.1 Institutional Arrangements for the Implementation of the project *Climate Change Adaptation to Reduce Land Degradation in Fragile Micro-Watersheds located in the municipalities of Texistepeque and Candelaria de la Frontera*



The roles and responsibilities of the main institutional units involved in project implementation are the following:

National level

MARN is the GEF Operational Focal point of El Salvador responsible for coordinating the programming of GEF resources and overseeing the El Salvador GEF portfolio with the GEF Agencies

MAG will be the **main Project Executing Partner** directly responsible for technical implementation of project activities, as well as day-to-day monitoring. The Minister of Agriculture or his representative will chair the Project Steering Committee (PSC) and annual project review and planning meetings. FAO will sign a Government Cooperation Project (GCP) Agreement with MAG. The GCP Agreement will outline the roles and responsibilities of FAO and MAG and legal aspects of collaboration such as responsibilities for facilitating inputs, copyrights among others.

MAG will use its own output and outcome monitoring system. The institutional arrangements for project implementation include the use of the MAG's existing structure. MAG will provide in-kind co-financing as office space, equipment, utilities, and will finance events logistics and local travels needed to carry out the project workshops and capacity-building activities. MAG's participation will be primarily through CENTA and the DGFCR

MINSAL will be consulted for the use of its own monitoring system to measure project adaptation benefits related to public health impacts, such as a reduction in child malnutrition in the project intervention areas. For the monitoring of nutritional health, every six months the health promoters of each Health Unit take weight measurements and evaluate the nutritional status according to an anthropometric indicator of weight/age ratio, which allows the identification of malnutrition cases in each area. Additionally, monthly measurements of weight of children under two years-old are taken to assess if weight gains are adequate, so as to promptly identify those infants with nutritional risks.

MARN, MAG, and CENTA, together with the **municipalities of Candelaria de la Frontera and Texistepeque**, and **FAO** will be integrated through a **Project Management Coordination Unit (PMCU)**, which will be responsible for day-to-day project operations. The role of the PMCU will be, in close consultation with the PSC and TWG members (see below), to ensure the coordination and execution of the Project through the timely and efficient implementation of annual work plans. The PMCU will act as secretariat to the PSC. It will coordinate work and follow closely the implementation of project activities, handle day-to-day project issues and requirements, coordinate project interventions with other on-going activities and ensure a high degree of national and local inter-institutional collaboration, monitor project progress and ensure the timely delivery of inputs and outputs. It will organize workshops and annual meetings for the Project for monitoring project progress and develop work plans with detailed budget for the next year to be approved by the PSC. It will be responsible for: i) implementing the Project M&E plan, supported by a short-term M&E specialist and the Project Coordinator; ii) managing its monitoring system and communication programme; and iii) elaborating the six-monthly Project Progress reports and giving inputs to the annual Project Implementation Review (PIR) and the midterm and final evaluations, supported by the Project Coordinator. Project Progress Reports on implemented activities and progress in achieving project outputs and outcomes for the previous year will

be submitted together with the Annual Work Plan and detailed Budget (AWP/B) to the PSC and FAO via the Project Coordinator.

The PMCU will have a **full-time Project Coordinator**⁹⁰ (financed by GEFTF/SCCF funds), responsible for the overall coordination and supervision of the project, and coordination with MAG, MARN, and CENTA staff (financed by the Government co-financing), as well as MINSAL and municipal governments. The Project Coordinator will be in charge of project daily management and technical supervision including: i) preparing AWP/B and allocating tasks to Project Executing Partners; ii) providing technical supervision and guidance to the Project Executing Partners in implementing project activities; iii) conducting regular field supervision visits and provide on-site guidance to technical staff from Project Executing Partners; iv) day-to-day coordination and communication with Project Executing Partners staff in charge of the GEF project; and v) preparing the Project Progress Reports.

The PMCU will incorporate a **short-term Monitoring and Evaluation Specialist**⁹¹ (financed by GEFTF/SCCF funds) in charge of designing the Project M&E system. The M&E system will be used by the Project Coordinator when complying M&E tasks, as detailed: vi) conducting regularly field M&E visits to project sites, which information will be included into the six-monthly Project Progress Reports; vii) monitoring progress in achieving project outputs and outcome indicators; viii) providing technical and operational guidance to MAG, MARN, MINSAL and CENTA staff; and ix) proposing eventual shifts in project implementation strategies if the project is not performing as planned.

In addition, a **part-time Project Bilingual Assistant**⁹² (financed by GEFTF/SCCF funds) will assist the Project Coordinator in the preparation of the Project Progress Reports and of the inputs for the Annual Project Implementation Reviews (in English) and other tasks as needed in the daily coordination and operation of the project.

The **National Budget and Operations Officer (part-time)** will be responsible for the day-to-day financial management and operation of the project including raising contracts and procure other needed inputs in accordance with the approved budget and annual work plans. The Budget and Operations Officer will work in close consultation with the Project Coordinator, BH, LTOs and executing partners, particularly with the FAO Representation in El Salvador (FAOSV), and will take the operational responsibility for timely delivery of needed inputs to produce project outputs⁹³.

GEF Agency

FAO will be the GEF Agency of the Project as well as the financial and operational executing agency. As the financial and operational executing agency FAO will provide procurement and contracting services and financial management services of SCCF/GEF resources. As the GEF Agency FAO will supervise and provide technical guidance for the overall implementation process. Administration of the GEF/SCCF grants will be in compliance with the rules and procedures of FAO, and in accordance with the agreement between FAO and the GEF Trustee. As the GEF agency for the project, FAO will:

⁹⁰ Detailed TORs in Appendix 6, N° 1

⁹¹ Detailed TORs in Appendix 6, N° 8

⁹² Detailed TORs in Appendix 6, N° 2

⁹³ Detailed TORs in Appendix 6, N° 3

- Administrate funds from SCCF/GEF in accordance with the rules and procedures of FAO;
- Oversee project implementation in accordance with the project document, work plans, budgets, agreements with co-financiers and the rules and procedures of FAO;
- Provide technical guidance to ensure that appropriate technical quality is applied to all project activities and outputs;
- Carry out at least one supervision mission per year; and
- Report to the GEF Secretariat and Evaluation Office, through the annual Project Implementation Review, on project progress and provide financial reports to the GEF Trustee.

Based on a request from the Government of El Salvador, FAO will also be the financial and operational executer of the GEF and SCCF resources including financial management, procurement of goods and contracting of services following FAO rules and procedures. As the financial executer, FAO will provide six-monthly financial reports including a statement of project expenditures to MAG, CENTA and other partners of the PMCU and the PSC. In accordance with the present project document, progress in the financial execution of the project, and the Annual Work Plan and Budget approved by the PSC, FAO will prepare budget revisions to maintain the budget current in the financial management system of FAO. The budget revisions will be provided to MAG, other partners of the PMCU, and the PSC to facilitate project planning and execution. FAO will, in collaboration with MAG and the other partners of the PMCU, participate in the planning and execution of contracting and procurement processes.

The FAO Representative in El Salvador will be **the Budget Holder (BH)** and responsible for the management of the GEF and SCCF resources. As a first step in project start-up, the FAO Representation in El Salvador will establish an interdisciplinary Project Task Force within FAO to guide the implementation of the project. In consultation with the LTO (see below) the FAO Representative will be responsible for timely operational, administrative and financial management of the GEF/SCCF project resources, including in particular: (1) contracting and procurement processes based on the request from MAC/PMCU and in accordance with the approved Annual Work Plan and Budget; (2) process the payments corresponding to delivery of goods, services and technical products based on the prior clearance of the same by MAG and the other partners of the PMCU as applicable in each case; (3) provide six-monthly financial reports including a statement of project expenditures to MAG/PMCU and the PSC; and (4) at least one time per year or more frequent if required, prepare Budget Revisions for submission to TCI/GEF Coordination Unit for approval. The FAO Representation in El Salvador will work in close consultation with MAG, MARN, CENTA, the FAO LTU (see below) and LTO, and the FAO GEF Coordination Unit for the management of GEF and SCCF resources.

The FAO Representative will in consultation with the LTU, LTO and the FAO-GEF Coordination Unit give no-objection to AWP/B submitted by the Project Management Coordination Unit (PMCU) as well as to the Project Progress reports which should be approved by the LTO before they are submitted to the FAO-GEF Coordination Unit for final approval and upload in FPMIS.

The FAO Lead Technical Unit(s): The Climate, Energy and Tenure Division (NRC) of the Natural Resources Department of FAO will be the Lead Technical Unit (LTU) for this project and will provide overall technical guidance to its implementation. NRC will assign a Lead

Technical Officer (LTO) or delegate LTO responsibility to FAO's Subregional office for Mesoamerica in Panama. The LTO will have specific expertise in land and water management practices and adaptation to climate change in degraded watersheds and agricultural systems and be responsible for direct technical supervision of the project.

The FAO Lead Technical Officer (LTO): Under the general technical oversight of the LTU, the LTO will provide technical guidance to the project team to ensure delivery of quality technical outputs. The LTO will coordinate the provision of appropriate technical backstopping from all the concerned FAO units represented in the Project Task Force responding to requests from the MAG/PMCU. The Project Task Force is thus composed of technical officers from the participating FAO units and of operational officers and is chaired by the BH. The LTO, supported by the LTU when needed, will be responsible for:

- review and give no-objection to TORs for consultancies and contracts to be performed under the project and to CVs and technical proposals short-listed by the PMCU for key project positions, goods, minor works, and services to be financed by GEF/SCCF resources;
- supported by the FAO Representation in El Salvador, review and clear final technical products delivered by consultants and contract holders financed by GEF/SCCF resources before the final payment can be processed;
- assist with review and provision of technical comments to draft technical products/reports on request from the PMCU during project execution;
- review and approve project progress reports submitted by the PMCU to the FAO Representation in El Salvador;
- support the FAO Representative in reviewing, revising and giving no-objection to AWP/B submitted by the PMCU and to be approved by the Project Steering Committee;
- prepare the annual Project Implementation Review report, supported by the FAO Representation in El Salvador and inputs from the PMCU, to be submitted for clearance and completion by the FAO GEF Coordination Unit (TCI) which will subsequently submit the PIR to the GEF Secretariat and Evaluation Office as part of the Annual Monitoring Review report of the FAO-GEF portfolio. The LTO must ensure that PMCU has provided information on co-financing provided during the course of the year for inclusion in the PIR;
- field annual (or as needed) project supervision missions;
- review and revise TORs for the mid-term review, participate in review mission including the mid-term workshop with all key project stakeholders, development of an eventual agreed adjustment plan in project execution approach, and supervise its implementation supported by the FAO.
- review and revise TORs for the final evaluation, participate in the final project closure workshop with all key project stakeholders and the development of and follow up on recommendations on how to insure sustainability of project outputs and results after the end of the project.

The **FAO GEF Coordination Unit (TCI)** will review and approve project progress reports, project reviews, and financial reports and budget revisions. The FAO GEF Coordination Unit will review and clear the annual PIR and undertake supervision missions if considered necessary. The PIRs will be included in the FAO GEF Annual Monitoring Review submitted to GEF by the FAO GEF Coordination Unit. The FAO GEF Coordination Unit will also participate in the mid-term review and final evaluation and the development of corrective

actions in the project implementation strategy in the case needed to mitigate eventual risks affecting the timely and effective implementation of the project. The FAO GEF Coordination Unit will in collaboration with the FAO Finance Division request transfer of project funds from the GEF Trustee based on six-monthly projections of funds needed.

The FAO Finance Division will provide annual Financial Reports to the GEF Trustee and, in collaboration with the FAO GEF Coordination Unit, call for project funds on a six-monthly basis from the GEF Trustee.

Committees and working groups

Project Steering Committee (PSC). A project PSC will be established chaired by the Minister of Agriculture and with the participation of the Minister of Environment or his/her delegate, the Executive Director of CENTA, and the FAO Representative in El Salvador (or their delegates). The PSC will meet minimally twice a year and its specific responsibilities will be: (i) overall oversight of project progress and achievement of planned results as presented in six-monthly Project Progress Reports; (ii) take decisions in the course of the practical organization, coordination and implementation of the project; (iii) facilitate cooperation between MAG, MARN, CENTA, MINSAL, FAO and project participating partners and project support at the local level; (iv) advise the PMCU on other on-going and planned activities facilitating collaboration between the Project and other programmes, projects and initiatives in the Santa Ana Department; (v) facilitate that co-financing support is provided in a timely and effective manner; and (vi) review six-monthly Project Progress Reports and approve AWP/B.

Technical Working Groups (TWG) will be established to provide technical advice on specific project components and outputs and may be composed of technical staff from MAG, MARN and CENTA and FAO, among others. The main tasks of the TWGs will be to provide technical advice to the PSC, backstop the PMCU on request, advise the PMCU on other on-going and planned activities and facilitate collaboration between the Project and other programmes, projects, and initiatives of sector agencies and research institutions. The TWGs may also be involved in technical evaluation of project progress and outputs, and identification of possible solutions and/or changes in project activities when technical issues arise in the course of project implementation.

Stakeholder Committees (SC). At least two stakeholder committees will be established, one for each of the participating municipalities. The mandate of the SCs will be to: (i) provide advice on relevant policies, actions and measures in particular in relation to the strengthening of local committees and civil protection committees in components 1 and 4; (ii) provide new ideas and thinking on better management options for increased CCA and sustainable use of NR, promotion of good agricultural practices among local farmers, reduction of CC threats at local level, introduction of suitable disaster risk reduction measures and community-based water management, all to be supported under the project; and (iii) promote communications between the government agencies and local communities and the private sector. The composition of the SCs will include representatives from local communities, women associations/networks, public schools teachers, farming and livestock associations, municipal governments, and the private sector.

4.3 FINANCIAL PLANNING AND MANAGEMENT

4.3.1 Financial plan (by component, outputs and co-financier)

The total cost of the project will be USD 7.96 million, to be financed through a USD 1.52 million GEF/SCCF grant and USD 6.44 million in co-financing from: (i) FAO in-kind contribution (USD 0.10 million); (ii) the MAG/CENTA FAP-FPIGS (USD 6.00 million); (iii) CENTA in-kind contribution (USD 0.16 million); and (iv) MAG in-kind contribution (USD 0.80 million). Table 4.1 below shows the cost by component and outputs and by sources of financing and Table 4.2 shows the sources and type of confirmed co-financing. The FAO will, as the GEF Agency, only be responsible for the execution of the GEF and SCCF resources and the FAO co-financing.

Component/output	MAG CENTA-PAF (cash)	MAG through DGFCR (in-kind)	CENTA (in-kind)	FAO (in-kind)	GEF/SCCF	Total	%
Component 1: Institutional strengthening to design and implement Fragile Micro-Watershed Management Plans that increase adaptation capacities to the adverse impacts of Climate Change, based on a participatory and gender-sensitive approach.	670,000	46,374	70,958	13,423	191,743	992,498	12%
Output 1.1.1:Methodology and guidelines for developing cost-efficient FMWMPs, built on a consensus between the central government, the municipalities and the local population.		-		-	19,307	19,307	0%
Output 1.1.2:Government agencies with enhanced capacities for prevention, response and recovery from natural disasters or extreme natural events (storms, droughts, hurricanes, etc.) in fragile watersheds in targeted areas (6 fragile micro-watersheds in 2 municipalities).		-		-	17,107	17,107	0%
Output 1.2.1:Strategic alliances including development actors and local stakeholders are created to support the development and implementation of FMWMPs in the municipalities of Texistepeque and Candelaria de la Frontera		-		-	25,907	25,907	0%
Output 1.2.2:Fragile Micro-Watershed Management Plans (FMWMPs) developed in the municipalities of Texistepeque and Candelaria de la Frontera, through a participatory process involving departmental, municipal and local authorities in discussions of CC adverse impacts at local level to be addressed by CCA measures in the FMWMPs for the most vulnerable micro-watersheds.					26,907	26,907	0%
Output 1.2.3:Households trained in CC impacts and vulnerability identification (e.g. causes, practices and context), and participate in risk reduction activities at local level		-		-	12,681	12,681	0%
Output 1.3.1:Households have climate resilient production systems and have enhanced their livelihood assets through productive activities in targeted areas.		-		-	89,833	89,833	1%
Component 2: Soil quality enhancement							39%

based on the increase of vegetation cover, Integrated Natural Resource Management (INRM), suitable land-use and gender-sensitive management, recovering flow of agro-ecosystem services in fragile micro-watersheds.	2,490,381	15,424	76,650	20,000	519,191	3,121,646	
Output 2.1.1: Supplied demand of vegetative material for soil/water protection and conservation (living barriers, living hedges, gully control) through establishment and strengthening of agro-forestry nurseries at household, community and municipal level, in targeted micro-watersheds		-		-	237,525	237,525	3%
Output 2.2.1: Farmer Field Schools (FFS) established and delivering training on INRM, soil conservation and protection in targeted micro-watersheds of Texistepeque and Candelaria de la Frontera.		-		-	81,180	81,180	1%
Output 2.2.2: Technical Demonstrative Families (DFs) trained in INRM techniques and good agricultural practices (GAP) in targeted micro-watersheds (technology and GAP adoption monitored applying gender-disaggregation)		-		-	37,280	37,280	0%
Output 2.2.3: Good agricultural practices (GAP) disseminated among small-scale producers (men and women) in the targeted micro-watersheds, through the technical Demonstrative/ Irradiated Families methodology					163,205	163,205	2%
Component 3: Increasing water quality and quantity to diversify livelihoods and income sources of vulnerable sectors in targeted micro-watersheds, enhancing participatory and gender-sensitive management.	1,481,416	-	-	20,000	364,784	1,866,200	23%
Output 3.1.1: Households in the targeted micro-watersheds are actively involved in the protection of water sources.		-		-	147,352	147,352	2%
Output 3.1.2: Households trained in shared decision-making, construction, management and maintenance of rainwater harvesting systems for multiple uses (irrigation and human consumption) in communities located in the targeted micro-watersheds		-		-	141,602	141,602	2%
Output 3.2.1: Community rainwater harvesting systems for productive uses managed by households, (including female-headed households) in targeted areas					12,416	12,416	0%
Output 3.2.2: Households with domestic rainwater harvesting and water conveyance systems for productive and domestic uses in targeted areas	-	-		-	63,416	63,416	1%
Component 4: Improving disaster risk management (DRM) to increase adaptive capacity to Climate Change, in vulnerable sectors living in targeted micro-watersheds.	723,584	57,171	-	20,000	242,496	1,043,251	13%
Output 4.1.1: Rural households and small-scale rural producers living in targeted micro-watersheds involved in disaster risk reduction (DRR), preparedness, response and recovery from natural disasters, including contingency planning, and enhancing gender-sensitive management		-		-	101,045	101,045	1%

Output 4.2.1: Communities of targeted micro-watersheds have climate, biophysical and social risk maps covering the entire population and identified signposted and conditioned local safe places to protect themselves in case of emergency.		-		-	27,041	27,041	0%
Output 4.2.2: Local communities (70-100 % of the population of targeted micro watersheds) integrated in municipal and departmental networks and structures for rapid response to extreme weather events.					39,541	39,541	0%
Output 4.2.3: Local and departmental governments are leaders in reducing vulnerability to CC through the design and implementation of Action Plans for coping with natural disasters and weather emergencies, and to reduce climate-induced economic losses in Texistepeque, and another one in Candelaria de la Frontera.	-	-		-	74,871	74,871	1%
Component 5: M&E and information dissemination	240,000	49,192		20,000	103,156	412,348	5%
Output 5.1.1: Project monitoring system providing six-monthly reports on progress in achieving project outputs and outcomes		-		-	19,807	19,807	0%
Output 5.1.2: Midterm and final evaluation reports		-		-	69,541	69,541	1%
Output 5.1.3: Project “best-practices” and “lessons-learned” in relation to multi-stakeholder processes for watershed management and disaster risk management and mainstreaming of soil and water conservation and other sustainable agriculture practices in local production systems disseminated via publications, project website and others					13,807	13,807	0%
Project Management	394,619	11,839	10,392	6,577	100,000	523,427	7%
Total Project	6,000,000	180,000	158,000	100,000	1,521,370	7,959,370	100%

Table 4.2: Sources of confirmed co-financing

Name of Co-financier (source)	Classification	Type	Project USD
MAG/CENTA FAP-FPIGS	National Government	Cash	6,000,000
CENTA	National Government	In-kind	158,000
MAG	National Government	In-kind	180,000
Food and Agriculture Organization	GEF Agency	In-kind	100,000
Total			6,438,000

4.3.2 GEF/SCCF inputs

The requested GEF/SCCF grant will be allocated mainly in support of institutional capacity building, including trainings and awareness-raising on CCA and disaster risk management; the preparation of fragile micro-watershed management plans, including technical assistance for participative and gender-sensitive watershed planning and INRM; trainings on soil and water conservation, good agricultural practices, agro-forestry and livestock management and investments in incentives such as vegetative materials (forest trees, fruit trees, improved

pastures); trainings on water systems management and investments in protection of water sources, reforestation of critical watershed catchment areas, individual and community rainwater capture and conveyance systems for multiple use (irrigation and domestic use); and reducing vulnerability by integrating families and communities into municipal and local civil protection committees, including investments in early warning and communication equipment.

4.3.3 Government inputs

The government in-kind co-financing will mainly consist in staff time, office space and utilities, and support for monitoring and technical outreach activities. The government Cash co-financing will support the supply of vegetative material and equipment for improving soil quality, improvement of water catchment infrastructure, capacity building at central, local and grassroots level, and the establishment DRM systems at local level, including early warning strategies and monitoring systems.

4.3.4 FAO inputs

FAO in-kind staff time co-financing will be used to support technical assistance and guidance to the project in areas such as sustainable land and water management practices, the Farmer Field School approach as well as gender mainstreaming.

4.3.5 Other co-financiers inputs

N/A

4.3.6 Financial management of and reporting on GEF and SCCF resources

Financial management and reporting in relation to the SCCF and GEF resources will be carried out in accordance with FAO's rules and procedures.

All financial reporting shall be in US dollars. Within one month of the end of each six month, i.e. on or before 31 July and 31 January, the FAO Representation in El Salvador shall submit six-monthly statements of expenditure of GEF resources to the PMCU and the PSC. The purpose of the financial statement is to list the expenditures incurred on the project on a six monthly basis so as to monitor project progress and to reconcile outstanding advances during the six month period. The financial statement shall contain information that allows for a financial overview of the execution of the project.

FAO shall prepare annual financial reports on the use of the SCCF and GEF resources to be submitted with the 2nd six monthly Project Progress Report to the PSC, showing amount budgeted for the year, amount expended since the beginning of the year, including unliquidated obligations (commitments) as follows: Details of project expenditures on an output-by-output basis, reported in line with project budget lines as set out in the project budget included in this Project Document Appendix 3, as at 31 December each year.

An annual budget revision will be prepared by the FAO Representation in El Salvador and inserted in the GRIMS in collaboration with the PMCU for clearance by the LTO, and the FAO GEF Coordination Unit. The financial execution will be monitored by the LTO and the FAO GEF Coordination Unit.

Financial reports for submission to the donor (GEF) will be prepared in accordance with the provisions in the Financial Procedures Agreement with the GEF Trustee and submitted by the FAO Finance Division (CSFE).

Responsibility for cost overruns. The BH shall utilize the GEF project funds in strict compliance with the project document. The BH shall be authorized to make variations not exceeding 20 per cent on any total output budget line or any cost category line of the project budget provided that the total allocated for the specific budgeted project component is not exceeded and the reallocation of funds does not impact the achievement of any project output as per the project Results Framework Appendix 1. Any variations exceeding 20 per cent on any total output budget line or any cost category line, that may be necessary for the proper and successful implementation of the project, shall be subject to prior consultations with the LTO and the FAO-GEF Coordination Unit. In such a case, a revision to the FAO-GEF budget in FPMIS should be prepared by the BH and approved by the LTO and the FAO-GEF Coordination Unit. Cost overruns shall be the sole responsibility of the BH.

4.4 PROCUREMENT

The Budget Holder, in close collaboration with the Project Coordinator, the LTO and the Budget and Operations Officer will procure the equipment and services provided for in the detailed budget in Appendix 3, in line with the Annual Work Plan and Budget and in accordance with FAO's rules and regulations.

Prior to commencement of procurement, the BH, in close consultation with the Project Coordinator and the LTO, will complete the procurement plan for all services and equipment to be procured by FAO.

The procurement plan shall be updated by the BH every 12 months and submitted to and cleared by the LTO with the AWP/B and annual financial statement of expenditures report for the next instalment of funds.

4.5 MONITORING AND REPORTING

Monitoring and evaluation of progress in achieving project results and objectives will be done based on the targets and indicators established in the Project Results Framework (Appendix 1 and described in section 2.3 and 2.4). The project Monitoring and Evaluation Plan has been budgeted at USD 128,968 (see Appendix 3, Component 5). Monitoring and evaluation activities will follow FAO and GEF monitoring and evaluation policies and guidelines.

4.5.1 Oversight and monitoring responsibilities

At the initiation of implementation of the SCCF/GEF Project (PY1), a short-term M&E Specialist will design and set up a project progress monitoring system, in close consultation

with the PMCU. Participatory mechanisms and methodologies for systematic data collection and recording will be developed in support of outcome and output indicator monitoring and evaluation. During the inception workshop (see section 4.5.3 below), M&E related tasks to be addressed will include: (i) presentation and clarification (if needed) of the project Results framework with all project stakeholders; (ii) review of the M&E indicators and their baseline; (iii) drafting the required clauses to include in consultants' contracts to ensure they complete their M&E reporting functions (if relevant); and (iv) clarification of the respective M&E tasks among the Project different stakeholders. One of the main outputs of the workshop will be a detailed monitoring plan agreed to by all stakeholders based on the monitoring and evaluation plan summary presented in section 4.5.4 below.

The day-to-day monitoring of the Project implementation will be the responsibility of the PMCU driven by the preparation and implementation of an AWP/B followed up through six-monthly PPRs. The Project Coordinator will closely support the PMCU in the mentioned tasks. The preparation of the AWP/B and six-monthly PPRs will represent the product of a unified planning process between main project partners. As tools for results-based-management (RBM), the AWP/B will identify the actions proposed for the coming project year and provide the necessary details on output targets to be achieved, and the PPRs will report on the monitoring of the implementation of actions and the achievement of output targets. Specific inputs to the AWP/B and the PPRs will be prepared based on participatory planning and progress review with local stakeholders and coordinated through the PMCU and facilitated through project planning and progress review workshops. An annual project progress review and planning meeting should be held with the participation of the PMCU. The AWP/B will be developed in a manner consistent with the project's Results Framework to ensure adequate fulfillment and monitoring of project outputs and outcomes.

Following the approval of the Project, the project's first year AWP/B will be adjusted (either reduced or expanded in time) to synchronize it with an annual reporting calendar. In subsequent years, the work plan and budget will follow an annual planning and reporting cycle as specified in section 4.5.3 below.

4.5.2 Indicators and information sources

To monitor project outputs and outcomes including contributions to global environmental benefits and adaptation benefits, specific indicators have been established in the Project Results Framework (see Appendix 1). The Project Results Framework indicators and means of verification will be applied to monitor both project performance and impact. Following FAO monitoring procedures and progress reporting formats, data collected will be sufficiently detailed to track specific outputs and outcomes, and flag project risks early on. Output target indicators will be monitored on a six-monthly basis, and outcome target indicators will be monitored on an annual basis, if possible, or as part of the mid-term review and the final evaluation. The project output and outcome indicators have been designed to monitor on-the-ground impacts and progress in building and consolidating capacities for watershed planning, INRM and CCA, SLM, and disaster risk management both at the municipal institutional level as well as at the level of local farmers and communities. The baseline and target for these indicators are established in the Project Results Framework and will be fine-tuned and included in the M&E plan to be designed by the short-term M&E specialist in PY1. Key indicators at the outcome level include:

Increased food production and diet improvement

Outcome 1.3: resulting in a reduction of child malnutrition in project intervention areas; adoption of climate resilient agricultural practices; households covered with climate resilient production systems leading to more secure livelihood assets.

Increased vegetation cover of lands and adoption of INRM practices in the wider landscape by farmers for soil and water conservation

Outcomes 2.1 and 2.2: hectares covered with increased vegetative cover (fruit trees, forest trees, grass, and bush, among others) and INRM in the project intervention area; number of INRM methodologies adopted by farmers in the project intervention areas.

Increased availability and quality of water

Outcome 3.1: increase in water supply in targeted areas; number of sustainable water management practices introduced to increase access to irrigation water under existing and projected climate change; number of water sources with protection and maintenance plans in project pilot areas; number of households with individual systems for collecting rainwater for domestic use in the project pilot areas; number of community-level rainwater collecting system for productive uses with the participation of local households (including women heads of family); number of individual systems for productive use derived from water conveyance systems established in the project pilot areas.

The institutional strengthening and capacity building process indicators will capture:

Normative planning and management instruments developed

Outcome 1.1: methodology and guidelines for developing cost-efficient FMWMPs agreed on between the central government, the municipalities and the local population; FMWMPs in the municipalities of Texistepeque and Candelaria de la Frontera based on participatory processes between the departmental, municipal and local officials to deal with the impacts of climate change locally.

Level of mainstreaming of CCA and disaster risk reduction within local institutional frameworks

Outcome 1.1: number of institutions present in project intervention areas (including community organizations, local committees, municipal governments, central government agencies) with increased adaptation capacity to reduce the risks and respond to climate variability;

Outcome 4.2: risk maps (including climate, biophysical and social aspects), prepared by local communities, which take into account the entire population, with signaling systems and safe places for local evacuations; municipal and departmental response mechanisms to extreme weather events integrate 70-90% of the population of the targeted micro-watersheds; action plans for disaster and extreme weather response to reduce losses attributable to climate, adopted by municipal and departmental governments in two pilot areas, one in each municipality.

Levels of created human capacities and awareness

- Outcome 4.1: % of men, women, present in the project intervention area which are aware of the adverse impacts of climate change, know appropriate responses and affirm their ownership of the processes of adaptation to climate change; number of households heads (disaggregated by gender) which have been trained on climate change impacts and vulnerability identification (causes, practices, context) through risk reduction activities at the local level; % of rural households (disaggregated by gender) and small rural producers in the selected micro-watersheds are involved in risk reduction, preparedness, response and disaster recovery, including contingency planning with a gender-sensitive perspective;
- Outcomes 2.1 and 2.2: number of Farmer Field Schools (FFS) established; number of Demonstrative Families (disaggregated by gender) trained in good agricultural practices and INRM in the project intervention areas; number of good agricultural practices disseminated among small-scale producers (disaggregated by gender);
- Outcome 3.1: number of households actively involved in the protection of local water sources; number of households (disaggregated by gender) trained in shared decision-making, construction, management and maintenance of rainwater catchment systems for multiple use (irrigation and domestic use); number of households participating in the management of rainwater catchment systems;
- Outcome 4.2: Vulnerability and risk perception index disaggregated by gender has increased from 1/2 (extreme/high vulnerability) to 3/4 (medium/low vulnerability) in targeted micro watersheds; % of population covered by climate change risk measures (disaggregated by gender); number and type of risk reduction and awareness activities introduced at local level.

The main sources of information to support the M&E program will be: (i) the MAG-CENTA monitoring systems; (ii) participative progress monitoring and workshops with beneficiaries; (iii) on-site monitoring of the implementation of the SLWM practices; (iv) project progress reports prepared by the Project Coordinator with inputs from MAG, CENTA, MINSAL and project specialists; (v) consultants reports; (vi) participants training tests and evaluations; (vii) mid-term review and the final evaluation, as well as post project impact and evaluation studies completed by independent consultants; (viii) financial reports and budget revisions; (ix) Project Implementation Reviews prepared by the FAO Lead Technical Officer(s) supported by the FAO Representation in El Salvador; and (ix) FAO supervision mission reports.

4.5.3 Reporting schedule

Specific reports that will be prepared under the M&E program are: (i) Project inception report; (ii) Annual Work Plan and Budget (AWP/B); (iii) Project Progress Reports (PPRs); (iv) annual Project Implementation Review (PIR); (v) Technical Reports; (vi) co-financing Reports; and (vii) Terminal Report. In addition, assessment of the SCCF and GEF Monitoring Evaluation Tracking Tools (METTs) against the baseline (completed during project preparation) will be required at the midterm review and at the final project evaluation.

Project Inception Report. After FAO approval of the project and signature of the GCP Agreement an inception workshop will be held. Immediately after the workshop, the PMCU supported by the Project Coordinator will prepare a project inception report in consultation with the FAO Representation in El Salvador and other project partners. The report will include a narrative on the institutional roles and responsibilities and coordinating action of project partners, progress to date on project establishment and start-up activities and an update of any changed external conditions that may affect project implementation. It will also include a detailed first year AWP/B, a detailed project monitoring plan based on the monitoring and evaluation plan summary presented in section 4.5.4 below. The draft inception report will be circulated to FAO and the Project Steering Committee for review and comments before its finalization, no later than three months after project start-up. The report should be cleared by the FAO BH, LTO and the FAO GEF Coordination Unit and uploaded in FPMIS by the LTO.

Annual Work Plan and Budget (AWP/B). The PMCU will submit to the FAO Representation in El Salvador a draft Annual Work Plan and Budget no later than 10 January. The AWP/B should include detailed activities to be implemented by project outputs and divided into monthly timeframes and targets and milestone dates for output indicators to be achieved during the year. A detailed project budget for the activities to be implemented during the year should also be included together with all monitoring and supervision activities required during the year. The draft AWP/B is circulated to and reviewed by the FAO Representation in El Salvador, PMCU incorporates eventual comments and the final AWP/B is send to the PSC for approval and to the FAO for final no-objection and upload in FPMIS by the FAO GEF Coordination Unit.

Project Progress Reports (PPR): The PMCU will prepare six-monthly PPRs and submit them to the FAO Representation in El Salvador no later than July 31 (covering the period January through June) and 31 January (covering the period July through December). The 1st semester six months report should be accompanied by the updated AWP/B, for review and no-objection by FAO. The PPR are used to identify constraints, problems or bottlenecks that impede timely implementation and take appropriate remedial action. PPRs will be prepared based on the systematic monitoring of output and outcome indicators identified in the project's Results Framework Appendix 1). The FAO Representation in El Salvador will review the progress reports and collect and consolidates eventual FAO comments from the LTU, LTO, and the FAO GEF Coordination Unit and provide these comments to the PMCU. When comments have been duly incorporated the LTO will give final approval and submit the final PPR to the FAO GEF coordination Unit for final clearance and upload in FPMIS.

Annual Project Implementation Review (PIR): The LTO supported by the LTU and the FAO Representation in El Salvador and with inputs from the PMCU, will prepare an annual PIR covering the period July (the previous year) through June (current year) to be submitted to the FAO GEF Coordination Unit for review and approval no later than 31 July. The FAO GEF Coordination Unit will upload the final report on FAO FPMIS and submit it to the GEF Secretariat and Evaluation Office as part of the Annual Monitoring Review report of the FAO-GEF portfolio. The FAO GEF Coordination Unit will provide the updated format when the first PIR is due.

Technical Reports: Technical reports will be prepared as part of project outputs and to document and share project outcomes and lessons learned. The drafts of any technical reports must be submitted by PMCU to the FAO Representation in El Salvador who will share it with the LTO and the LTU for review and clearance and to the FAO GEF Coordination Unit for

information and eventual comments, prior to finalization and publication. Copies of the technical reports will be distributed to the PSC and other project partners as appropriate. The final reports will be posted on the FAO FPMIS by the LTO.

Co-financing Reports: The PMCU will be responsible for collecting the required information and reporting on in-kind and cash co-financing provided by MAG, MARN, CENTA, local governments and eventual other partners not foreseen in the Project Document. The PMCU will submit the report to the FAO Representation in El Salvador in a timely manner on or before 31 July covering the period July (the previous year) through June (current year).

GEF LD Tracking Tool: Following the GEF policies and procedures, the tracking tool for LD focal area will be submitted at three moments: (i) with the project document at CEO endorsement; (ii) at the project's mid-term evaluation; and (iii) with the project's terminal evaluation or final completion report.

SCCF CCA Tracking Tool: Following the GEF policies and procedures, the tracking tool for CCA/SCCF will be submitted at three moments: (i) with the project document at CEO endorsement; (ii) at the project's mid-term evaluation; and (iii) with the project's terminal evaluation or final completion report.

Terminal Report: Within two months before the end date of the GCP Agreement, the PMCU will submit to the FAO Representation in El Salvador a draft Terminal Report. The main purpose of the final report is to give guidance at ministerial or senior government level on the policy decisions required for the follow-up of the Project, and to provide the donor with information on how the funds were utilized. The terminal report is accordingly a concise account of the main **products, results, conclusions and recommendations** of the Project, without unnecessary background, narrative or technical details. The target readership consists of persons who are not necessarily technical specialists but who need to understand the policy implications of technical findings and needs for insuring sustainability of project results. Work is assessed, lessons learned are summarized, and recommendations are expressed in terms of their application to the department's and country's further development of fragile micro-watershed planning, INRM, CCA, SLM, and disaster risk management in the context of their development priorities as well as in practical execution terms. This report will specifically include the findings of the final evaluation as described in section 4.6 below. A final project review meeting should be held to discuss the draft terminal report before it is finalized by the PMCU and approved by the FAO LTO, LTU and the FAO GEF Coordination Unit.

4.5.4 Monitoring and evaluation plan summary

The monitoring and evaluation plan will serve two functions: first, periodic assessment of project implementation and performance of activities and, second, evaluation of their outcomes in terms of relevance and effectiveness. Both will contribute to improved decision making and management, by keeping the project on track towards achieving the human development and global environmental goals/objectives and by feeding knowledge from experiences and lessons learnt into planned activities.

Monitoring will take place at two levels: project execution and project performance.

Project Execution: Monitoring at project execution level will involve collection of information on actual implementation of project activities compared to those scheduled in the

work plan, including the delivery of quality outputs in a timely manner, identify problems and constraints (technical, human resource and financial), make clear recommendations for corrective actions, identify lessons learned and best practices.

Day-to-day monitoring of implementation progress will be the responsibility of the Project Coordinator, who reports directly to the Project Steering Committee and FAO. It is envisaged that the Project Coordinator will utilize a M&E system that will be designed and agreed in PY1. The system will allow the Project Coordinator to identify key milestones and outputs from each of the main components of the project as defined in the work plan. Each activity will have allocated a percentage score based on an evaluation of its contribution to the completion of each component.

Project Performance: Performance evaluation will assess the project’s success in achieving its outcomes. Project performance will be monitored closely by FAO and by the Project Steering Committee through semi-annual project progress reports (PPRs), annual project implementation reviews (PIRs), technical reports, and technical supervision missions. The overall achievement of the project’s outcomes will be evaluated at the end of the project through an independent terminal evaluation (see section 4.6).

The **table 4.3** below provides a summary of the main M&E reports, responsible parties and timeframe

Type of M&E Activity	Responsible Parties	Time-frame
Inception Workshop	PMCU, supported by the FAO LTU, BH, and the FAO GEF Coordination Unit	Within two months of project start up
Project Inception Report	PMCU, cleared by FAO LTU, BH, and the FAO GEF Coordination Unit	Immediately after workshop
Field-based impact monitoring	PMCU, participating executing partners and other relevant institutions.	Continually
Supervision visits and rating of progress in PPRs and PIRs	PMCU, FAOSV, FAO LTU and FAO GEF Coordination Unit	Annual or as required
Project Progress Reports	PMCU and Project Coordinator (supported by the Project Bilingual Assistant) with inputs from other partners	Six-monthly
Project Implementation Review report	Inputs provided by the Project Coordinator, assisted by the Project Bilingual Assistant. FAOSV and LTUs supported by the PMCU. PIRs cleared and submitted by the FAO GEF Coordination Unit to the GEF Secretariat	Annual
Co-financing Reports	PMCU	Annual
Technical reports	PMCU, /LTU	As appropriate
Mid-term Review	External Consultant, in consultation with the project team including the FAO GEF Coordination Unit, the LTU, and other partners	At mid-point of project implementation
Final evaluation	External Consultant, FAO independent Evaluation Office in consultation with the project team including the FAO GEF Coordination Unit, the LTU, and other partners	At the end of project implementation

Type of M&E Activity	Responsible Parties	Time-frame
Terminal Report	PMCU, FAOSV, LTUs, TSCR report Unit	At least two months before the end date of the GCP Agreement

4.6 PROVISION FOR EVALUATIONS

A mid-term review will be undertaken by an independent consultant towards the middle of the second project year to review progress and effectiveness of implementation in terms of achieving project objective, outcomes and outputs. Findings and recommendations of this review will be instrumental for bringing improvement in the overall project design and execution strategy for the remaining period of the project's term if necessary. FAO will arrange for the review in consultation with project management. The review will, *inter alia*:

- (i) review the effectiveness, efficiency and timeliness of project implementation;
- (ii) analyze effectiveness of partnership arrangements;
- (iii) identify issues requiring decisions and remedial actions;
- (iv) propose any mid-course corrections and/or adjustments to the implementation strategy as necessary; and
- (v) highlight technical achievements and lessons learned derived from project design, implementation and management.

An independent Final Evaluation (FE) will be carried out three months prior to the terminal review meeting of the project partners. The FE would aim to identify the project impacts and sustainability of project results and the degree of achievement of long-term results. This Evaluation would also have the purpose of indicating future actions needed to expand on the existing Project in subsequent phases, mainstream and up-scale its products and practices, and disseminate information to management authorities to assure continuity of the processes initiated by the Project.

The FAO LTO will prepare the first draft of the Terms of Reference for the mid-term review and the final evaluation and consult with and incorporate comments from MAG/PMCU, the FAO budget holder, the FAO Lead Technical Unit, and the FAO GEF Coordination Unit. Subsequently, in the case of the final evaluation, the TORs will be sent to the FAO Office of Evaluation for finalization, in accordance with FAO evaluation procedures and taking into consideration evolving guidance from the GEF Evaluation Office. The TORs and the reports will be discussed with and commented upon by the project partners. Critical issues to be included in the TORs for the evaluation in the midterm review and the final evaluation will in particular be the ones captured by the outcome indicators.

4.7 COMMUNICATION AND VISIBILITY

The Project design has incorporated a number of activities that will directly or indirectly support the communication of the following Project's messages: the importance of being well-prepared to face climate change challenges, at institutional, productive and household levels; the promotion of sustainable natural resources practices that improve water and land quality as well as local livelihoods; the participatory and gender-sensitive approach in project activities to generate adaptation benefits getting involved all local stakeholders; the centrality of applying a watershed-based planning to deal with climate change negative impacts and reverse or stop land degradation trends; among others.

The Project will have a high visibility and ensure effective communications through the following activities: (i) the institutional strengthening under Component 1, which will generate great visibility of the Project among high-level government decision-makers (including regional, national and local government institutions); (ii) the establishment of Farmer Field Schools (including communications and training materials), and the demonstrative family/irradiated families methodology (Component 2) that will support the dissemination of the Project's message at local level, especially in the six selected micro-watersheds; (iii) multiple training workshops including local institutions, stakeholders and population in the project intervention areas, that will raise awareness among participants; (iv) the definition of participatory local risk maps and emergency response mechanisms at the municipal and departmental levels, including signaling systems and safe areas for local evacuations, as well as risk reduction and awareness activities, conducted as part of Component 4, that will enhance intra- and inter-community communications; (v) for the more distant community including other stakeholders in El Salvador, Central America and beyond, the systematization of three specific "best practices and lessons learned" publications supported under component 5. These publications will include "best practices and lessons learned" in: (a) the use of Farmer Field Schools and Demonstrative Family methodology to disseminate good practices of INRM; (b) the watershed management as approach to mainstream CCA strategies into community and municipal planning; (c) the DRR strategies in vulnerable tropical context with highly eroded natural resources and rural poverty; and (d) the role of institutions in the awareness-raising processes on CCA and DRR, food security and INRM.

SECTION 5 – SUSTAINABILITY OF RESULTS

The project results are expected to be sustainable since national, municipal and community ownership are addressed in project activities, as well the alignment with national priorities (see sub-section 1.1.5).

By the end of PY3, the involved communities and municipalities shall continue project activities with the support of MARN, CENTA and MAG. Municipal Environmental Units will be strengthened for playing an active role in the project exit strategy (in PY3 and after project completion). The three dimensions of project sustainability (social, economic, and environmental) are detailed below.

5.1 SOCIAL SUSTAINABILITY

The social sustainability of project results will be achieved through a participatory, bottom-up and gender-sensitive planning approach. Best practices will be disseminated through the methodology of Demonstrative/Irradiated families which has proven to be very rooted in the territory (see sub-section 1.1.4). Project implementation will include defining factors to ensure social sustainability⁹⁴:

- **Capacity development** (see sub-section 5.4).
- **Gender equality and gender mainstreaming** at institutional and community levels. Data will be disaggregated by gender to monitor differentiated project impacts, and female-led households will be particularly involved and represented in all decision-making steps and project activities.
- **Participation** through local micro-watershed management committees, community committees and other local networks, to influence the planning and prioritization processes at micro-watershed and municipal levels. Local communities will be fully involved in the financing, execution, and supervision of six micro-watershed plans, their field activities, and the operation and maintenance of local water infrastructure.
- **Food security** promoted through incentives for soil and water conservation practices and INRM activities carried out by demonstrative families and irradiated families in local production systems. Project activities seek to increase sustainable food production, and improve diet.
- **Diversified livelihoods** through enhanced agro-livestock systems, reforestation of critical watershed catchment areas, investments in water protection, collection and conveyance systems. Communities will increase their access to water resources for domestic and production uses.
- **Ownership** of local population and communities overall project processes (see sub-section 5.4).

⁹⁴ Based on FAO, *Environmental Impact Assessment - Guidelines for FAO Field Projects*, “Annex 3: Basic Policy Requirement for field projects”: <http://www.fao.org/docrep/016/i2802e/i2802e.pdf>

5.2 ENVIRONMENTAL SUSTAINABILITY

The environmental sustainability of project results will be achieved by increasing climate change adaptation and disaster risk management capacities, helping reverse land degradation in rural production systems, and reducing vulnerability to CC. Project activities shall directly or indirectly contribute to environmental sustainability through:

- **Awareness-raising and mainstreaming CCA into the local policy** to support institutions in the design of their CCA and DRM strategies. For policy implementation, targeted regional and local government staff, community leaders, and women leaders will have enhanced capacities by PY3.
- **Promotion of soil and water conservation practices that reduce land degradation** and related capacity development (see description in Section 2, and sub-section 5.4).
- **Protection of local water sources**, reforestation of critical watershed catchment areas, and improvement of water collection and conveyance systems (see description in Section 2).

5.3 FINANCIAL AND ECONOMIC SUSTAINABILITY

Financial and economic sustainability of project supported activities will be achieved to the extent that these activities are financially and economically viable for the parties involved, including small-scale farmers and their families, organized communities in the six micro-watersheds, producer organizations, and institutional partners in the central and local governments, particularly the providers of public outreach and extension services. The economic, financial, and sustainability analyses of the different components are closely related. Financial and economic sustainability considerations are incorporated in each of the project components, as follows:

- Component 1 will support the financial and economic sustainability of the FMWMPs and related activities. According to the baseline analysis⁹⁵, the selected communities are interested in activities that will be financially and economically viable, i.e. that enhance their livelihoods and quality of life in a sustainable manner, exceeding the support provided by the project in 2014-2016. In view of that, the design of Component 1 includes sustainability measures such as the diversification and strengthening of livelihoods and family income sources, aimed at creating direct positive economic impact at household and community levels. In addition, the institutional strengthening will increase local management capacities, including financial planning.
- Component 2 will provide technical assistance, vegetative materials, and incentives to selected family farmers. This combination will create positive economic impacts, increasing the productivity of local production systems, and their economic viability. Furthermore, according to lessons learnt collected during full project preparation (see Section 1.1.4) the Demonstrative/Irradiated Family and the FFS methodologies have proven to be cost-effective, and are within the financial capacities of the public outreach agencies involved.

⁹⁵ The socio-economic analysis was conducted by the team of consultants of the FAO Representation in El Salvador and a Socio-economic Specialist.

- Under Component 3, the designed investments to protect water resources, rehabilitate existing infrastructure and build new multiple-use water systems, have taken into account the financial and economic sustainability of the systems, and as such include technical assistance and training on the sustainable management of these water systems. Furthermore, these investments will help strengthen and diversify livelihood assets and income sources, thus contributing to their economic and financial sustainability. The aggregation of these efforts will result in transformation of the wider environmental and social landscape.
- Under Component 4, training and technical assistance on DRM will help households and communities to reduce economic losses caused by extreme weather events and natural disasters. Furthermore, Component 4 will integrate them into the existing civil protection committees, as part of the national civil protection system. These contention networks will additionally diminish their climate-related losses in production and domestic environments.

5.4 SUSTAINABILITY OF CAPACITIES DEVELOPED

The project will address the three dimensions of capacity development (CD) identified in *FAO's Approach to Sustainability*⁹⁶: i) individuals (small-scale farmers, households, female-led households); ii) institutions (municipal governments, regional branches and local offices of CENTA, MARN and MAG, health units, civil protection committees, community-based networks, water boards); and iii) the policy enabling environment (new FMWMPs, based on agreed methodology and guidelines; enhanced institutional capacities through trainings on CCA and DRM; strategic alliances). The interaction between community members and local CSOs, and between CSOs and municipal governments will be also addressed.

At field level, CD activities will be implemented for community organizations and households living in the fragile micro-watersheds throughout the four project components. Component 1 will promote the constitution of partnerships among institutions and local stakeholders to support FMWMPs. In Component 2, the project will work through the local public agricultural extension agencies managed by CENTA, which are already implementing the FAP in the region, to further strengthen existing capacities. In Component 3, local community organizations will be reinforced to lead the management of local water systems and their capacities will be strengthened. In Component 4, local community organizations will be integrated into existing civil protection committees, thus contributing to the sustainability of existing capacities and capacities developed through project awareness-raising activities.

The sustainability of capacities developed will be ensured by strengthening technical abilities and promoting the appropriation of the CCA and SLWM practices and concepts by institutional partners and local stakeholders.

5.5 APPROPRIATENESS OF TECHNOLOGY INTRODUCED

During full project preparation, four studies⁹⁷ have assessed which technologies and practices should be appropriate, tested and cost/efficient in the Salvadorian context. The conclusions of

⁹⁶<http://www.fao.org/capacitydevelopment/the-three-dimensions-of-the-fao-capacity-development-framework/en/20>

⁹⁷ These analyses were conducted as part of this full project preparation.

those studies have been incorporated into the design of project components. As detailed in Section 2, these technologies include agro-forestry and reforestation with native non-invasive species, SLWM and conservation agriculture practices, rainwater harvesting and multiple-use water systems for domestic and productive uses (micro-irrigation), improved basic grain production practices, vegetable plots and orchards, poultry modules, and equipment for disaster risk reduction.

5.6 REPLICABILITY AND SCALING UP

This project has a high potential for replicability and scaling up, given the complementarity with already ongoing government initiatives and national priority policies (see FAP-MAG and PREP-MARN, described in sub-sections 1.1.3 and 4.1). In addition, Candelaria de la Frontera and Texistepeque are located in the border with Guatemala and Honduras, and are part of the Trifinio Municipal Association (see sub-sections 1.1.3 and 4.1). Lessons learnt and success stories of this project will be shared and disseminated through the Trifinio Municipal Association to other partner municipalities. Moreover, FAO is extracting lessons learnt from El Salvador projects since 2004. This project has served as showcase since its inception, and its methodologies and approaches are being shared with other countries in Central America through the FAO Subregional Office in Panama, and South America through the FAO Regional Office for Latin America and the Caribbean.

APPENDICES

APPENDIX 1: RESULTS MATRIX

Project outcomes and impacts:

Objective/Impact	Baseline	Outcome indicators	Assumptions
<p><u>Global Environmental Objective:</u> To contribute to arresting and reversing current global trends in land degradation, specifically desertification and deforestation, through the promotion of sustainable land and water management practices in areas with highly degraded natural resources and vulnerable to desertification in the Santa Ana Department.</p> <p><u>Adaptation Objective:</u> To reduce the vulnerability to the adverse impacts of climate change (CC) and variability, and to increase adaptive capacity to respond to these impacts, with the participation of small-scale rural producers - linked to the <i>Family Agriculture Plan</i> (FAP)-, in targeted micro-watersheds of the Santa Ana Department.</p> <p><u>Project Development Objective:</u>⁹⁸ To increase and improve the</p>	<p>Component 1:</p> <p><u>Outcome 1.1:</u> The institutions present in the project intervention area have weak capacities to adapt to climate change, disaster risk reduction and response mechanisms to deal with the effects of climate variability⁹⁹.</p> <p>Capacity perception index (disaggregated by gender): score 2. Initial awareness raised (e.g. workshops, seminars)¹⁰⁰. Female: 25%</p> <p><u>Outcome 1.2:</u> Men, women, local authorities, and institutions in targeted areas have little awareness of the adverse effects of climate change, and are not participating in adaptation processes¹⁰¹.</p> <p><u>Outcome 1.3:</u> 0% change in projected food production in targeted area given existing and projected climate change¹⁰²</p>	<p>Component 1:</p> <p><u>Outcome 1.1:</u> 7 institutions present in the project intervention area have enhanced capacities to integrate CCA in fragile micro-watershed planning and management processes, based on intersectoral coordination, and bottom-up and gender-sensitive approaches.</p> <p>Capacity perception index (disaggregated by gender): score 3. Substantial training in practical application (e.g. vocational training). Female: 35%</p> <p><u>Outcome 1.2:</u> 50-75% of men, women, local authorities and institutions in targeted areas are aware of the adverse impacts of climate change, appropriate responses and affirm their ownership of the processes of adaptation to climate change;</p> <p><u>Outcome 1.3:</u> +10% in food production in targeted area given existing and projected climate change.</p> <p>Dietary habits have improved leading to a 2% decrease in child malnutrition in the project</p>	<p>Component 1:</p> <p>High involvement and participation of local institutions in micro-watershed coordination and monitoring mechanisms.</p> <p>Targeted households and local stakeholders are motivated to participate in awareness-raising campaigns and workshops on CC local negative impacts</p> <p>No major extreme natural and weather event will occur during PY1, which may de-capitalize households and increase food/nutritional insecurity at the start of project implementation</p> <p>The national government (CENTA, MAG, MARN) supports project objectives in line with national policy and priorities.</p>

⁹⁸ In line with FAO SOs

⁹⁹ SCCF AMAT Indicator 2.2.1

¹⁰⁰ SCCF AMAT Indicator 2.2.2

¹⁰¹ See also SCCF AMAT indicators 2.3.2 in the table *Project outputs and outcomes* below

¹⁰² SCCF AMAT Indicator 1.2.8

<p>provision of goods and services from agriculture and forestry in a sustainable manner, through the promotion of integrated natural resources management (INRM) and the reduction of land degradation; and to increase the resilience of livelihoods to threats and crises by mainstreaming climate change adaptation (CCA) and disaster risk reduction (DRR) into Fragile Micro-Watersheds Management Plans; with the participation of small-scale farmers</p>	<p>Child malnutrition: 19.6% in Texistepeque; 17.6% in Candelaria de la Frontera). 0 climate resilient agricultural practices introduced to promote food security¹⁰³ Households and communities have poor access to livelihood assets (score: 2)¹⁰⁴. Female participation: 30%.</p>	<p>intervention areas</p> <p>5 climate resilient agricultural practices introduced to promote food security</p> <p>Households and communities have moderate access to livelihood assets (score: 3). Female headed households: 30%.</p>	
	<p>Component 2:</p> <p>Outcome 2.1: 13% of soils in targeted areas have vegetation cover (fruit trees, forest trees, grass, and bush, among others) for soil and water protection and conservation¹⁰⁵.</p> <p>Outcome 2.2: 0.3% of soils (12 Ha) in targeted areas are covered by INRM practices in the wider landscape. Agriculture productivity (corn): 2,75 Tn/Ha/year. 0 proposed INRM methodologies¹⁰⁶ (agro-forestry systems, conservation agriculture and watershed management) applied in the targeted areas</p>	<p>Component 2:</p> <p>Outcome 2.1: 40% of soils in targeted areas have increased vegetation cover (fruit trees, forest trees, grass, and bush, among others) for soil and water protection and conservation¹⁰⁷.</p> <p>Outcome 2.2: 40% of soils (1.541 Ha) in the project intervention areas are covered by INRM practices in the wider landscape resulting in sustained agricultural productivity (corn: 2,89 Tn/Ha/year). 3 INRM methodologies (agro-forestry systems, conservation agriculture and watershed management) applied in the wider landscape in targeted areas.</p>	<p>Component 2:</p> <p>CENTA and FAO implemented rural projects in this project area in the last decade and tested outreach methodologies that proved to be successful in disseminating INRM practices among small-scale farmers.</p> <p>Small-scale farmers and local households have been involved in the design of Component 2 and are willing to participate in field activities.</p> <p>The two municipal governments have engaged in the project preparation process and will be committed to support field actions at local level and community levels.</p> <p>CENTA will carry out field project interventions, through its dedicated and expert field staff in Santa Ana.</p>
	<p>Component 3:</p> <p>Outcome 3.1: Water supply in targeted areas: 6750 m³ (18 m³/household/year; 375</p>	<p>Component 3:</p> <p>Outcome 3.1: Water supply in targeted areas: +9,500m³.</p>	<p>Component 3:</p> <p>In the project intervention areas, some lands out of the communities and towns</p>

¹⁰³ SCCF AMAT Indicator 1.2.1.3

¹⁰⁴ SCCF AMAT Indicator 1.3.1

¹⁰⁵ See also the indicator LD PMAT LD1.iii) in the table *Project outputs and outcomes* below

¹⁰⁶ Indicator LD PMAT LD3.ii)

¹⁰⁷ *Ibidem*

	<p>families, out of which 175 are female headed)¹⁰⁸</p> <p>0 sustainable water management practices introduced to increase access to water for irrigation and domestic uses (both at household level)¹⁰⁹</p> <p>Outcome 3.2: Households and communities have poor access to livelihood assets (score: 2)¹¹⁰. Female participation: 30%.</p> <p>0 sustainable water management practices to increase access to irrigation water under existing and projected climate change¹¹¹</p>	<p>3 sustainable water management practices introduced to increase access to water for irrigation and domestic uses (both at household level), including the protection of 10 water sources, improvement of water storage infrastructure, and conveyance systems¹¹².</p> <p>Outcome 3.2: Households and communities have moderate access to livelihoods assets¹¹³ (score: 3) Female-headed households: 30%.</p> <p>2 sustainable water management practices introduced to increase access to water irrigation for production uses: 1 community rainwater harvesting system; 12 domestic rainwater harvesting systems derived from multiple water conveyance^{114 115}</p>	<p>are dedicated to the production of basic grains and livestock (mainly cattle), while in towns and communities women typically have domestic backyards where they cultivate vegetables and small livestock (backyard birds, one or two pigs). The domestic production serves for subsistence goals, influencing deeply on family's food security. Water availability will help both small-scale production in dedicated fields for trade purposes, and domestic production for self-consumption. In addition, water conveyance systems will bring water within the houses, facilitating healthier cooking among women.</p> <p>Women networks have actively participated in the design of Component 3 and will actively contribute to the sustainability of outcomes 3.1 and 3.2 during project implementation.</p> <p>The domestic rainwater harvesting systems will derive from multiple water conveyance systems possibly located outside the towns or communities. Water will be conducted through a simple grid. The communities have been consulted and actively participated in the design of these outputs and they will actively engage during project implementation to ensure sustainability.</p>
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¹⁰⁸ SCCF AMAT Indicator 1.2.4

¹⁰⁹ See more details in the table *Project outputs and outcomes* below

¹¹⁰ SCCF AMAT Indicator 1.3.1

¹¹¹ SCCF AMAT Indicator 1.2.1.5

¹¹² See more details in the table *Project outputs and outcomes* below

¹¹³ SCCF AMAT Indicator 1.3.1

¹¹⁴ SCCF AMAT Indicator 1.2.1.5. See more details in the table *Project outputs and outcomes* below

¹¹⁵ See also the SCCF AMAT Indicator 1.3.1 in the table *Project outputs and outcomes* below

	<p>Component 4:</p> <p>Outcome 4.1: 10% of local population has awareness of predicted adverse impacts of climate change and appropriate responses. (Score 1: No awareness level: <50% correct)¹¹⁶.</p> <p>Outcome 4.2: Extreme / high vulnerability and risk perception index (score 1/2)¹¹⁷ .</p> <p>0% of population covered by climate change risk measures¹¹⁸</p> <p>0 risk reduction and awareness activities introduced at local level¹¹⁹.</p>	<p>Component 4:</p> <p>Outcome 4.1: 50%-75% of target population have moderate awareness of predicted adverse impacts of CC and appropriate response measures. (Score: 2: Moderate awareness level: 75% of the population)¹²⁰.</p> <p>Outcome 4.2: Vulnerability and risk perception index disaggregated by gender has increased from 1/2 (extreme/high vulnerability) to 3/4 (medium/low vulnerability) in targeted micro watersheds¹²¹ .</p> <p>80 % of population covered by climate change risk measures (disaggregated by gender)¹²² .</p> <p>3 Risk reduction and awareness activities introduced at local level¹²³, such as: Monitoring/Forecasting capacity (EWS, Vulnerability mapping system); ICT and information dissemination; Community Workshops for CC adaptation.</p>	<p>Component 4:</p> <p>Both municipalities have Civil Protection Units, that are weak and will be strengthened through Component 4. Local women networks, schools, community-based organizations, producers associations and the municipal environmental units have been involved in the design of Component 4, and are expected to actively participate and facilitate the awareness-raising and DRM activities to achieve outcomes 4.1 and 4.2</p>
		<p>Component 5:</p> <p>Outcome 5.1: Project implementation based on results-based management</p>	<p>Component 5:</p> <p>CENTA has dedicated field staff that will support the project implementation, in particular, Component 2 and 3. FAO will execute the project budget and is providing technical backstopping to the overall project cycle.</p>

¹¹⁶ SCCF AMAT Indicator 2.3.1

¹¹⁷ SCCF AMAT Indicator 1.2.14

¹¹⁸ SCCF AMAT Indicator 2.2.2.1

¹¹⁹ SCCF AMAT Indicator 2.3.1.1

¹²⁰ *Ibidem*

¹²¹ SCCF AMAT Indicator 1.2.14

¹²² SCCF AMAT Indicator 2.2.2.

¹²³ SCCF AMAT Indicator 2.3.1.1

Project outputs and outcomes:

Outcomes and Outputs	Baseline ¹²⁴	Target	Milestones towards achieving output and outcome targets			Data Collection and Reporting	
			Year 1	Year 2	Year 3	Means of verification	Responsible for Data Collection
Component 1: Institutional strengthening in design and implementation of Fragile Micro-Watershed Management Plans that increase adaptation capacities to the adverse impacts of Climate Change, based on a participatory and gender-sensitive approach.							
<p>Outcome 1.1 The institutions present in targeted project areas have enhanced capacities to integrate CCA in fragile micro-watershed planning and management processes, based on intersectoral coordination, and a bottom-up and gender-sensitive approach.</p>	<p>SCCF AMAT Indicator 2.2.1: The institutions present in targeted project areas (municipal governments of Texistepeque and Candelaria de la Frontera, Civil Protection Committees, CENTA agencies at the local and departmental level, MAG-DGFCR, MARN, MINSAL Local Health Units) have weak capacities to adapt to climate change, disaster risk reduction and response mechanisms to deal with the effects of climate variability</p> <p>SCCF AMAT Indicator 2.2.2: Capacity perception index (disaggregated by gender): score 2: Initial awareness raised (e.g. workshops, seminars). Female: 25%</p>	<p>SCCF AMAT Indicator 2.2.1: 7 institutions present in targeted areas (municipal governments of Texistepeque and Candelaria de la Frontera, Civil Protection Committees, CENTA agencies at the local and departmental level, MAG-DGFCR, MARN, MINSAL Local Health Units) have increased capacities, to adapt to climate change, disaster risk reduction and response mechanisms to deal with the effects of climate variability</p> <p>SCCF AMAT Indicator 2.2.2: Capacity perception index. Score (disaggregated by gender): score 3: Substantial training in practical application (e.g. vocational training). Female: 25-30%</p>	<p>7 institutions present in targeted areas have enhanced capacities to integrate CCA in fragile micro-watershed planning and management processes, in selected micro-watersheds (6 micro-watersheds in 2 municipalities). (Capacity perception index: score 2)</p>	<p>7 institutions present in targeted areas have enhanced capacities to integrate CCA in fragile micro-watershed planning and management processes, in selected micro-watersheds (6 micro-watersheds in 2 municipalities). (Capacity perception index: score 3)</p>	<p>7 institutions present in targeted areas have enhanced capacities to integrate CCA in fragile micro-watershed planning and management processes, in selected micro-watersheds (6 micro-watersheds in 2 municipalities). (Capacity perception index: score 3)</p>	<p>Minutes of stakeholder meetings and consultations.</p> <p>FMWPs</p> <p>Monitoring reports of FMWPs</p> <p>Training evaluation forms completed by all participants (data disaggregated by gender).</p> <p>List of participants for each training module.</p> <p>Gender-sensitive training material.</p> <p>Semester monitoring reports including SCCF tracking tools</p> <p>Surveys that measure capacity perception index</p> <p>Verification visits to the field.</p> <p>Project Midterm and</p>	<p>Project Coordinator</p> <p>Project Management Coordination Unit (PMCU)</p> <p>Part-time Institutional Specialist</p> <p>DGFCR - MAG</p>

¹²⁴ Value in the case of quantitative indicators and description of situation in the case of qualitative indicators. Please insert the year of the baseline

Outcomes and Outputs	Baseline ¹²⁴	Target	Milestones towards achieving output and outcome targets			Data Collection and Reporting	
			Year 1	Year 2	Year 3	Means of verification	Responsible for Data Collection
						Final evaluations; PPRs; PIRs.	
Output 1.1.1 Methodology and guidelines for developing cost-efficient FMWMPs, built on a consensus between the central government, the municipalities and the local population.	0 methodology and guidelines are established for developing cost-efficient Fragile Micro-Watershed Management Plans (FMWMPs)	1 methodology and guidelines for developing cost-efficient FMWMPs built on a consensus between the central government, the municipalities and the local population.	1 methodology and guidelines for micro-watershed planning drafted and validated in multi-stakeholder consultations			Methodology and guideline document	Project Coordinator Project Management Coordination Unit (PMCU) Part-time Institutional Specialist MAG-DGRNR
Output 1.1.2 Government agencies with enhanced capacities for prevention, response and recovery from natural disasters or extreme natural events (storms, droughts, hurricanes, etc.) in fragile watersheds in targeted areas (6 fragile micro-watersheds in 2 municipalities).	7 institutions in targeted areas (municipalities of Texistepeque and Candelaria de la Frontera, Civil Protection Committees, CENTA departamental branch, MAG-DGFCR, MARN, MINSAL Health Units) have low capacities for the prevention, response and recovery to extreme weather events (storms, drought, hurricanes, etc.)	7 institutions in targeted areas (municipalities of Texistepeque and Candelaria de la Frontera, Civil Protection Committees, CENTA departamental branch, MAG-DGFCR, MARN, MINSAL Health Units) have medium-high capacities for the prevention, response and recovery to extreme weather events (storms, drought, hurricanes, etc.) 150 technical staff trained in technical adaptation themes (disaggregated by gender). Themes: -Monitoring/Forecasting	7 institutions in targeted areas have low-medium capacities SCCF AMAT Indicator 2.2.1.1 50 technical staff trained	7 institutions in targeted areas have medium capacities SCCF AMAT Indicator 2.2.1.1 50 technical staff trained	7 institutions in targeted areas have medium-high capacities SCCF AMAT Indicator 2.2.1.1 50 technical staff trained	List of participants in each training module. Training material and modules used, including participatory tools (i.e participatory natural resources and land use maps, flowcharts, seasonal calendars) Training evaluation forms completed by all participants PPRs	Project Coordinator Project Management Coordination Unit (PMCU) Part-time Institutional Specialist MAG-DGFCR

Outcomes and Outputs	Baseline ¹²⁴	Target	Milestones towards achieving output and outcome targets			Data Collection and Reporting	
			Year 1	Year 2	Year 3	Means of verification	Responsible for Data Collection
		capacity (Early Warning System (EWS), Vulnerability mapping system) - Supporting livelihoods - Erosion control/soil water conservation - Water storage					
Outcome 1.2 Men, women, local authorities and institutions present in targeted areas are aware of the adverse impacts of climate change, appropriate responses and affirming ownership of adaptation processes	Men, women, local authorities and institutions in targeted areas have little awareness of adverse impacts of CC, and are not participating in adaptation processes. SCCF AMAT Indicator 2.3.2: 0% of population affirming ownership of adaptation processes	50-75% of men, women, local authorities and institutions present in targeted areas are aware of the adverse impacts of climate change, appropriate responses and affirm their ownership of the processes of adaptation to climate change SCCF AMAT Indicator 2.3.2 50-75% of population affirming ownership of adaptation processes.		50% affirming ownership of CCA processes SCCF AMAT Indicator 2.3.2 50% of population affirming ownership of adaptation processes.	75% affirm their ownership of CCA processes SCCF AMAT Indicator 2.3.2 50-75% of population affirming ownership of adaptation processes.	Targeted surveys to measure the levels of awareness and ownership among project participants SCCF tracking tools Mid-term review and final evaluations	Project Coordinator Project Management Coordination Unit (PMCU) Part-time Institutional Specialist DGFCR - MAG
Output 1.2.1 Strategic alliances including development actors and local stakeholders are created to support the development and implementation of FMWMPs in the municipalities of Texistepeque and Candelaria de la Frontera	There are currently no inter-institutional agreements for the implementation of FMWMPs	4 strategic alliances including 5 development actors and 5 local stakeholders are created to support the development and implementation of six FMWMPs in the municipalities of Texistepeque and Candelaria de la Frontera.	4 strategic alliances	4 strategic alliances	4 strategic alliances including	Minutes of the strategic alliance meetings Strategic alliance agreements PPRs, PIRs	Project Coordinator Project Management Coordination Unit (PMCU) Part-time Institutional Specialist MAG-DGFCR

Outcomes and Outputs	Baseline ¹²⁴	Target	Milestones towards achieving output and outcome targets			Data Collection and Reporting	
			Year 1	Year 2	Year 3	Means of verification	Responsible for Data Collection
<p>Output 1.2.2 Fragile Micro-Watershed Management Plans (FMWMPs) developed in the municipalities of Texistepeque and Candelaria de la Frontera, through a participatory process (involving departmental, municipal and local authorities and civil society). The FMWMPs include concrete measures to reduce CC adverse impacts in the most vulnerable micro-watersheds at local level.</p>	0 FMWMPs are established in the municipalities of Texistepeque and Candelaria de la Frontera to respond to the adverse effects of CC	Six FMWMPs developed, under implementation and monitored	6 FMWMPs drafted	6 FMWMPs validated and under implementation	6 FMWMPs implemented and progress in achieving their objectives monitored in a participatory manner	<p>FMWMPs (including summary of the participatory design processes)</p> <p>FMWMPs implementation and monitoring reports</p> <p>List of participants to multi-stakeholder consultations for validation of the FMWMPs (disaggregated by gender)</p> <p>PPRs, PIRs</p>	<p>Project Coordinator</p> <p>Project Management Coordination Unit (PMCU)</p> <p>Part-time Institutional Specialist</p> <p>MAG-DGFCR</p>
<p>Output 1.2.3 Households aware of CC impacts and trained in vulnerability identification (e.g. causes, practices and context), and risk reduction activities at local level</p>	0 households aware of CC impacts and trained in vulnerability identification	750 households (25-30% female-headed) aware of CC impacts and trained in vulnerability identification, and participated in risk reduction activities at the local level.	150 households (25-30% female-headed) aware of CC impacts and trained in vulnerability identification, and participated in risk reduction activities at local level	350 additional households (25-30% female-headed) aware of CC impacts and trained in vulnerability identification and are participating in risk reduction activities at local level	250 additional households (25-30% female-headed) aware of CC impacts and trained in vulnerability identification, and are participating in risk reduction activities at local level	<p>Training material.</p> <p>Training participation lists</p> <p>Training evaluation forms (disaggregated by gender)</p> <p>PPRs</p> <p>PIRs</p>	<p>Project Coordinator</p> <p>Project Management Coordination Unit (PMCU)</p> <p>Part-time Institutional Specialist</p> <p>MAG-DGFCR</p>
<p>Outcome 1.3 Increase in food production in targeted area given existing and projected climate change. Dietary habits have improved leading to a decrease in child</p>	<p>Child malnutrition: 19.6% in Texistepeque and 17.6% in Candelaria de la Frontera.</p> <p>SCCF AMAT Indicator 1.2.8: 0% change in projected food</p>	<p>2% decrease in child malnutrition in the project intervention areas</p> <p>SCCF AMAT Indicator 1.2.8: 10% increase in projected food</p>		<p>Children malnutrition reduced 18% in Texistepeque and 16% in Candelaria de la Frontera</p> <p>SCCF AMAT</p>	<p>Children malnutrition reduced 17.6% in Texistepeque and 15.6% in Candelaria de la Frontera</p> <p>SCCF AMAT Indicator 1.2.8: 10% increase in projected</p>	<p>Household surveys conducted by health promoters</p> <p>Quarterly economic reports of food production in project targeted areas</p>	<p>CENTA</p> <p>Project Coordinator</p> <p>Project Management Coordination Unit</p>

Outcomes and Outputs	Baseline ¹²⁴	Target	Milestones towards achieving output and outcome targets			Data Collection and Reporting	
			Year 1	Year 2	Year 3	Means of verification	Responsible for Data Collection
malnutrition in the project intervention areas	production in targeted area given existing and projected climate change. SCCF AMAT Indicator 1.2.1.3: 0 climate resilient agricultural practices introduced to promote food security SCCF AMAT Indicator 1.3.1: Households and communities have poor access to livelihood assets (score: 2). Female participation: 25%.	production in targeted area given existing and projected climate change SCCF AMAT Indicator 1.2.1.3: 5 climate resilient agricultural practices introduced to promote food security SCCF AMAT Indicator 1.3.1: Households and communities have moderate access to livelihood assets (score: 4). Female-headed households: 25-30%.		Indicator 1.2.8: 5% increase in projected food production in targeted area given existing and projected climate change SCCF AMAT Indicator 1.2.1.3: 2 additional Climate resilient agricultural practices introduced SCCF AMAT Indicator 1.3.1: Households and communities have moderate access to livelihood assets (score 3). Female-headed households: 25-30%	food production in targeted area given existing and projected climate change SCCF AMAT Indicator 1.2.1.3: 1 additional Climate resilient agricultural practice introduced SCCF AMAT Indicator 1.3.1: Households and communities have sustained moderate access to livelihood assets (score: 3). Female-headed households: 25-30%.	Field visits and monthly reports on agricultural production practices adopted by families and producers to improve food security Monthly reports on child malnutrition prepared by field health promoters (staff MINSAL) Semester monitoring reports including SCCF tracking tools	(PMCU) Short-term nutritionist
Output 1.3.1 Households have climate resilient production systems and have enhanced their livelihood assets through productive activities in targeted areas.	All households (25-30% female-headed) in targeted areas have production systems with low resiliency and have poor access to livelihood assets	1200 households (25-30% female-headed) have production systems more climate resilient, and have enhanced their livelihood assets through productive activities in project targeted areas (basic grains, vegetable gardens, poultry).	300 households (25-30% female headed) have more climate resilient production systems and have enhanced their livelihood assets.	500 additional households (25-30% female-headed) have more climate resilient production systems and have enhanced their livelihood assets	400 additional households (25-30% female headed women) have more climate resilient production systems and have enhanced their livelihood assets	Field visits at farm level Farm level monitoring reports Monthly reports of Extension Agents uploaded on the MAG's monitoring system	CENTA Project Coordinator Project Management Coordination Unit (PMCU) Part-time Agriculture Diversification Specialist

Outcomes and outputs	Baseline	Target	Milestones towards achieving output and outcome targets			Data Collection and Reporting	
			Year 1	Year 2	Year 3	Means verification of	Responsible for Data Collection
Component 2: Soil quality enhancement based on the increase of vegetation cover, Integrated Natural Resource Management (INRM), suitable land-use and gender-sensitive management, recovering flow of agro-ecosystem services in fragile micro-watersheds.							
Outcome 2.1 Soils in targeted areas have increased vegetation cover (fruit trees, forest, grass, and bush, among others) for soil/water protection and conservation	LD PMAT LDI.iii) 13% of soils (501 ha) in targeted areas have vegetation cover (fruit trees, forest trees, grass, and bush, among others) for soil and water protection and conservation.	LD PMAT LDI.iii) 40% of soils (1,541 ha) in targeted areas have increased vegetation cover (fruit trees, forest trees, grass, and bush, among others) for soil and water protection and conservation.	LD PMAT LDI.iii) 40 additional ha of soils in targeted areas have increased vegetation cover (total: 541 ha)	LD PMAT LDI.iii) 956 additional hectares of soils in targeted areas have increased vegetation cover (total: 1156 ha.)	LD PMAT LDI.iii) 385 additional hectares of soils in targeted areas have increased vegetation cover (total: 1541 ha)	Delivery and reception acts of agricultural inputs and vegetative material signed by recipient household and systematically stored by the CENTA information system Farm management plans. Monthly monitoring reports by CENTA extension agents tracking farm level activities including visual evidence. MAG monitoring system. GEF LD tracking tools Field visits. Mid-term review and final evaluation, PPRs, PIRs	CENTA Technical Team Project Coordinator

Outcomes and outputs	Baseline	Target	Milestones towards achieving output and outcome targets			Data Collection and Reporting	
			Year 1	Year 2	Year 3	Means verification of	Responsible for Data Collection
Output 2.1.1 Supplied vegetative material for soil/water protection and conservation (living barriers, living hedges, gully control) through establishment and strengthening of agro-forestry nurseries at household, community and municipal level, in targeted micro-watersheds	USD 0 invested in the acquisition of inputs for soil conservation. 13.01% of soils in the project targeted areas (Texistepeque and Candelaria de la Frontera) have vegetative cover	USD 80,000 invested in inputs for soil conservation 40% of soils in the project targeted areas (Texistepeque and Candelaria de la Frontera) have vegetative cover.	USD 30,000 invested 15% of soils in the project targeted areas have vegetative cover: 125,000 forest trees in living barriers, 11,000 fruit trees and 181 Ha of pasture (Total: 541 ha)	Additional USD 30,000 invested (total USD 60,000) 30% of soils in the project targeted areas have vegetative cover: 294,000 forest trees in living barriers; 22,000 fruit trees and 362 Ha. of pasture (Total: 1156 ha)	Additional USD 20,000 (total USD 80,000) 40% of soils in the project targeted areas have vegetative cover: 374,200 forest trees in living barriers; 33,000 fruit trees and 517 ha of pasture (Total:1541 ha)	Invoices Reception and delivery acts MAG monitoring system PPRs, PIRs	FAOSV CENTA Technical Team Project Coordinator
Outcome 2.2 Targeted area under INRM in wider landscape, resulting in sustained agricultural productivity and reduced community vulnerability	LD PMAT LD 3.ii) 0.3% of soils (12 Ha of land) in targeted areas are covered by INRM practices in the wider landscape. Agriculture productivity proxy for corn: 2.75 Ton/Ha/year LD PMAT LD 3.ii) 0 INRM practices applied in the wider landscape in targeted areas	LD PMAT LD 3.ii) 40% (1,541 ha) in targeted areas are under INRM practices in the wider landscape Agriculture productivity proxy for corn: 2.89 Ton corn/ Ha/year LD PMAT indicator 3.ii) 3 INRM practices (agro-forestry systems, conservation agriculture and watershed management) applied in the wider landscape in the project targeted areas.	LD PMAT LD 3.ii) 200 Ha in targeted areas under INRM practices in the wider landscape, Agriculture productivity for corn increased to 2.89 ton/Ha/year LD PMAT LD 3.ii) 3 INRM practices (agro-forestry systems, conservation agriculture and watershed management) applied in the wider landscape.	LD PMAT LD 3.ii) 956 Ha in targeted areas under INRM practices in the wider landscape (Total: 1156 Ha) Agriculture productivity for corn maintained at 2.89 ton/Ha/year LD PMAT LD3.ii) 3 INRM practices (agro-forestry systems, conservation agriculture and watershed management) applied in the wider landscape	LD PMAT LD 3.ii) 385 Ha in targeted areas under INRM practices in the wider landscape (Total: 1541 Ha) Agriculture productivity for corn maintained at 2.89 ton/Ha/year LD PMAT LD3.ii) 3 INRM practices (agro-forestry systems, conservation agriculture and watershed management) applied in the broader landscape	MAG monitoring system; Farm management plans Trimester Technical reports PPRs, PIRs	CENTA Technical Team Project Coordinator
Output 2.2.1 Farmer Field Schools (FFS) established and farmer's engaged in experimental learning in	0 FFS in targeted areas	6 FFS are established and 192 households (25-30% female-headed) are engaged in experimental learning in INRM, soil	2 FFS are established, and 64 households (25-30% female-headed) engaged in	2 additional FFS are established (total: 4 FFS) and 64 additional households (25-30%	2 additional FFS are established (total: 6 FFS) and 64 additional households (25-30% female headed) (total 192 households) are engaged	Lists of participants to FFS FFS progress reports	CENTA Technical Team Project Coordinator

Outcomes and outputs	Baseline	Target	Milestones towards achieving output and outcome targets			Data Collection and Reporting	
			Year 1	Year 2	Year 3	Means of verification	Responsible for Data Collection
INRM, soil conservation and protection in targeted micro-watersheds of Texistepeque and Candelaria de la Frontera.		conservation and protection to in targeted micro-watersheds.	experimental learning.	female-headed (total: 128 households) are engaged in experimental learning.	in experimental learning.	including photos PPRs Evaluation surveys of FFS completed by participant households	
Output 2.2.2 Technical Demonstrative Families (DFs) assisted in adopting INRM techniques and good agricultural practices (GAP) in targeted micro watersheds (technology and GAP adoption monitored gender-disaggregated)	0 households have adopted good agricultural practices and INRM techniques	128 technical DFs (out of which 38 are female-headed) assisted in adopting good agricultural practices and INRM techniques in targeted micro watersheds	43 technical DFs (out of which 13 are female-headed) assisted in adopting good agricultural practices and INRM techniques in targeted micro watersheds	43 additional technical DFs (out of which 13 are female-headed) assisted in adopting good agricultural practices and INRM techniques in targeted micro watersheds (Total: 86 DFs of which 26 female-headed)	42 additional technical DFs (out of which 12 are female-headed) assisted in adopting good agricultural practices and INRM techniques in targeted micro watersheds (Total: 128 DFs of which 38 female-headed)	Training program, material, and list of participating DF Monitoring report on adoption of practices Farm management plans Field visits PPRs	CENTA Technical Team Project Coordinator
Output 2.2.3 Good agricultural practices (GAP) disseminated among small-scale producers (men and women) in the targeted micro-watersheds, through the technical <i>Demonstrative/ Irradiated Families</i> methodology	0 good agricultural practices in the targeted areas	5 good agricultural practices disseminated among 1,200 small-scale producers (25-30% women) in targeted areas through 128 technical Demonstrative Families (DFs) Examples of GAPS: Drip-irrigation Preventive medicine Back-yard birds Use of protective equipment for application of insecticides Use of green-label products Production and use of	1 good agricultural practices disseminated among 300 households (25-30% female headed) in targeted areas through DFs, including: the establishment of 15 vegetable plots, 40 drip irrigation systems for intensive crops, and 75 poultry modules.	3 additional agricultural good practice disseminated among 500 additional households in targeted micro-watersheds in both municipalities, including the establishment of: 30 vegetable plots, 80 drip irrigation systems for intensive crops and 150 poultry modules. (Total: 4 GAPS, 900 households, 25-30% female-headed)	1 additional good agricultural practice disseminated among 400 households (in targeted areas, including: the establishment of 45 vegetable plots, 120 drip irrigation systems for intensive crops and 225 poultry modules. (Total: 5 GAPS, 1200 households, 25-30% female-headed)	List of training participants Technical reports on the 5 agricultural good practices Knowledge-based surveys to Irradiated Families (IFs) PPR	CENTA Technical Team Project Coordinator

Outcomes and outputs	Baseline	Target	Milestones towards achieving output and outcome targets			Data Collection and Reporting	
			Year 1	Year 2	Year 3	Means of verification	Responsible for Data Collection
		organic fertilizers Production and use of natural soil enhancers (mulch, biochar)					

Outcomes and outputs	Baseline	Target	Milestones towards achieving output and outcome targets			Data Collection and Reporting	
			Year 1	Year 2	Year 3	Means of verification	Responsible for Data Collection
Component 3: Increasing water quality and quantity to diversify livelihoods and income sources of vulnerable sectors in targeted micro-watersheds, enhancing participatory and gender-sensitive management.							
Outcome 3.1 Increase in water availability in targeted areas through building of catchment and water conveyance systems, and protection of water sources	SCCF AMAT Indicator 1.2.4: water supply in targeted areas: 6750 m ³ (18 m ³ /household/year; 375 families, out of which 175 are female-headed) 0 sustainable water management practices introduced to increase access to water for irrigation and domestic uses at household level under existing and projected climate change	SCCF AMAT Indicator 1.2.4: Increase in water supply in targeted areas: +9,500 m ³ per year 3 sustainable water management practices introduced to increase access to water for home gardening and domestic uses, including the protection of 10 water sources, improvement of water collection/storage infrastructure, rainwater harvesting and conveyance systems for household use.		SCCF AMAT Indicator 1.2.4: 3500 m ³ per year increase in clean water supply (+6000 m ³ in total; water quality parameters applied) for home gardens and human consumption 3 sustainable management practices introduced including: protection of 7 water sources, improvement of water collection/storage infrastructure, rainwater harvesting and conveyance systems for household use.	SCCF AMAT Indicator 1.2.4: 3500 m ³ per year increase in clean water supply (+9500 m ³ in total; water quality parameters applied) from home gardens and human consumption 3 sustainable management practices introduced protection of 10 water sources, improvement of water collection/storage infrastructure, rainwater harvesting and conveyance systems for household use	Trimester Technical reports on sustainable water management practices In situ verification of infrastructure building and operation Water quality tests Mid-term review and final evaluation, PPRs, PIRs SCCF tracking tools	Project Coordinator PMCU Part-time Participatory Watershed Management Specialist
Output 3.1.1 Households in the targeted micro-	0 water sources are protected and sustainably managed in	10 water sources are sustainably managed through protection and	4 water are sustainably managed through	3 additional water sources (total: 7 water sources) are	3 additional water sources (total: 10 water sources) are sustainably managed through	Protection and maintenance management plans for	Project Coordinator

Outcomes and outputs	Baseline	Target	Milestones towards achieving output and outcome targets			Data Collection and Reporting	
			Year 1	Year 2	Year 3	Means of verification	Responsible for Data Collection
watersheds are actively involved in the protection of water sources.	targeted micro-watershed	maintenance plans in targeted areas involving 187 households ¹²⁵ (30% are female-headed).	protection, maintenance, and management plans involving 74 households (30% female headed).	sustainably managed through protection, maintenance, and management plans involving 57 additional households (Total: 131 households, 30% female-headed)	protection, maintenance, and management plans involving 56 additional households (Total: 187 households, 30% female-headed)	each water source Monitoring reports of water source management plans Targeted surveys that assess the effective household involvement (gender disaggregated) in the protection of sources PPRs, PIRs Field visits	PMCU Part-time Participatory Watershed Management Specialist DGFCR-MAG CENTA
Output 3.1.2 Households trained in shared decision-making, construction, management and maintenance of rainwater harvesting systems for multiple uses (irrigation and human consumption) in communities located in the targeted micro-watersheds	0 households in the selected micro-watersheds are trained in construction, management and maintenance of rainwater collection systems for multiple use in targeted micro-watersheds 0 households are participating in the management of community rainwater catchment systems	375 households (175 female-headed) trained in shared decision-making, construction, management and maintenance of rainwater catchment systems for multiple use (irrigation and domestic use) in targeted micro-watersheds 375 households participating in the management of both domestic and community rainwater harvesting systems	128 households trained 128 households participating	150 additional households are trained (total: 278 households) 150 additional households participating	97 additional families are trained (total: 375 households) 97 additional households participating.	Training material for water source management, maintenance and protection Training evaluation forms completed by all 375 trained households PPRs, PIRs Field visits.	Project Coordinator PMCU Part-time Participatory Watershed Management Specialist
Outcome 3.2 Households and communities have	SCCF AMAT Indicator 1.3.1: Households and communities have poor	SCCF AMAT Indicator 1.3.1 Households and		SCCF AMAT tracking tool: Indicator 1.3.1	SCCF AMAT tracking tool: Indicator 1.3.1 Households and communities have	Trimester in situ verification of harvesting systems building,	Project Coordinator

¹²⁵ 25% of the total number of households living in the targeted micro-watersheds, as assessed by the Water Management Specialist during the Full Document Preparation (Cuenca, 2012).

Outcomes and outputs	Baseline	Target	Milestones towards achieving output and outcome targets			Data Collection and Reporting	
			Year 1	Year 2	Year 3	Means of verification	Responsible for Data Collection
more secure access to livelihood assets (water resources) in targeted areas	access to livelihood assets (score: 2) . Female participation: 30%. SCCF AMAT Indicator 1.2.1.5: 0 sustainable water management practices to increase access to irrigation water under existing and projected climate change	communities have moderate access to livelihood assets (score: 3) Female-headed households: 30%. SCCF AMAT Indicator 1.2.1.5: 2 sustainable water management practices introduced to increase access to irrigation water for production uses: 1 community rainwater harvesting system; 12 domestic rainwater harvesting systems derived from multiple water conveyance		Households and communities have moderate access to livelihood assets. (score: 3. Female-headed households: 30%.) SCCF AMAT Indicator 1.2.1.5: 2 sustainable water management practices introduced (one community rainwater harvesting system for multiple-use; and 12 domestic rainwater harvesting systems for productive use)	sustained moderate access to livelihood assets (score: 3. Female-headed households: 30%). SCCF AMAT Indicator 1.2.1.5: 2 sustainable water management practices introduced (one community rainwater harvesting system for multiple-use; and 12 domestic rainwater harvesting systems for productive use)	operation, and maintenance SCCF tracking tools Midterm review and final evaluation,PPRs, PIRs	PMCU DGFCR-MAG CENTA Part-time Participatory Watershed Management Specialist
Output 3.2.1 Community rainwater harvesting systems for productive uses managed by households, (including female-headed households) in targeted areas	0 community rainwater harvesting systems are in place in the targeted areas	1 community rainwater harvesting system for multiple-use is built, managed and maintained in collaboration with 12 households out of which 4 are female-headed	1 community rainwater harvesting system for productive use is built in collaboration with 12 households, out of which 4 are female-headed	1 community rainwater harvesting system for productive use is built and managed in collaboration with 12 households, out of which 4 are female-headed	1 community rainwater harvesting system for productive use is managed and maintained in collaboration with 12 households, out of which 4 are female-headed	Trimester in situ verification of building, operation, and maintenance of the community harvesting system Targeted surveys that assess the effective household involvement (gender disaggregated) in building and management of community infrastructure PPRs	Project Coordinator PMCU Part-time Participatory Watershed Management Specialist
Output 3.2.2 Households with domestic rainwater harvesting and water	0 water conveyance systems for productive uses are established in targeted areas	12 domestic water conveyance systems derived from two multiple water	6 domestic water conveyance systems are built	6 additional domestic water conveyance systems (Total: 12 conveyance systems,	12 domestic water conveyance systems derived from 2 multiple water conveyance systems, are operative and	In situ verification of infrastructure building and maintenance	Project Coordinator PMCU

Outcomes and outputs	Baseline	Target	Milestones towards achieving output and outcome targets			Data Collection and Reporting	
			Year 1	Year 2	Year 3	Means of verification	Responsible for Data Collection
conveyance systems for productive and domestic uses in targeted areas	12 households have domestic rainwater harvesting systems for domestic and productive uses in targeted areas.	conveyance systems are built for productive and domestic uses in targeted areas 42 households with domestic rainwater harvesting systems for domestic use in targeted areas	10 additional domestic rainwater harvesting systems built (Total: 22 households)	2 multiple systems) 10 additional domestic rainwater harvesting systems built (Total: 32 households)	maintained in the targeted areas. 10 additional domestic rainwater harvesting systems built (Total: 42 households)	Technical reports on domestic rainwater catchment systems. Targeted surveys that assess the effective household involvement (gender disaggregated) in building and management of domestic infrastructure Farm/home management plans Technical reports on water conveyance systems derived from multiple water conveyance systems PPRs	Part-time Participatory Watershed Management Specialist MAG-DGFCR CENTA

Outcomes and outputs	Baseline	Target	Milestones towards achieving output and outcome targets			Data Collection and Reporting	
			Year 1	Year 2	Year 3	Means of verification	Responsible for Data Collection
Component 4: Improving disaster risk management (DRM) to increase adaptive capacity to Climate Change, in vulnerable sectors living in targeted micro-watersheds.							
Outcome 4.1 50-75% of target population have moderate awareness (as defined in the SCCF/LDCF AMAT disaggregated by gender) of predicted adverse impacts of CC and appropriate response measures	SCCF AMAT Indicator 2.3.1: 10% of local population has awareness of predicted adverse impacts of climate change and appropriate responses. (Score 1: No awareness level: <50% correct).	SCCF AMAT Indicator 2.3.1: 50%-75% of target population have moderate awareness of predicted adverse impacts of CC and appropriate response measures (Score 2: Moderate awareness level: 50%-75% of the population)	SCCF AMAT Indicator 2.3.1: 30 % of targeted population have awareness (Score: 1/2: Low/Moderate awareness level)	SCCF AMAT Indicator 2.3.1: 50% of targeted population have awareness (Score: 2. Moderate awareness level)	SCCF AMAT Indicator 2.3.1: 50-75% of targeted population have awareness (Score: 2. Sustained Moderate awareness level)	Household surveys (disaggregated by gender) assessing knowledge on climate change and DRM issues	Project Coordinator PMCU Disaster Risk Reduction (DRR) Specialist DGFCR-MAG

Outcomes and outputs	Baseline	Target	Milestones towards achieving output and outcome targets			Data Collection and Reporting	
			Year 1	Year 2	Year 3	Means of verification	Responsible for Data Collection
<p>Output 4.1.1 Rural households and small-scale rural producers living in targeted micro-watersheds involved in disaster risk reduction (DRR), preparedness, response and recovery from natural disasters, including contingency planning, and enhancing gender-sensitive management</p>	0% of households in the targeted micro-watersheds have been involved in disaster risk reduction, preparedness, response and recovery from natural disasters.	50% of households (out of which 30% are female-headed) participate in 30 workshops on DRR, preparedness, response, and recovery from natural disasters	15% of households (30% female-headed) have participated in 10 workshops on DRR, preparedness, response and recovery	35% of households (30% female-headed) have participated in 10 additional workshops on DRR, preparedness, response and recovery	50% households (30% female-headed) have participated in 10 additional workshops on DRR, preparedness, response and recovery	<p>Workshops participants lists</p> <p>Training material and program, targeting different needs and actors (disaggregated by gender)</p> <p>Workshop evaluation forms and simple knowledge tests</p> <p>PPRs, PIRs</p>	<p>Project Coordinator</p> <p>PMCU</p> <p>DRR Specialist</p> <p>MAG-DGFCR</p>
<p>Outcome 4.2 Vulnerability and risk perception index disaggregated by gender have increased in targeted micro watersheds.</p>	<p>SCCF AMAT Indicator 1.2.14 Extreme / high vulnerability and risk perception index (score 1/2) (disaggregated by gender)</p> <p>SCCF AMAT Indicator 2.2.2.1: 0% of population covered by climate change risk measures (disaggregated by gender).</p> <p>SCCF AMAT Indicator 2.3.1.1: 0 risk reduction and awareness activities introduced at local level.</p>	<p>SCCF AMAT Indicator 1.2.14 Vulnerability and risk perception index disaggregated by gender has increased from 1/2 (extreme/high vulnerability) to 3/4 (medium/low vulnerability) in targeted micro watersheds.</p> <p>SCCF AMAT Indicator 2.2.2.1: 80 % of population covered by climate change risk measures (disaggregated by gender).</p> <p>SCCF AMAT Indicator 2.3.1.1: 3 Risk reduction and awareness activities introduced at local level, such as: Monitoring/Forecasting</p>		<p>SCCF AMAT Indicator 1.2.14 Vulnerability and risk perception index disaggregated by gender: 3 (medium vulnerability).</p> <p>SCCF AMAT Indicator 2.2.2.1: 60% of population covered by climate change risk measures (disaggregated by gender).</p> <p>SCCF AMAT Indicator 2.3.1.1: 3 Risk reduction and awareness activities introduced at local level.</p>	<p>SCCF AMAT Indicator 1.2.14 Vulnerability and risk perception index disaggregated by gender: 3/4 (medium/low vulnerability).</p> <p>SCCF AMAT Indicator 2.2.2.1: 80% of population covered by climate change risk measures (disaggregated by gender).</p> <p>SCCF AMAT Indicator 2.3.1.1: 3 Risk reduction and awareness activities introduced at local level.</p>	<p>Vulnerability maps</p> <p>Targeted trimester surveys that assess the vulnerability and risk perception risks of selected households (disaggregated by gender)</p>	<p>Project Coordinator</p> <p>PMCU</p> <p>DRR Specialist</p>

Outcomes and outputs	Baseline	Target	Milestones towards achieving output and outcome targets			Data Collection and Reporting	
			Year 1	Year 2	Year 3	Means of verification	Responsible for Data Collection
		capacity (EWS, Vulnerability mapping system); ICT and information dissemination; Community Workshops for CC adaptation.					
Output 4.2.1 Communities of targeted micro-watersheds have climate, biophysical and social risk maps covering the entire population and identified signposted and conditioned local safe places to protect themselves in case of emergency.	0 risk maps prepared by local communities	6 climate, biophysical and social risk maps prepared by local communities, covering the entire population and identified signposted and conditioned local safe places to protect themselves in case of emergency.	2 climate, biophysical and social risk maps elaborated by 2 communities including 750 households (out of which 300 are female-headed.	2 additional climate, biophysical and social risk maps elaborated by two additional communities (total: 4 risk maps and 4 communities), including 750 households (out of which 300 are female-headed.	2 additional climate, biophysical and social risk maps elaborated by 2 additional communities (total: 6 risk maps and 6 communities), including 750 households (out of which 300 are female-headed).	Climate, biophysical and social risk maps List of signposted and conditioned local safe places for protection in case of emergency	Project Coordinator PMCU DRR Specialist
Output 4.2.2 Local communities integrated in municipal and departmental networks and structures for rapid response to extreme weather events.	0 municipal and departmental response mechanisms to extreme weather integrating local communities in target micro-watersheds	6 municipal and departmental response mechanisms to extreme weather events integrating 70-90% of the population in targeted micro-watersheds	2 municipal and departmental emergency response mechanisms to extreme climatic events established, covering 20-40% of the population in selected watersheds.	2 additional municipal and departmental emergency response mechanisms to extreme climatic events established, covering 41-69% of the population in selected watersheds.	2 additional municipal and departmental emergency response mechanisms to extreme climatic events established, covering 70-90% of the population in selected watersheds	Report on multi-stakeholder consultations for disaster response coordination plans Municipal Natural disaster emergency plans Departmental natural disaster emergency plans List of municipal committees.	Project Coordinator PMCU DRR Specialist Municipal governments
Output 4.2.3 Local and departmental governments are taking the lead in reducing vulnerability to CC through the design and	0 Action plans for natural disasters and weather emergencies to reduce losses, are adopted by municipal and departmental	2 action plans for natural disaster and extreme weather emergencies, to reduce climate-induced economic losses, participatory designed,	2 action plans for natural disasters and extreme weather emergencies designed for	2 action plans for natural disasters and extreme weather emergencies implemented for Texistepeque, and	2 action plans for natural disasters and extreme weather emergencies implemented and monitored in Texistepeque, and Candelaria de la Frontera.	Municipal action plans and budget for natural disasters and extreme weather events Departmental action	Project Coordinator PMCU DRR Specialist

Outcomes and outputs	Baseline	Target	Milestones towards achieving output and outcome targets			Data Collection and Reporting	
			Year 1	Year 2	Year 3	Means of verification	Responsible for Data Collection
implementation of Action Plans for coping with natural disasters and weather emergencies, and to reduce climate-induced economic losses in Texistepeque, and another one in Candelaria de la Frontera.	governments	and implemented by the municipal governments of Texistepeque, and Candelaria de la Frontera.	Texistepeque, and Candelaria de la Frontera.	Candelaria de la Frontera.		plans and budget for natural disasters and extreme weather events Minutes of the participatory design processes (meetings, workshops, etc) PPRs, PIRs	Municipal governments

Outcomes and outputs	Baseline	Target	Milestones towards achieving output and outcome targets			Data Collection and Reporting	
			Year 1	Year 2	Year 3	Means of verification	Responsible for Data Collection
Component 5: M&E and information dissemination							
Outcome 5.1 Project implementation based on results-based management		Project outcomes achieved and showing sustainability		50% progress in achieving project outcomes	Project outcomes achieved and showing sustainability	PIRs Midterm and final evaluations	Project Coordinator PMCU MAG-DGFCR FAO
Output 5.1.1 Project monitoring system providing six-monthly reports on progress in achieving project outputs and outcomes	Project results framework with project output and outcome indicators, targets and baseline	Six six-monthly progress reports and three PIRs	Two six-monthly progress reports and one PIR	Two six-monthly progress reports and one PIR	Two six-monthly progress reports and one PIR	PPRs PIRs	Project Coordinator PMCU part-time Project Bilingual Assistant FAO
Output 5.1.2: Midterm review and final evaluation reports				Midterm review report	Final evaluation report	Review and Evaluation reports	Project Coordinator PMCU

Outcomes and outputs	Baseline	Target	Milestones towards achieving output and outcome targets			Data Collection and Reporting	
			Year 1	Year 2	Year 3	Means of verification	Responsible for Data Collection
							Evaluation expert (international) FAO
Output 5.1.3: Project best practices and lessons learned disseminated via publications, project website and others (topics: watershed management and disaster risk management, mainstreaming of soil, water conservation and sustainable agriculture practices in local production systems).			Publication on project experiences and best practices on integrated and participatory watershed management. Dissemination through the project website	Publication on project best practices and lessons learned on mainstreaming soil and water conservation and other sustainable agriculture practices in local production systems and DRM. Dissemination through the project website	Publication on comprehensive project lessons learnt, including successes and failures. Dissemination through the project website	Publications PPRs, PIRs	Project Coordinator PMCU FAO MAG-DGFCR

APPENDIX 2: WORK PLAN (RESULTS BASED)

Outputs	Activities	Responsible institution/ entity	Year 1				Year 2				Year 3			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Component 1: Institutional strengthening to design and implement Fragile Micro-Watershed Management Plans that increase adaptation capacities to the adverse impacts of Climate Change, based on a participatory and gender-sensitive approach.														
1.1.1 Methodology and guidelines for developing cost-efficient FMWMPs, building on a consensus between the central government, the municipalities and the local population.	2 multi-stakeholder consultation workshops to develop 1 methodology and guidelines for FMWMPs	Part-time Institutional Specialist; MAG-DGFCR; Project Management Coordination Unit (PMCU) ; Project Coordinator												
	1 multi-stakeholder validation workshop	Part-time Institutional Specialist; MAG-DGFCR; PMCU ; Project Coordinator												
	1 methodology and guidelines mainstreamed in 3 FMWMPs	Part-time Institutional Specialist; MAG-DGFCR; PMCU; Project Coordinator												
	1 methodology and guidelines mainstreamed in 3 additional FMWMPs	Part-time Institutional Specialist; MAG-DGFCR; PMCU; Project Coordinator												
1.1.2 Government agencies with enhanced capacities for prevention, response and recovery from natural disasters or extreme natural events (storms, droughts, hurricanes, etc.) in fragile watersheds in targeted areas (6 fragile micro-watersheds in 2 municipalities)	Preparation of targeted capacity-development (CD) and training materials including training evaluation forms	Part-time Institutional Specialist; MAG-DGFCR; PMCU; Project Coordinator												
	Implementation of 8 training workshops	Part-time Institutional Specialist; MAG-DGFCR; PMCU; Project Coordinator												
1.2.1 Strategic alliances including development actors and local stakeholders are created to support the development and implementation of FMWMPs in the	Identification of 5 representatives from local civil society and 5 development actors to create 4 strategic alliances	Part-time Institutional Specialist; MAG-DGFCR; PMCU; Project Coordinator												

Outputs	Activities	Responsible institution/ entity	Year 1				Year 2				Year 3			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
municipalities of Texistepeque and Candelaria de la Frontera	Multi-stakeholder consultation meetings for the stipulation and agreement of 4 strategic alliances	Part-time Institutional Specialist; MAG-DGFCR; PMCU; Project Coordinator												
	Strategic alliances meetings to support the validation, implementation and monitoring of 6 FMWMPs.	Part-time Institutional Specialist; MAG-DGFCR; PMCU; Project Coordinator												
1.2.2 FMWMPs developed in the municipalities of Texistepeque and Candelaria de la Frontera, through a participatory process involving departmental, municipal and local authorities in discussions of CC adverse impacts at local level to be addressed by CCA measures in the FMWMPs for the most vulnerable micro-watersheds.	Design of the monitoring system for FMWMPs implementation	Part-time Institutional Specialist; MAG-DGFCR; PMCU; Project Coordinator												
	6 multi-stakeholder consultation workshops to design 6 FMWMPs	Part-time Institutional Specialist; MAG-DGFCR; PMCU; Project Coordinator												
	1 multi-stakeholder workshop to validate 6 FMWMPs	Part-time Institutional Specialist; MAG-DGFCR; PMCU; Project Coordinator												
	Implementation of the 6 FMWMPs and the monitoring system	Part-time Institutional Specialist; MAG-DGFCR; PMCU; Project Coordinator												
1.2.3 Households trained in CC impacts and vulnerability identification (e.g. causes, practices and context) and risk reduction activities at local level	Design of training material and modules, including participatory tools, knowledge based surveys and evaluation forms	Part-time Institutional Specialist; MAG-DGFCR; PMCU; Project Coordinator												
	Implementation of 9 training workshops	Part-time Institutional Specialist; MAG-DGFCR; PMCU; Project Coordinator												
	Two one-day awareness campaigns	Part-time Institutional Specialist; MAG-DGFCR; PMCU; Project Coordinator												

Outputs	Activities	Responsible institution/ entity	Year 1				Year 2				Year 3			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
1.3.1 Households have climate resilient production systems and have enhanced their livelihood assets through productive activities in targeted areas.	Design of training material on climate-resilient agriculture practices, including participatory tools	Part-time Agriculture Diversification Specialist; CENTA; PMCU; Project Coordinator	■	■										
	Implementation of field based capacity development activities including monitoring field visits	Part-time Agriculture Diversification Specialist; CENTA; PMCU; Project Coordinator			■	■	■	■	■	■	■	■	■	■
	Design targeted material and deliver technical training to MINSAL local officers and MAG nutritionists.	Part-time Nutritionist; PMCU; Project Coordinator	■	■							■	■		
Component 2: Soil quality enhancement based on the increase of vegetation cover, Integrated Natural Resource Management (INRM), suitable land-use and gender-sensitive management, recovering flow of agro-ecosystem services in fragile micro-watersheds.														
2.1.1 Supplied vegetative material for soil/water protection and conservation (living barriers, living hedges, gully control) through establishment and strengthening of agro-forestry nurseries at household, community and municipal level, in targeted micro-watersheds	Purchase of inputs for soil conservation	FAOSV		■	■	■		■	■	■		■	■	■
	Identification of sites for implementation of agro-forestry nurseries and planting of vegetative material	CENTA Technical Team; Project Coordinator	■				■				■			
	Identification of non-native plant species	CENTA Technical Team; Project Coordinator		■				■				■		
	Preparation of sites for establishment of agro-forestry nurseries and vegetative material	CENTA Technical Team; Project Coordinator		■	■			■	■			■	■	
	Distribution of inputs and planting of vegetative material	CENTA Technical Team; Project Coordinator			■	■			■	■			■	■
2.2.1 Farmer Field Schools (FFS) established engaging small-holders households in experimental learning in INRM, soil conservation and protection in targeted micro-watersheds of Texistepeque and Candelaria de la Frontera.	Identification of communities involved in the establishment of 6 FFS and identification of learning sites	CENTA Technical Team; Project Coordinator	■	■										
	Preparation of technical training material including training evaluation forms	CENTA Technical Team; Project Coordinator			■	■	■	■			■	■		

Outputs	Activities	Responsible institution/ entity	Year 1				Year 2				Year 3			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
	Implementation of 6 FFS	CENTA Technical Team; Project Coordinator												
	Field monitoring visits	CENTA Technical Team; Project Coordinator												
2.2.2 Technical Demonstrative Families (DFs) assisted in adopting INRM techniques and good agricultural practices (GAP) in targeted micro watersheds (technology and GAP adoption monitored gender disaggregated)	Design of training programme materials and modules for DFs (INRM techniques and GAPs), including training evaluation forms	CENTA Technical Team; Project Coordinator												
	Targeted workshops and learning-by-doing activities to support capacity development of 128 DFs (38 female-headed) in GAPs and INRM techniques	CENTA Technical Team; Project Coordinator												
2.2.3 Good agricultural practices (GAP) disseminated among small-scale producers (men and women) in the targeted micro-watersheds, through the technical <i>Demonstrative/ Irradiated Families</i> methodology	Establishment of 45 vegetable plots, 120 drip irrigation systems for intensive crops and 225 poultry modules through the technique of Irradiated Family	CENTA Technical Team; Project Coordinator												
	Monitoring field visits to DFs and irradiated families (IFs)	CENTA Technical Team; Project Coordinator												
Component 3: Increasing water quality and quantity to diversify livelihoods and income sources of vulnerable sectors in targeted micro-watersheds, enhancing participatory and gender-sensitive management.														
3.1.1 Households in the targeted micro- watersheds are actively involved in the protection of water sources.	Design training material for targeted communities and households involved in: i) the implementation of sustainable water management practices; ii) the protection of water sources; and iii) the building, management, and maintenance of rainwater harvesting and conveyance systems. It includes target surveys.													

Outputs	Activities	Responsible institution/ entity	Year 1				Year 2				Year 3			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
	Learning-by-doing activities with 187 households (30% female-headed) for protecting selected 10 water sources.	Part-time Participatory Watershed Management Specialist DGFCR-MAG CENTA Project Coordinator PMCU												
	Multi-stakeholders consultations to design and validate protection, maintenance and management plans for 10 water sources	Part-time Participatory Watershed Management Specialist DGFCR-MAG CENTA Project Coordinator PMCU												
	Implementation of protection and maintenance management plans for water resources	Part-time Participatory Watershed Management Specialist DGFCR-MAG CENTA Project Coordinator PMCU												
3.1.2 Households trained in shared decision-making, construction, management and maintenance of rainwater harvesting systems for multiple uses (irrigation and human consumption) in communities located in the targeted micro- watersheds	Design of training modules and material	Part-time Participatory Watershed Management Specialist DGFCR-MAG CENTA Project Coordinator PMCU												
	30 learning-by-doing activities and workshops on construction and maintenance of rainwater harvesting systems	Part-time Participatory Watershed Management Specialist DGFCR-MAG CENTA Project Coordinator PMCU												
3.2.1 Community rainwater harvesting systems for productive uses managed by households, (including female-headed households) in targeted areas	Building of 1 community rainwater harvesting system for productive use	Part-time Participatory Watershed Management Specialist DGFCR-MAG CENTA Project Coordinator PMCU												

Outputs	Activities	Responsible institution/ entity	Year 1				Year 2				Year 3			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
	Establishment and implementation of a monitoring plan to manage and maintain the community harvesting system	Part-time Participatory Watershed Management Specialist DGFCR-MAG CENTA Project Coordinator PMCU												
3.2.2 Households with domestic rainwater harvesting and water conveyance systems for productive and domestic uses in targeted areas	Identification of households where rainwater harvesting and conveyance systems will be built	Part-time Participatory Watershed Management Specialist DGFCR-MAG CENTA Project Coordinator PMCU												
	Building of 12 domestic water conveyance systems derived from two multiple water conveyance systems	Part-time Participatory Watershed Management Specialist DGFCR-MAG CENTA Project Coordinator PMCU												
	Building of 42 domestic rainwater harvesting systems	Part-time Participatory Watershed Management Specialist DGFCR-MAG CENTA Project Coordinator PMCU												
Component 4: Improving disaster risk management (DRM) to increase adaptive capacity to Climate Change, in vulnerable sectors living in targeted micro-watersheds.														
4.1.1 Rural households and small-scale rural producers living in targeted micro-watersheds involved in disaster risk reduction (DRR), preparedness, response and recovery from natural disasters, including contingency planning, and enhancing gender-sensitive management	Design of training material and modules	DRR Specialist Project Coordinator PMCU MARN MAG-DGFCR												
	Implementation of 6 workshops on disaster risk reduction (DRR), preparedness, response and recovery – with local households	DRR Specialist Project Coordinator PMCU MAG-DGFCR												

Outputs	Activities	Responsible institution/ entity	Year 1				Year 2				Year 3			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
4.2.1 Communities of targeted micro-watersheds have climate, biophysical and social risk maps covering the entire population and identified signposted and conditioned local safe places to protect themselves in case of emergency.	6 community-based workshops to elaborate 6 climate, social and biophysical risk maps with 750 households.	DRR Specialist Project Coordinator PMCU MAG-DGFCR												
	Identification of signposted and conditioned local safe places for community gathering in case of emergency	DRR Specialist Project Coordinator PMCU MAG-DGFCR												
	Multi-stakeholders consultations to establish and implement 2 Monitoring and Surveillance Systems	DRR Specialist Project Coordinator PMCU MAG-DGFCR												
	Multi-stakeholders consultations to establish and implement 2 municipal Early Warning System	DRR Specialist Project Coordinator PMCU MAG-DGFCR												
	6 workshops to disseminate municipal Monitoring and Surveillance Systems and Early Warning System	DRR Specialist Project Coordinator PMCU MAG-DGFCR												
4.2.2 Local communities (70-100 % of the population of targeted micro watersheds) integrated in municipal and departmental networks and structures for rapid response to extreme weather events	Multi-stakeholder consultations to design 6 community-based municipal and departmental response mechanisms to extreme weather events	DRR Specialist Project Coordinator PMCU MAG-DGFCR												
	6 workshops to disseminate municipal and departmental response mechanisms	DRR Specialist Project Coordinator PMCU MAG-DGFCR												
	3-4 evacuation exercises	DRR Specialist Project Coordinator PMCU MAG-DGFCR												

Outputs	Activities	Responsible institution/ entity	Year 1				Year 2				Year 3			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
4.2.3 Local and departmental governments are leaders in reducing vulnerability to CC through the design and implementation of Action Plans for coping with natural disasters and weather emergencies, and to reduce climate-induced economic losses in Texistepeque, and another one in Candelaria de la Frontera.	Multi-stakeholder consultations to design 2 participatory municipal and departmental action plans	DRR Specialist Project Coordinator PMCU MAG-DGFCR												
	Implementation of 2 action through coordination mechanisms amongst stakeholders	DRR Specialist Project Coordinator PMCU MAG-DGFCR												
Component 5: M&E and information dissemination														
5.1.1 Project monitoring system providing six-monthly reports on progress in achieving project outputs and outcomes	Inception workshop	M&E specialist, Project Coordinator PMCU MAG-DGFCR												
	Preparation and validation of the AWP/B													
	Preparation and validation of the M&E plan	M&E specialist, Project Coordinator PMCU												
	Regular monitoring and reporting requirements (PPRs)	Project Coordinator PMCU Bilingual Assistant												
	PIRs	LTU Project Coordinator Bilingual Assistant												
5.1.2 Midterm review and final evaluation reports	Mid-Term Review	External Consultant FAO												
	Final Evaluation	External Consultant FAO												

Outputs	Activities	Responsible institution/ entity	Year 1				Year 2				Year 3			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
5.1.3 Project “best-practices” and “lessons-learned” in relation to multi-stakeholder processes for watershed management and disaster risk management and mainstreaming of forestry, soil and water conservation and other sustainable agriculture practices in local production systems disseminated via publications, project website and others.	Identification of best practices and lessons arising from project activities	Project Coordinator Bilingual assistant PMCU FAO												
	Preparation of technical reports on best practices and lessons learnt for dissemination	Project Coordinator Bilingual assistant PMCU FAO												
	Project website design and update	Project Coordinator												
Project Management	Contracting of project management staff	FAOSV												
	PSC bi-annual meetings	PSC Chairperson Project Coordinator PMCU												

APPENDIX 3: RESULTS BUDGET

For space reasons, please find the GEF and SCCF detailed outputs-based budget here:



OracleGEFTF.SCCF.
v5Nov2013.xlsx

Oracle code and description	Unit	No. of units	Unit cost	BUDGET (GEF AND SCCF FINANCING)						Expenditures by year			
				Comp. 1	Comp. 2	Comp. 3	Comp. 4	Comp. 5	PMC	Total GEF	Year 1	Year 2	Year 3
				Total	Total	Total	Total	Total					
5300 Salaries professionals													
Operations and Administrative Officer (NAT)	month	22.00	3,876	0	0	0	0	0	85,272	85,272	23,690	23,690	23,690
5300 Sub-total salaries professionals				0	0	0	0	0	85,272	85,272	23,690	23,690	23,690
5570 Consultants													
			0	0	0	0	0	0		0			0
Sub-total international Consultants				0	0	0	0	0	0	0	0	0	0
Project Coordinator	month	36	2,511.44	15,137	15,137	15,137	15,137	15,137	14,728.00	90,411.81	30,137	30,137	30,137
Bilingual Project Assistant	month	6	1,000	0	0	0	0	6,000		6,000	2,000	2,000	2,000
Institutional Specialist	month	10	1,600	16,000	0	0	0	0		16,000	16,000		
Nutritionist	month	5	2,000	10,000	0	0	0	0		10,000	6,000		4,000
Agricultural Diversification Specialist	month	10	2,000	20,000	0	0	0	0		20,000	8,000	8,000	4,000

Oracle code and description	Unit	No. of units	Unit cost	BUDGET (GEF AND SCCF FINANCING)						Expenditures by year			
				Comp. 1	Comp. 2	Comp. 3	Comp. 4	Comp. 5	PMC	Total GEF	Year 1	Year 2	Year 3
				Total	Total	Total	Total	Total					
Participatory Watershed Management Specialist	month	10	2,000	0	0	20,000	0	0		20,000	8,000	8,000	4,000
M&E Specialist	month	3	2,000	0	0	0	0	6,000		6,000	6,000		
Disaster Risk Reduction (DRR) Specialist	month	30	2,000	0	0	0	60,000	0		60,000	20,000	24,000	16,000
Sub-total national Consultants				61,137	15,137	35,137	75,137	27,137	14,728	228,412	96,137	72,137	60,137
5570 Sub-total consultants				61,137	15,137	35,137	75,137	27,137	14,728	228,412	96,137	72,137	60,137
5650 Contracts													
CENTA LOA 1	Lumpsum	1	69,510	0	69,510	0	0	0		69,510	46,340	23,170	
CENTA LOA 2	Lumpsum	1	53,730		53,730	0	0	0		53,730		17,910	35,820
Mid-term review	Lumpsum	1	15,000					15,000		15,000		15,000	
Final Evaluation	Lumpsum	1	40,734					40,734		40,734			40,734
Monitoring and measurement of vegetative cover	month	1	2,000		2,000	0	0	0		2,000			2,000
Radio spots	spot	6	100	0	600	0	0	0		600		300	300
Rehabilitation of water collection infrastructure	source	10	6,000	0	0	60,000	0	0		60,000		60,000	
System rainwater harvesting and water collection box the Pichiche source	System	1	31,500	0	0	31,500	0	0		31,500	31,500		
Irrigation system and rehabilitation of water system Caserio Las Cristalinas	System	1	63,000	0	0	63,000	0	0		63,000	63,000		
Irrigation system caserio El Jute	System	1	42,686	0	0	42,686	0	0		42,686		42,686	
Micro-watershed management plans	Plan	6	5,861	0	0	35,166	0	0		35,166	35,166		
Signalling system for evacuation in case of warning	Kit	3	2,500	0	0	0	7,500			7,500		5,000	2,500
Monitoring and surveillance system	System	1	10,000	0	0	0	10,000	0		10,000	3,333	3,333	3,333

Oracle code and description	Unit	No. of units	Unit cost	BUDGET (GEF AND SCCF FINANCING)						Expenditures by year			
				Comp. 1	Comp. 2	Comp. 3	Comp. 4	Comp. 5	PMC	Total GEF	Year 1	Year 2	Year 3
				Total	Total	Total	Total	Total					
5650 Sub-total Contracts				0	125,840	232,352	17,500	55,734	0	431,426	179,339	167,399	84,687
5900 Travel													
DSA	days	75	19	285	285	285	285	285		1,425	475	475	475
5900 Sub-total travel				285	285	285	285	285	0	1,425	475	475	475
5023 Training													
Workshops with staff from institutions (governmental and nongovernmental)	Event	24	200	4,800	0	0	0	0		4,800	1,600	1,600	1,600
Formation of strategic alliances	Event	36	100	3,600	0	0	0	0		3,600	2,400	1,200	
Workshop on identifying problems, solutions, functions and responsibilities	Event	120	70	8,400	0	0	0	0		8,400	5,880	2,520	
Strengthening workshops committees	Event	120	70	8,400	0	0	0	0		8,400	4,200	2,100	2,100
Awareness activities to adapt to climate change	Event	6	429	2,574	0	0	0	0		2,574	429	1,287	858
MINSAL strengthening workshops	Event	18	200	3,600	0	0	0	0		3,600	1,400	1,400	800
Household workshops	Event	15	1,575	23,626	0	0	0	0		23,626	7,875	15,751	
Workshops family gardens	Event	30	210	6,300	0	0	0	0		6,300	1,260	2,940	2,100
Farmer Field Schools	School	6	4,800	0	28,800	0	0	0		28,800	9,600	9,600	9,600
Field trips and demonstrations of methods	Event	12	300	0	3,600	0	0	0		3,600	900	1,500	1,200
Field Days	Event	16	300	0	4,800	0	0	0		4,800	1,200	2,100	1,500
Workshops on backyard production systems (poultry modules)	Event	20	140	0	2,800	0	0	0		2,800	840	1,120	840
Technical Training	Event	12	200	0	2,400	0	0	0		2,400	1,200	1,200	
Maintenance of water systems	Person	375	14	0	0	5,250	0	0		5,250	5,250		
Sensitization vulnerability of water resources to climate	Person	375	14	0	0	5,250	0	0		5,250		5,250	
Integrated management of water resources	Event	2	2,500	0	0	5,000	0	0		5,000		5,000	

Oracle code and description	Unit	No. of units	Unit cost	BUDGET (GEF AND SCCF FINANCING)						Expenditures by year			
				Comp. 1	Comp. 2	Comp. 3	Comp. 4	Comp. 5	PMC	Total GEF	Year 1	Year 2	Year 3
				Total	Total	Total	Total	Total					
Workshops on use and maintenance of irrigation systems	Event	10	700	0	0	7,000	0	0		7,000		3,500	3,500
Training on implementation of watershed management plans		8	98	0	0	780	0	0		780			780
Socialization and delivery of watershed management plans		4	123	0	0	490	0	0		490			490
Workshops for development of risk management plans, preparedness and response		25	250	0	0	0	6,250	0		6,250	2,000	2,250	2,000
Workshops for risk mapping		25	250	0	0	0	6,250	0		6,250	2,000	2,250	2,000
Workshops for design and creation of monitoring and evaluation systems		25	250	0	0	0	6,250	0		6,250	2,000	2,250	2,000
Training in non-agricultural diversification (ARNAS)		5	420	0	0	0	2,100	0		2,100		2,100	
Formation of local committees		24	83	0	0	0	1,980	0		1,980	660	660	660
5023 Sub-total training				61,300	42,400	23,770	22,830	0	0	150,300	50,694	67,578	32,028
6000 Expendable procurement													
Pack miscellaneous supplies for household Workshops	Package	15	700	10,500	0	0	0	0		10,500		10,500	
Supplement to agricultural input package	Package	200	100	20,000	0	0	0	0		20,000	3,500	12,500	4,000
Family vegetable gardens, miscellaneous supplies	Package	250	50	12,500	0	0	0	0		12,500	2,500	7,500	2,500
Technical Handbook (editing and printing)	handbook	1200	2	0	2,400	0	0	0		2,400		2,400	
Promotional posters (no burning, reforestation)	poster	300	4	0	1,200	0	0	0		1,200		1,200	
Vegetable plots	Plot	40	500	0	20,000	0	0	0		20,000	2,500	11,500	6,000
Fruit trees	Tree	33021	2	0	57,787	0	0	0		57,787		57,787	
Forest tree nurseries	Tree	374243	0.14	0	54,000	0	0	0		54,000		54,000	

Oracle code and description	Unit	No. of units	Unit cost	BUDGET (GEF AND SCCF FINANCING)						Expenditures by year			
				Comp. 1	Comp. 2	Comp. 3	Comp. 4	Comp. 5	PMC	Total GEF	Year 1	Year 2	Year 3
				Total	Total	Total	Total	Total					
	nursery												
Inputs for soil conservation practices	seeds (qq)	75	800	0	60,000	0	0	0		60,000	20,000	40,000	
Inputs for improved pasture	seeds (qq)	32	817	0	26,146	0	0	0		26,146		26,146	
Backpack pumps	Punp	6	52	0	312	0	0	0		312		312	
Intensive agricultural production with drip irrigation	System	100	500	0	50,000	0	0	0		50,000	10,000	25,000	15,000
Backyard production systems (poultry module)	System	200	250	0	50,000	0	0	0		50,000	12,500	22,500	15,000
Mini drip irrigation system	System	100	300	0		30,000	0	0		30,000	7,500	15,000	7,500
Inputs for agricultural production under irrigation	Package	100	250	0		25,000	0	0		25,000	6,250	12,500	6,250
Reproduction of watershed management plans	Document	60	33	0	0	0	2,004			2,004		2,004	
Package for equipping early warning committees	Package	8	9,000	0		0	72,000	0		72,000	72,000		
Equipment for non-agricultural rural activities (various types)	Package	12	2,500	0	0	0	30,000	0		30,000		30,000	
6000 Sub-total expendable procurement				43,000	321,845	55,000	104,004	0	0	523,849	136,750	330,849	56,250
6100 Non-expendable procurement													
Precision Compass	Unit	1	150	0	150	0	0	0		150	150		
GPS (with battery and charger)	Unit	1	500	0	500	0	0	0		500	500		
Optical caliper	Unit	1	250	0	250	0	0	0		250	250		
Water analysis equipment	Unit	1	1,600	0	1,600	0	0	0		1,600	1,600		
Infiltration rings	Unit	1	200	0	200	0	0	0		200	200		
Rangefinder with amplification (PCE-ELRF600)	Unit	1	225	0	225	0	0	0		225	225		
Eclimeter	Unit	1	300	0	300	0	0	0		300	300		
Laptop with licenses	Unit	3	800	0	0	0	2,400	0		2,400	2,400		

Oracle code and description	Unit	No. of units	Unit cost	BUDGET (GEF AND SCCF FINANCING)						Expenditures by year			
				Comp. 1	Comp. 2	Comp. 3	Comp. 4	Comp. 5	PMC	Total GEF	Year 1	Year 2	Year 3
				Total	Total	Total	Total	Total					
multifunction printer	Unit	1	500	0	0	0	500	0		500	500		
furniture (desk and chair)	Unit	3	250	0	0	0	750	0		750	750		
Projectors	Unit	1	700	0	0	0	700	0		700	700		
Cameras	Unit	1	150	0	0	0	150	0		150	150		
Pick-up 4x4 double cab	Unit	1	20,000	0	0	0	0	20,000		20,000	20,000		
6100 Sub-total non-expendable procurement				0	3,225	0	4,500	20,000	0	27,725	27,725	0	0
6300 GOE budget													
Operations/maintenance	month	36	2,027	26,021	10,459	18,240	18,240	0		72,961	24,320	24,320	24,320
6300 Sub-total GOE budget				26,021	10,459	18,240	18,240	0	0	72,961	24,320	24,320	24,320
TOTAL				191,743	519,191	364,784	242,496	103,156	100,000	1,521,370	539,131	686,448	281,588

SUBTOTAL Comp 1			191,743
SUBTOTAL Comp 2			519,191
SUBTOTAL Comp 3			364,784
SUBTOTAL Comp 4			242,496
SUBTOTAL Comp 5			103,156
SUBTOTAL Project Management			100,000
TOTAL GEF			1,521,370

APPENDIX 4: RISK MATRIX

Risk description	Category	Impact	Likelihood	Mitigation actions
Local climate risk in targeted areas: high-probability of occurrence of extreme natural and weather event.	H	Project beneficiaries (households) may be de-capitalized, and their food/nutritional insecurity may increase	60-100%	The proposed project will mitigate this risk by supporting the implementation of CCA measures and inducing coordination to support emergency responses.
Local climate risk in targeted areas: high-probability of extreme weather events and natural disasters.	H	Contingencies and emergencies in affected areas. Worsened impacts due to high local vulnerability to such events.	60-100%	The proposed project will mitigate the impacts of extreme weather events and natural disasters by setting emergency response planning, and micro-watersheds protection and management plans.
Institutional risks: high-probability of absence of contingency plans to cope with extreme weather events and natural disasters,	M	Implementation of uncoordinated and unsuitable responses.	60-100%	The project will mitigate this risk by emergency planning, coordinating DRR with key stakeholders, fostering mechanisms for sustainable natural resources management and ecosystems recovery, and implementing CCA measures
Decrease in project ownership and support from governmental agencies	L	Project implementation could be affected and undermine cost-efficiencies	≥ 30%	The government agencies (MARN, MAG, CENTA, municipal governments) have been fully involved in the full project preparation and are expected to be fully involved in implementation through the PMCU, supported by FAO's technical assistance. The project design takes into

				consideration the need of achieving results in the short-term to show the importance of project objectives, results, and activities to local and national governmental agencies.
Conflicts and differences among political parties	M	Project implementation might be affected	30-60%	The Project will promote continuous awareness-raising among all key actors of the importance of project objectives beyond political differences. It will also support the close involvement of local governments through strategic alliances and agreements.
Low involvement and participation of local institutional in micro-watershed coordination and monitoring mechanisms.	M	Project implementation might be affected	≥ 30%	The Project will encourage local participation, empowerment and ownership to support the coordination mechanisms related to watershed management (see Component 1). Specific cooperation agreements and letters of understanding will be endorsed by local institutions and local stakeholders for the support of FMWMPs. Detailed responsibilities and commitments to support the implementation of the actions will be clearly defined in the FMWMPs.
Lack of continuity of the political party currently in office in local government may erode local interest in project implementation	M	Decrease of local governments' involvement in project implementation	30-60%	The participation, involvement and empowerment of existing local committees (such as OBSAN and civil protection committees) will be strengthened. These committees are composed of diverse institutions rooted in the territory, and this will ensure that actions would be continued even in the case of political alternation in the two municipal governments. Local institutions and community-based organizations participating in the civil protection committees will be strengthened, independently of which

				political party takes office.
Lack of participation of beneficiaries	L	Lack of local and community ownership over projects results	30-60%	<p>Awareness-raising campaigns and workshops on CC local negative impacts will be conducted involving institutions and local stakeholders The local approach will stimulate local participation, since problems to be addressed are highly known and visible in local population's everyday life.</p> <p>Local communities and family farmers/small-scale producers will be supported through technical assistance and rural incentives (plant materials, investments in water systems), stimulating the diversification and their livelihoods assets and income sources. Direct adaptation benefits will increase and incentive the participation of project beneficiaries.</p>

APPENDIX 5: PROCUREMENT PLAN

Please use format from the “FAO Guide to the Project Cycle”

APPENDIX 6: TERMS OF REFERENCE (TORS) FOR INTERNATIONAL AND NATIONAL CONSULTANTS

Climate Change Adaptation to Reduce Land Degradation in Fragile Micro-watersheds located in the Municipalities of Texistepeque and Candelaria de la Frontera

N.1: Draft Terms of Reference:

PROJECT COORDINATOR

Under the overall supervision of the FAO Representative in El Salvador/Budget Holder, and the technical guidance of the Natural Resources Officer in his capacity as Lead Technical Officer (LTO), the Coordinator will lead the Project Management Coordination Unit (PMCU) as well as act as Secretary to the Project Steering Committee (PSC). He/she will be responsible for the overall planning, daily management, technical supervision and coordination of all project activities. Specifically this will include the following tasks:

- a) Participate in the inception workshop, annual project progress review and planning workshops with local stakeholders and Project Executing Partners to prepare the Annual Work Plan and Budget (AWP/B) in collaboration with the PMCU;
- b) Provide comments, and advising the FAO Representative on giving no-objection to AWP/B in consultation with the LTU and the FAO-GEF Coordination Unit;
- c) Providing technical supervision and guidance to the Project Executing Partners in implementing project activities;
- d) Conduct regular field supervision visits and providing on-site guidance to technical staff from Project Executing Partners;
- e) Day-to-day coordination and communication with Project Executing Partners staff in charge of the GEF/SCCF project;
- f) Monitor project risks according to the risk matrix (see Appendix 4) and ensure that mitigation measures are being applied or alternative mitigation measures are in place;
- g) Ensure that the participatory, gender-sensitive, and integrated natural resources management approaches are followed during project implementation;
- h) Prepare six-monthly Project Progress Reports (PPRs) in coordination with the PMCU, reporting on the implementation of activities, and monitoring the achievement of project outcomes and output targets;
- i) Support the LTU in preparation of the annual Project Implementation Review (PIR) report;
- j) In coordination with the PMCU, report on in-kind and cash co-financing provided by MAG, MARN, CENTA, municipal governments and eventual other partners not foreseen in the Project Document;
- k) In consultation with the FAO Evaluation Office, the LTU and the FAO-GEF Coordination Unit, support the organization of the mid-term and final evaluations, contribute to the development of an eventual agreed adjustment plan in project execution approach, and supervise its implementation;
- l) Coordinate and conduct M&E related activities including: i) conducting regularly field M&E visits to project sites, which information will be included into the six-monthly Project Progress Reports (PPRs); ii) monthly monitoring progress in achieving all project outputs and outcome indicators; iii) providing technical and operational guidance to MAG, MARN, MINSAL and CENTA staff; and iv) proposing eventual shifts in project implementation strategies if the project is not performing as planned.

Minimal requirements:

1. University Degree in Environmental Management, Engineering Management, Public Administration, Economy, or related fields.
2. At least 10 years professional field experience in natural resources management, agricultural production and/or project management, as well as experience in participatory planning of field activities.
3. Knowledge and experience on the results-based management approach, including outputs-based budget execution, reporting and monitoring.
4. A minimum of 5 years of demonstrated experience in the management of internationally funded projects.
5. Proven capacity to work and establish working relationships with medium to high-level government and non-governmental representatives.
6. Proven capacity as team leader and team builder in developing countries with strong motivational skills.
7. Experience in preparing project technical and financial reports for international donors.
8. Excellent oral and written communication skills.
9. Experience in the implementation of GEF/SCCF project would be desirable.

Location: San Salvador with regular field visits to project targeted areas

Duration: 36 months

Languages: Spanish

Climate Change Adaptation to Reduce Land Degradation in Fragile Micro-watersheds located in the Municipalities of Texistepeque and Candelaria de la Frontera

N.2: Draft Terms of Reference:

PART-TIME BILINGUAL PROJECT ASSISTANT

Under the direct supervision of the Project Coordinator, the Project Bilingual Assistant will assist the Project Coordinator in gathering inputs for the Project Progress Reports (PPRs) and the Annual Project Implementation Reviews (PIRs) the latter in English. Specifically this will include the following main tasks:

- a) Provide support to the Project Coordinator in gathering inputs from the PMCU, local stakeholders, and Project Executing Partners for the preparation of the PIRs and PPRs;
- b) Provide support to the Project Coordinator in the six-monthly monitoring of progress in achieving project outcomes and outputs targets;
- c) Support the preparation of the PPRs and inputs for the PIRs, the latter in English, complying with GEF/SCCF and FAO requirements;
- d) Participate in the inception workshop, annual project progress review and planning workshops

Minimal requirements:

1. University Degree in Development Studies, Public Administration, Environmental Studies, or related disciplines.
2. At least two years of experience in supporting project implementation at field level in developing countries.
3. Experience in participatory planning and results-based management would be an asset.
4. A minimum of two years of demonstrated experience in supporting internationally funded projects.
5. Experience in supporting partnerships with government, civil society, and NGOs stakeholders.
6. Two years of experience in supporting the design of project ideas, project documents and/or report documents, including outputs-based budget.
7. Good oral and written communication skills in English.
8. Good oral and written communication skills in Spanish.

Duration: 6 months

Location: San Salvador

Languages: Spanish and English

Climate Change Adaptation to Reduce Land Degradation in Fragile Micro-watersheds located in the Municipalities of Texistepeque and Candelaria de la Frontera

N.3: Draft Terms of Reference:

FINANCIAL AND OPERATIONS OFFICER

Under the general supervision of the FAO Representative in El Salvador (Budget Holder) and the Project Coordinator, and in close collaboration with the project executing partners, the Budget and Operations Officer will take the operational responsibility for timely delivery of the project outcomes and outputs. In particular, he/she will perform the following main tasks:

1. Ensure smooth and timely implementation of project activities in support of the results-based workplan, through operational and administrative procedures according to FAO rules and standards;
2. Coordinate the project operational arrangements through contractual agreements with key project partners;
3. Arrange the operations needed for signing and executing Letters of Agreement (LoA) and Government Cooperation Programme (GCP) agreement with relevant project partners;
4. Maintain inter-departmental linkages with FAO units for donor liaison, Finance, Human Resources, and other units as required;
5. Day-to-day manage the project budget, including the monitoring of cash availability, budget preparation and budget revisions to be reviewed by the Project Coordinator;
6. Ensure the accurate recording of all data relevant for operational, financial and results-based monitoring;
7. Ensure that relevant reports on expenditures, forecasts, progress against workplans, project closure, are prepared and submitted in accordance with FAO and GEF defined procedures and reporting formats, schedules and communications channels, as required;
8. Execute accurate and timely actions on all operational requirements for personnel-related matters, equipment and material procurement, and field disbursements;
9. Participate and represent the project in collaborative meetings with project partners and the Project Steering Committee, as required;
10. Undertake missions to monitor the outputs-based budget, and to resolve outstanding operational problems, as appropriate;
11. Be responsible for results achieved within her/his area of work and ensure issues affecting project delivery and success are brought to the attention of higher level authorities through the BH in a timely manner,
12. In consultation with the FAO Evaluation Office, the LTU, and the FAO-GEF Coordination Unit, support the organization of the mid-term and final evaluations, and provide inputs regarding project budgetary matters;
13. Undertake any other duties as required.

Minimal requirements:

- a) University Degree in Economics, Business Administration, or related fields.
- b) Five years of experience in project operation and management related to natural resources management, including field experience in developing countries.
- c) Proven capacity to work and establish working relationships with government and non-government representatives.
- d) Knowledge of FAO's project management systems.

Location: San Salvador with regular field visits to project targeted areas

Duration: 18 months

Language: Spanish

***Climate Change Adaptation to Reduce Land Degradation in Fragile Micro-watersheds
located in the Municipalities of Texistepeque and Candelaria de la Frontera***

N.4: Draft Terms of Reference:

PART-TIME INSTITUTIONAL SPECIALIST

Under the overall supervision of the PMCU and the direct supervision of the Project Coordinator, the Part-Time Institutional Specialist will support the PMCU to achieve and monitor the project outcomes 1.1 and 1.2 (Project Component 1)¹²⁶, related to the institutional strengthening to mainstream climate change adaptation (CCA) into watershed planning and management processes, including multi-stakeholders processes, intersectorial coordination and community mobilization.

He/she will work in close coordination the Project Coordinator, the PMCU, MAG-DGCFR, and the two municipalities. In particular, he/she will perform the following main tasks:

1. Lead the preparation of targeted capacity-development (CD) and training materials aimed at strengthening the institutional capacities of: municipal governments, community-based associations, Civil Protection Committees, DRM committees, CENTA (Branch Santa Ana Department), MAG (Branch Santa Ana Department), MARN (Branch Santa Ana Department, and Municipal Environmental Units), and MINSAL (municipal health units). Themes: i) prevention, response and recovery from extreme weather events and natural disasters; ii) climate change adaptation measures, and adaptive capacities; iii) enhancing multi-stakeholders' participation in municipal decision-making processes; and iv) ensuring project outcomes sustainability beyond its conclusion¹²⁷;
2. Design the surveys that will assess how public officers and technical officers participating in the Project CD activities have acknowledged the concept of climate change adaptation, their ownership level; and that will measure their capacity perception index¹²⁸;
3. In PY1, design training material and modules, including participatory tools, for men, women, local authorities and institutions present in targeted areas, to increase their awareness on the adverse impacts of climate change, develop appropriate responses and affirming their ownership of adaptation processes. In PY3 prepare an assessment report of failures and successes of the methodologies applied¹²⁹;
4. Design targeted surveys and evaluation forms to measure the levels of awareness and ownership among project participants (disaggregated by gender)¹³⁰;
5. In PY1, identify 5 representatives from local civil society (NGO's, community-based education associations-ACEs, churches, women groups, water boards, disaster risk management committees) and 5 development actors (agriculture and livestock associations, cooperatives, community-based development associations- ADESCOs, Civil Protection committees, Food and Nutritional Security committee) to create 4 strategic alliances that will support the development and implementation of Fragile Micro-watersheds Management Plans (FMWMPs)¹³¹;

¹²⁶ See Project Results Framework, Appendix 1.

¹²⁷ See outcome 1.1, Project Results Framework, Appendix 1.

¹²⁸ *Ibidem*

¹²⁹ See outcome 1.2, Project Results Framework, Appendix 1.

¹³⁰ *Ibidem*

¹³¹ See output 1.2.1, Project Results Framework, Appendix 1.

6. Systematize the methodologies and guidelines that serve as basis for the FMWMPs design (agreed by the institutions)¹³²;
7. Design the monitoring system for the FWMMPs;
8. In PY2, prepare a report that summarize the text of the agreed FMWMPs, and that systematize the participatory tools and methodologies used during the FMWMPs design, validation and implementation¹³³;
9. Every six months, support the Project Coordinator in the monitoring of outcomes indicators (outcomes 1.1 and 1.2, see Project Results Framework), in close collaboration with MAG-DGFCR and the two municipalities in order to enhance national and local monitoring capacities;
10. Participate in the Technical Working Groups (TWGs) on issues related to the strengthening of institutional arrangements and coordination mechanisms, providing advice to the PMCU on relevant actions and measures to be taken across the different project components, particularly in relation to the strengthening of local committees
11. Provide technical inputs on the institutional and political risks that may appear during project implementation, and design targeted mitigation measures as needed.

Minimal requirements:

- e) University Degree in Social Sciences, Development Studies, Natural Resources Management or related fields;
- f) Five years of relevant field experience in local participatory planning processes, including gender mainstreaming;
- g) Highly developed communication (spoken, and presentation) skills, to effectively communicate with partners and multiple target audiences, including ability to present sensitive issues/positions;
- h) Proven capacity of writing technical/academic documents. Research experience would be an asset.

Location: San Salvador with regular field visits to project targeted areas

Duration: 10 months

Language: Spanish

¹³² See output 1.2.2, Project Results Framework, Appendix 1.

¹³³ *Ibidem*

***Climate Change Adaptation to Reduce Land Degradation in Fragile Micro-watersheds
located in the Municipalities of Texistepeque and Candelaria de la Frontera***

N.5: Draft Terms of Reference:

SHORT-TERM NUTRITIONIST

Under the overall supervision of the PMCU and the direct supervision of the Project Coordinator, the short-term Nutrition Specialist will support MINSAL and CENTA in the provision of technical assistance, supervision and monitoring of the achievement of outcome 1.3 (i.e.: improvement of dietary habits and reduction by -2% of child malnutrition in the project intervention area¹³⁴). He/she will work in coordination with the FAO Representation in El Salvador (FAOSV). The consultant will develop the following tasks:

1. In PY1, design targeted material and deliver technical training to the MINSAL local officers on methodologies for measuring and monitoring food security and child malnutrition indicators¹³⁵. (These methodologies should be included in the household surveys usually conducted by the MINSAL health promoters in project intervention areas, and in the monthly reports on child malnutrition also prepared by MINSAL health promoters for project monitoring¹³⁶);
2. In PY1, design targeted material and deliver technical training to strengthen the capacities of targeted nutritionists placed in the MAG-Western Region, who will be financed through a loan provided by the Central American Bank for Economic Integration (CABEI);
3. In PY3, provide with technical guidance to MINSAL local staff to monitor project achievements regarding child malnutrition, generating reliable statistics and information data for the PMCU (to be included in the project terminal report)¹³⁷;
4. In PY3, support the MINSAL local and departmental staff to mainstream the project lessons learnt into the MINSAL monitoring platform;
5. Participate in the TWGs providing technical advice to the PMCU on on-going and planned activities towards the achievement of outcome 1.3, and facilitating collaboration between the project and other initiatives such as *Zero Hunger* and the Observatory for Food and Nutritional Security (OBSAN) implemented by the Trifinio Municipal Association and the Regional Programme for Food and Nutrition in Central America II (PRESANCA II).

Minimal Requirements:

- a) University Degree in Nutrition, Public Health, or other field closely related to food and nutrition security.
- b) Knowledge and experience in nutrition education/behavior change approaches. Knowledge of food and nutrition security concepts and indicators building.
- c) At least three years of professional experience in the field of nutrition. Solid and demonstrated skills in capacity development and participatory methodologies, including gender-sensitive approaches;

¹³⁴ See Component 1, in the Project Results Framework, Appendix 1.

¹³⁵ See outcome 1.3, Project Results Framework, Appendix 1.

¹³⁶ *Ibidem*

¹³⁷ *Ibidem*

- d) Proven capacity to conduct field work and ability to work in teams and establish working relationships with local governments, community-based organizations, women networks, and rural households.

Duration: 5 months (3 months in PY1, and 2 months in PY3)

Location: San Salvador with regular field visits to project targeted areas

Languages: Spanish

Climate Change Adaptation to Reduce Land Degradation in Fragile Micro-watersheds located in the Municipalities of Texistepeque and Candelaria de la Frontera

N.6: Draft Terms of Reference:

PART-TIME AGRICULTURE DIVERSIFICATION SPECIALIST

Under the overall supervision of the PMCU and the direct supervision of the Project Coordinator, the Agriculture Diversification Specialist will support CENTA in the provision of technical assistance, supervision and monitoring of Component 1 (outcome 1.3: production diversification indicators)¹³⁸. He/she will work in coordination with the FAO Representation in El Salvador (FAOSV). The Agriculture Diversification Specialist will be located within CENTA to strengthen the capacities of CENTA local and departmental extension agents/chiefs. He/she will perform the following main tasks:

1. Support CENTA in the provision of technical assistance to project households, aimed at implementing more resilient production systems based on agricultural diversification (i.e.: basic grains, management of community and domestic vegetable gardens, and poultry farming)¹³⁹;
2. Support CENTA in the provision of technical assistance aimed at implementing five climate-resilient agriculture practices to promote food security at the household level in project intervention areas¹⁴⁰;
3. Support CENTA in the preparation of trimester reports on agricultural production practices adopted by families and producers to improve food security in project intervention areas¹⁴¹;
4. Prepare semester monitoring reports including monitor and report on the progress of SCCF AMAT Indicator 1.2.8 (% change in projected food production in targeted area given existing and projected climate change); and on the number of households that have adopted climate resilient production systems and have enhanced livelihood assets¹⁴².

Minimal requirements:

- a) University Degree in Agronomy, or related field.
- b) At least five years of field experience in agriculture extension services, outreach, and/or innovation.
- c) Knowledge of climate change adaptation concepts and how to increase adaptive capacities through sustainable land management and good agricultural practices.
- d) Demonstrated experience in leading capacity development activities in the rural sector with participatory and gender-sensitive approaches.

Duration: 10 months (4 months in PY1; 4 months in PY2; and 2 months in PY3)

Location: San Salvador with regular field visits in targeted areas

¹³⁸ See Project Results Framework, Appendix 1.

¹³⁹ See outcome 1.3, Project Results Framework, Appendix 1.

¹⁴⁰ *Ibidem*

¹⁴¹ *Ibidem*

¹⁴² *Ibidem*

Climate Change Adaptation to Reduce Land Degradation in Fragile Micro-watersheds located in the Municipalities of Texistepeque and Candelaria de la Frontera

N.7: Draft Terms of Reference:

Part-Time Participatory Watershed Management Specialist

Under the overall supervision of the PMCU and the direct supervision of the Project Coordinator, the Participatory Watershed Management Specialist will support CENTA and MAG-DGFCR in the provision of technical assistance, supervision and monitoring of Component 3¹⁴³. He/she will work in coordination with the FAO Representation in El Salvador (FAOSV), and will be located within CENTA to strengthen the capacities of CENTA local and departmental extension agents/chiefs. He/she will perform the following main tasks¹⁴⁴:

1. Support CENTA and MAG-DGFCR in the provision of technical assistance to project households, aimed at introducing sustainable management practices in project intervention areas (i.e.: including the protection and maintenance of 10 water sources, improvement of water collection infrastructure, the building of 1 community rainwater harvesting system for multiple-use; and 12 domestic rainwater harvesting systems for domestic and productive use)¹⁴⁵;
2. Design training material for targeted communities and households involved in: i) the implementation of sustainable water management practices; ii) the protection of water sources; and iii) the building, management, and maintenance of rainwater harvesting and conveyance systems;
3. Design and conduct targeted surveys to assess the effective households' and communities' involvement (gender disaggregated) in: i) the introduction of sustainable water management practices; ii) the protection of water sources; and iii) the building, management, and maintenance of rainwater harvesting and conveyance systems;
4. Design a trimester technical report template on sustainable water management practices to be completed by CENTA extension agents through their regular field visits to the project intervention areas¹⁴⁶;
5. Support CENTA and MAG-DGFCR in providing technical assistance and training to project households, in shared decision-making, construction, management and maintenance of rainwater catchment systems for multiple use (irrigation and domestic use) in targeted micro- watersheds¹⁴⁷;
6. Design and conduct six-monthly water quality and quantity tests in project intervention areas, to track changes caused by project implementation;
7. Conduct a semester in situ verification of infrastructure building and operation and maintenance (protection of water sources, water harvesting systems, water conveyance systems derived from multiple systems, including community and domestic systems),

¹⁴³ See Project Results Framework, Appendix 1

¹⁴⁴ *Ibidem*

¹⁴⁵ See outcomes 3.1 and 3.2 in the Project Results Framework, Appendix 1

¹⁴⁶ *Ibidem*

¹⁴⁷ See output 3.1.2, Project Results Framework, Appendix 1

in close collaboration with local and departmental staff of CENTA and MAG-DGFCR, and under the supervision of the Project Coordinator¹⁴⁸;

8. Prepare semester monitoring reports, including: i) SCCF indicators for Component 3¹⁴⁹, and ii) brief descriptions on the protection and maintenance plans for each water source, and their participatory processes (gender disaggregated);
9. Participate in the TWGs providing technical advice to the PMCU on issues related to participatory watershed planning processes, mechanisms for community-based monitoring systems, tracking water quality and quantity, project outcomes sustainability.

Minimal Requirements:

- a) University Degree in Hydrology, Civil Engineering, Natural Resources Management, or related fields.
- b) At least five years of field experience in community-based and/or local watershed management and planning, and construction of local infrastructure for improving the access to irrigation water.
- c) Knowledge of climate change adaptation concepts and how to increase adaptive capacities through sustainable water resources management.
- d) Demonstrated experience in participatory capacity development, and gender mainstreaming.
- e) Ability to take initiatives and to work with minimum supervision.

Duration: 10 months: 4 months in PY1, 4 months in PY2, 2 months in PY3.

Location: San Salvador with regular field visits

¹⁴⁸ See outcome 3.1, Project Results Framework, Appendix 1

¹⁴⁹ See Project Results Framework, Appendix 1

Climate Change Adaptation to Reduce Land Degradation in Fragile Micro-watersheds located in the Municipalities of Texistepeque and Candelaria de la Frontera

N.8: Draft Terms of Reference:

SHORT-TERM M&E SPECIALIST

Under the overall supervision of the PMCU and the direct supervision of the Project Coordinator, the M&E Specialist will support MAG-DGFCR and MARN in designing and establishing the M&E system of the Project. The M&E system will be used by the Project Coordinator when complying M&E tasks, as detailed: i) conducting regularly field M&E visits to project sites, which information will be included into the six-monthly Project Progress Reports; ii) monitoring progress in achieving project outputs and outcome indicators; iii) providing technical and operational guidance to MAG, MARN, MINSAL and CENTA staff; and iv) proposing eventual shifts in project implementation strategies if the project is not performing as planned.

The M&E Specialist will perform the following main tasks:

1. In collaboration with the Project Coordinator, MAG-DGFCR and MARN local staff, he/she will facilitate the M&E related tasks during the inception workshop, including: (i) presentation and clarification (if needed) of the Project Results framework with all project stakeholders; (ii) review of the M&E indicators and their baseline values; (iii) drafting the required clauses to include in consultants' contracts to ensure they complete their M&E reporting functions (if relevant); (iv) updated project risks matrix and mitigation measures, and (iv) clarification of the respective M&E tasks and responsibilities, including mitigation measures, among the different Project stakeholders;
2. Design the M&E monitoring plan, agreed with all stakeholders based on the outcomes of the inception workshop and the project M&E plan summary;
3. In coordination with the PMCU, support the development of mechanisms and methodologies for systematic data collection and recording in support of outcome and output indicators monitoring and evaluation.

Minimal Requirements:

- a) University degree in a relevant field such as Social Sciences, Environmental Studies or Project Management. Relevant specialized courses in M+E would be an advantage.
- b) Demonstrated knowledge of climate change adaptation; natural resources management; and disaster risk management.
- c) A minimum of five years experience in general programme/project related work;
- d) Proven writing and communication skills.
- e) Ability to take initiatives and to work with minimum supervision.

Duration: 3 months during PY1

Location: San Salvador and regular field visits to project targeted areas

Climate Change Adaptation to Reduce Land Degradation in Fragile Micro-watersheds located in the Municipalities of Texistepeque and Candelaria de la Frontera

N.9: Draft Terms of Reference:

DISASTER RISK REDUCTION (DRR) SPECIALIST

Under the overall supervision of the PMCU and the direct supervision of the Project Coordinator, the Disaster Risk Reduction (DRR) Specialist will support the MARN and MAG-DGFCR in the provision of technical assistance, supervision and monitoring of Component 4.

The Disaster Risk Reduction (DRR) Specialist will help the Santa Ana-regional branches of MARN and MAG-DGFCR, and the two municipal governments, build internal capacities for DRR, setting meteorological forecasts at local level, developing preparation, response and recovery skills to face natural disasters and weather emergencies, and designing and disseminating biophysical and social risks maps. The main task of the DRR Specialist will be to support a broad extension of capacity development actions in Component 4 that ensure the sustainability of project results. As such, he/she will perform the following main tasks:

1. Support MARN local staff and the municipal civil protection committees in organizing all awareness-raising activities with vulnerable population living in targeted micro-watersheds, to be implemented in Component 4¹⁵⁰;
2. Support MARN and the municipal civil protection committees in designing and implementing 6 municipal emergency response plans and budget allocation, to face extreme climate events, based on multi-stakeholders' consultations;
3. Support MARN and the municipal civil protection committees in coordinating multi-stakeholders' process to establish 2 municipal action plans to cope with natural disaster and extreme weather events, reducing climate-induced losses;
4. Support MARN and the municipal civil protection committees in coordinating organizing 8 workshops (20-30 participants) that will serve to create coordination mechanisms among local stakeholders for the implementation of the municipal action plans;
5. Design and conduct targeted household surveys to assess local stakeholders' awareness levels, vulnerability, and perception risk index, regarding adverse impacts of climate change and DRM (data disaggregated by gender);
6. Design training material targeting different needs and actors (i.e.: women, children, teachers, small-scale farmers) to develop capacities in disaster risk reduction, preparedness, response and recover. It should include 3 specific risk-reduction and awareness activities: Monitoring/Forecasting capacity (EWS, Vulnerability mapping system), ICT and information dissemination, and community-based workshops for CC adaptation;
7. Design workshop evaluation forms and simple knowledge tests (disaggregated by gender), to assess the ownership level of local participants over the concepts introduced in the training modules, allowing for improvements during project execution, as needed;

¹⁵⁰ See details in the Project Results Framework - Appendix 1

8. Provide technical guidance for participatory designing and implementation of two municipal Monitoring and Surveillance Systems;
9. Provide technical guidance for participatory designing and implementation of two municipal Early Warning System;
10. Provide technical guidance for the identification of signposted and conditioned local safe places for community gathering in case of emergency; and coordinate the planning and implementation of awareness campaigns and information dissemination;
11. Develop a methodology for the participatory designing of climate, biophysical and social risk maps in each of the 6 micro-watersheds, covering the entire target population;
12. Prepare six-monthly technical monitoring reports, tracking all project indicators for Component 4 (including SCCF AMAT Indicators)¹⁵¹, which will serve as inputs for the preparation of the Project Progress Reports (PPRs) and PIRs;
13. Participate in the inception workshop, annual project progress review and planning workshops.

Minimal Requirements:

- a) University degree in Social Sciences, Meteorology, Environmental Studies, Ecology, Natural Resources, or related fields.
- b) 10 years of demonstrable field work experience with local governments and community organizations in topics related to early warning systems; prevention, preparedness and response to extreme weather events and natural disasters, humanitarian aid and emergencies, or related issues.
- c) Knowledge of climate change adaptation concepts, and how to increase local resilience to reduce climate-induced economic losses.
- d) Experience in designing and implementing capacity development and training methods and tools for DRM and CCA.

Duration: 30 months

Location: San Salvador, regular field visits to targeted areas

¹⁵¹ See Component 4, Project Results Framework, in Appendix 1

APPENDIX 7: PROJECT STEERING COMMITTEE DRAFT TERMS OF REFERENCE (TORS)

Climate Change Adaptation to Reduce Land Degradation in Fragile Micro-watersheds located in the Municipalities of Texistepeque and Candelaria de la Frontera

Role of the Project Steering Committee (PSC)

The PSC will be the policy setting body for the project. As and when required, the PSC will be the ultimate decision-making body with regard to policy and other issues that may affect the achievement of project objectives. The PSC will be responsible for providing general oversight of project execution, and will ensure that all activities in the SCCF/GEF project document are adequately prepared and carried out. In particular, the PSC will:

1. Take decisions in the course of the practical organization, coordination and implementation of the project, and provide overall guidance to the Project Management Coordination Unit (PMCU);
2. Advise the PMCU on other on-going and planned activities facilitating collaboration between the Project and other programmes, projects and initiatives in the Santa Ana Department;
3. Facilitate that co-financing support is provided in a timely and effective manner;
4. Review six-monthly Project Progress Reports (PPRs), and provide overall oversight of project progress and achievement of planned results as presented in the PPRs;
5. Ensure all project outputs are in accordance with the SCCF/GEF project document;
6. Review, amend if appropriate, and approve the draft Annual Work Plan and Budget (AWP/B) for submission to FAO;
7. Provide inputs to the mid-term and final evaluations, review findings, and provide comments for the Management Response;
8. Ensure the dissemination of project information, lessons learnt, and best practices.
9. Facilitate cooperation between MAG, MARN, CENTA, MINSAL, FAO, and project participating partners at the local level;

Meetings of the PSC

10. The PSC meetings will normally be held bi-annually. Nevertheless, the PSC Chairperson will have the discretion to call additional meetings, if this is considered necessary. PSC meetings would not necessarily require a physical presence, and could be also undertaken electronically. No more than 7 months may elapse between PSC meetings;
11. Invitations to a regular PSC meeting shall be issued not less than 90 days in advance of the date fixed for the meeting. Invitations to special meetings shall be issued not less than 40 days in advance of the meeting date.

Agenda

12. A provisional agenda will be drawn up by the Project Coordinator and sent to PSC members following the approval of the Chairperson. The provisional agenda will be sent not less than 30 days before the meeting date;
13. A revised agenda including comments received from PSC members will be circulated 5 working days before the meeting date;
14. The agenda of each regular meeting shall include:
 1. A report of the Project Coordinator on project activities during the inter-sessional period;
 2. A report and recommendations from the Project Coordinator on the proposed AWP/B and the proposed budget for the ensuing period;
 3. Reports that need PSC intervention;
 4. Consideration of time and place of the next meeting;
 5. Any other matters as approved by the Chairperson.
15. The agenda of a special meeting shall consist only of items related to the purpose for which the meeting was called.

The PSC Secretariat

The PMCU will act as Secretariat to the PSC, and be responsible for providing PSC members with all required documents in advance of PSC meetings, including the draft AWP/B, and independent scientific reviews of significant technical proposals or analyses. The PMCU will prepare written report of all PSC meetings and be responsible for logistical arrangements regarding the holding of those meetings.

Election of Chairperson and Vice-Chairperson

The PSC will be chaired by the Minister of Agriculture (or his representative). A Vice-Chairperson for PY1 will be nominated by PSC members at their first PSC meeting. The Vice-Chairperson will serve up to the PSC meeting in PY2, finishing her/his term upon the completion of the PSC meeting held closest to one year after selection. At this point, a successor Vice-Chairperson shall be chosen by the PSC members in similar manner.

Functions of Chairperson and Vice-Chairperson

The Chairperson shall exercise the functions conferred on him/her in these TORs, and in particular shall:

16. Declare the opening and closing of each PSC meeting;
17. Lead the PSC meeting discussions, ensuring the observance of these TORs, accord the right to speak, enounce questions, and announce decisions;
18. Rule on point of order;
19. Subject to these TORs, manage the proceedings of the meetings;
20. Ensure circulation of all relevant documents to PSC members through the PSC Secretariat;
21. Sign approved AWP/B and any subsequent proposed amendments submitted to FAO;
22. In liaison with the PSC Secretariat, the Chairperson shall be responsible for determining the date, site, and agenda of the PSC meeting(s), and chairing these meetings;
23. The Vice-Chairperson shall exercise the functions of the Chairperson in the Chairperson's absence or at the Chairperson's request.

Participation

The PSC will include the Minister of Agriculture, the Minister of Environment, the Executive Director of CENTA, and the FAO Representative in El Salvador. The Majors of the Municipal Government of Texistepeque and Candelaria de la Frontera shall also participate. The Project Coordinator and an official from the FAO GEF Coordination Unit shall be represented on the PSC, in ex-officio capacity. The Project Coordinator will also be the Secretary to the PSC. Other institutions active in the Santa Ana Department and/or in the Lempa watershed may also be requested to participate as observers.

Decision-making

All decisions of the PSC shall be taken by consensus.

Reports and recommendations

24. At each meeting, the PSC shall approve a report text that embodies its views and decisions, including, when requested, a statement of minority views;
25. A draft report shall be circulated to the PSC Members after the meeting for comments. Comments shall be accepted over a period of 20 days. Following its approval by the Chairperson, the final report will be distributed among PSC members and shall be uploaded to the MAG website.

Official language

The official language of the PSC will be Spanish.

APPENDIX 8: SELECTED FRAGILE MICRO-WATERSHED MAPS

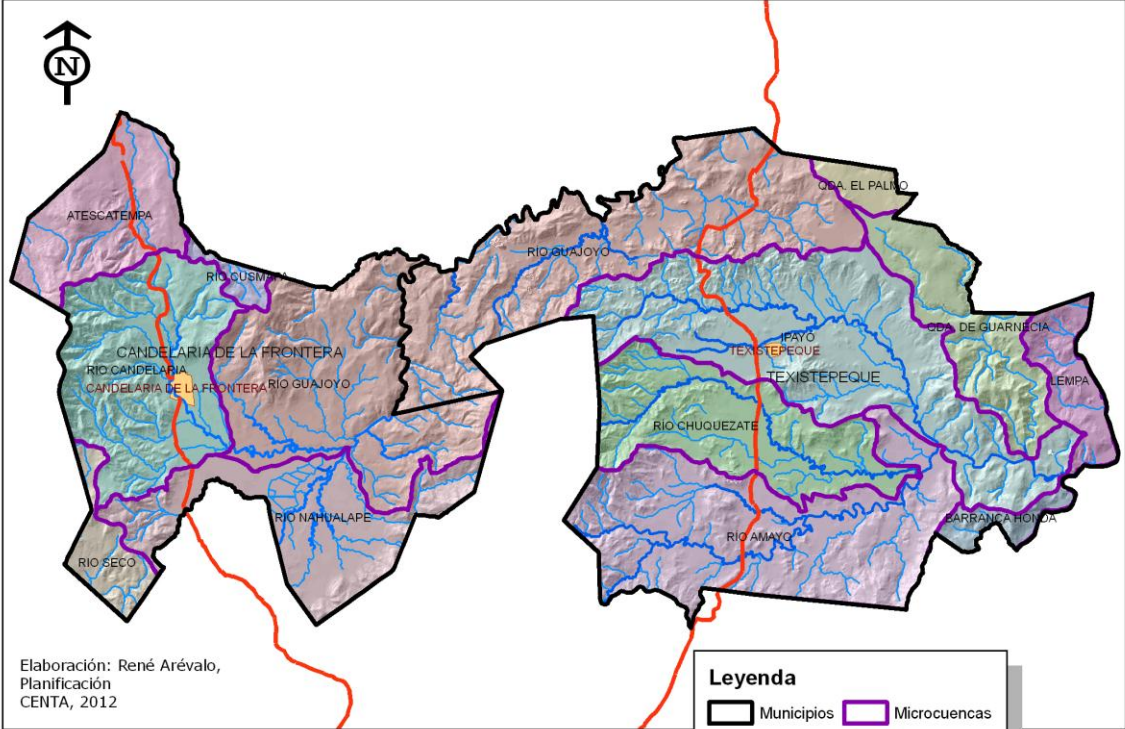
Climate Change Adaptation to Reduce Land Degradation in Fragile Micro-watersheds located in the Municipalities of Texistepeque and Candelaria de la Frontera

MAP N.1: WATERSHED SYSTEM IN CANDELARIA DE LA FRONTERA AND TEXISTEPEQUE MUNICIPALITIES

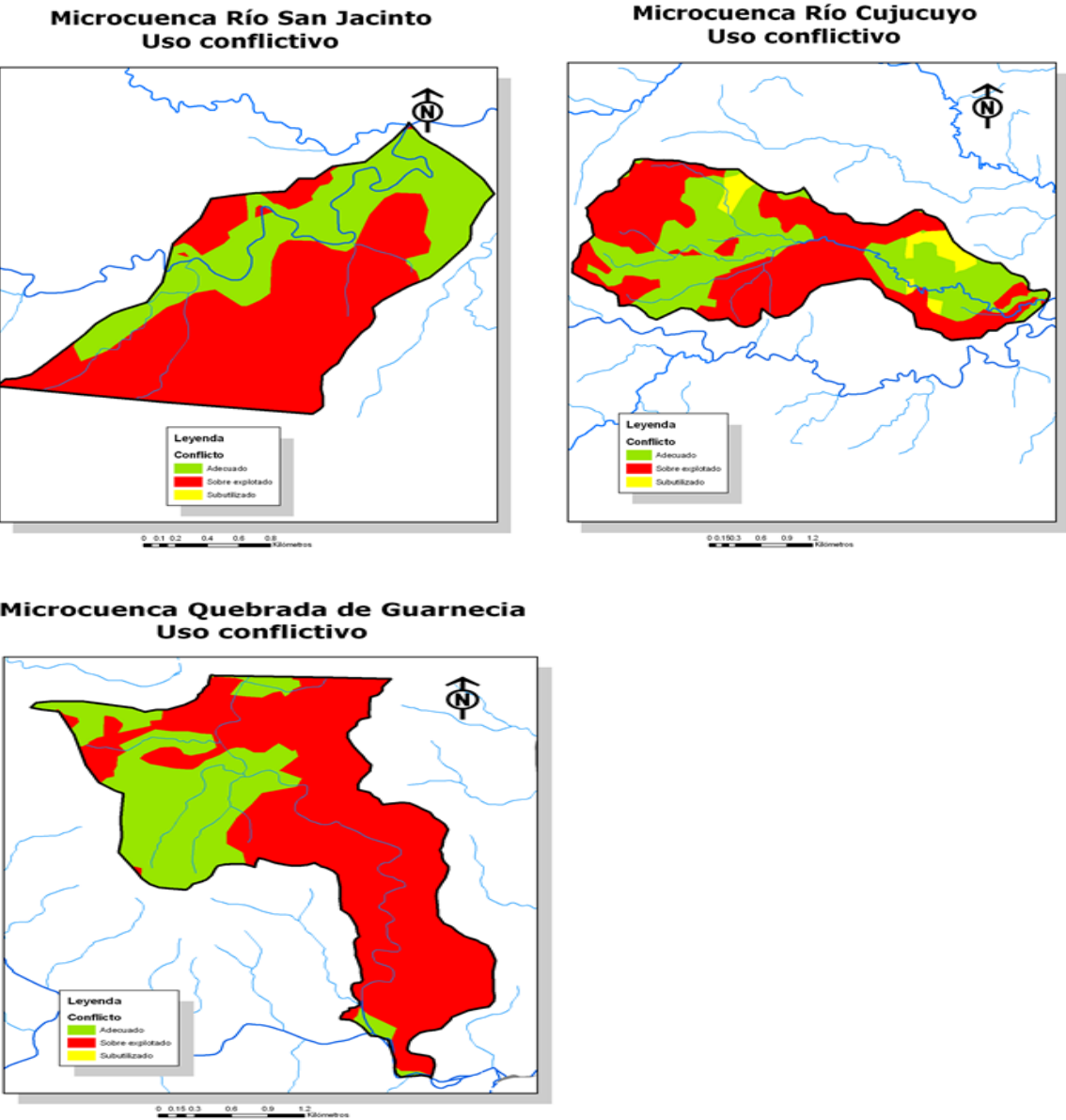


MAP N.2: MICRO-WATERSHEDS IN CANDELARIA DE LA FRONTERA AND TEXISTEPEQUE MUNICIPALITIES

Municipios de Candelaria de La Frontera y Texistepeque
Microcuencas

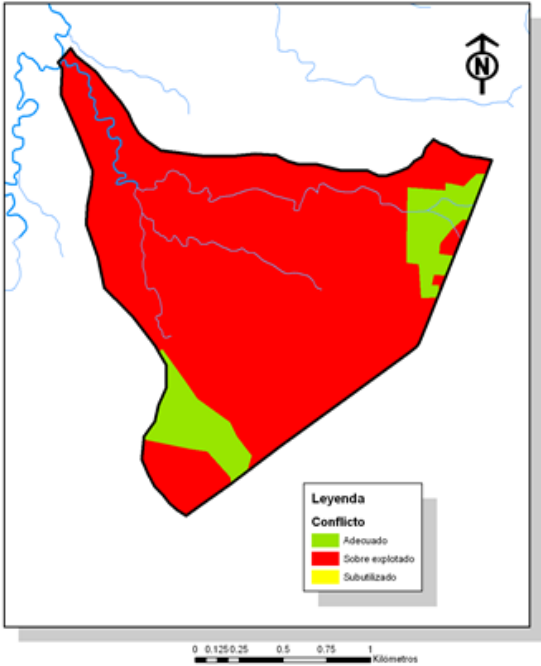


MAP 3: SELECTED MICRO-WATERSHEDS IN TEXISTEPEQUE MUNICIPALITY

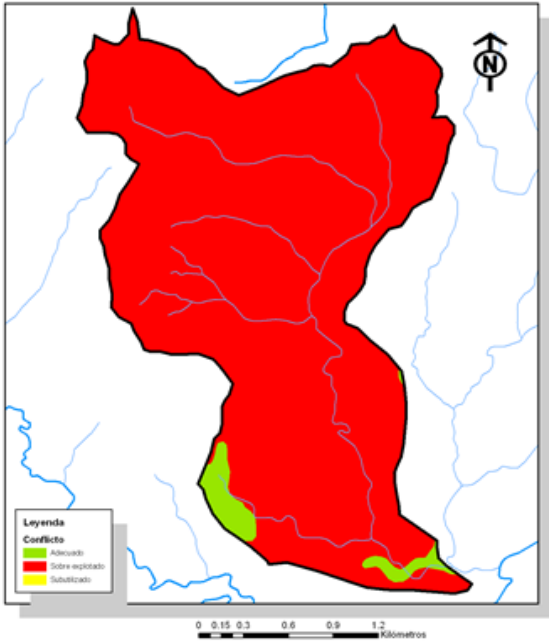


MAP 4: SELECTED MICRO-WATERSHEDS IN CANDELARIA DE LA FRONTERA

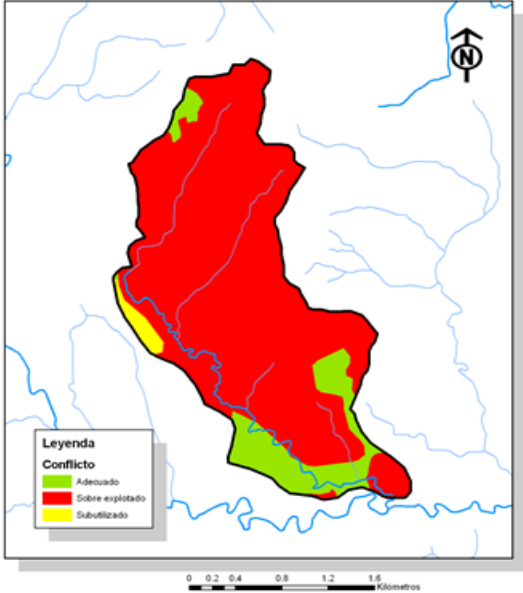
**Microcuenca Río Santa Gertrudis
Uso conflictivo**



**Microcuenca Qda. Mojarras Blancas
Uso conflictivo**



**Microcuenca Río El Jute
Uso conflictivo**



APPENDIX 9: LETTERS OF AGREEMENT (LOA)

Climate Change Adaptation to Reduce Land Degradation in Fragile Micro-watersheds located in the Municipalities of Texistepeque and Candelaria de la Frontera

LOA # 1

1. Background

The project "*Climate Change Adaptation to Reduce Land Degradation in Fragile Micro-Watersheds located in the municipalities of Texistepeque and Candelaria de la Frontera*", submitted to the Global Environment Facility - GEF, aims to incorporate climate change adaptation and disaster risk reduction into Fragile Micro-Watershed Management Plans (FMWMPs), and to reduce land degradation and inappropriate management practices of land and water, through integrated natural resource management (INRM) and the participation of small-scale local producers - tied to Family Agriculture Plan (PAF) - in selected micro-watersheds in the following sub-basins: i) Atescatempa, Cusmapa, Guajoyo and Pampe (Candelaria de la Frontera) and ii) Barranca Honda, El Palmo, Ipayo and San Jacinto (Texistepeque), Department of Santa Ana.

The aforementioned FAO-GEF project will be executed and coordinated by the Project Management Coordination Unit (PMCU) composed of national focal points of the Ministry of Agriculture (MAG), Ministry of Environment and Natural Resources (MARN), and National Center for Agricultural and Forestry Technology (CENTA). The PMCU will ensure the coordination and execution of the project and will coordinate project interventions with other on-going activities. The MAG is the main government counterpart and executing partner, directly responsible for technical implementation of project activities. FAO will be the GEF implementing agency, providing procurement services in accordance with FAO rules and procedures, and will be responsible for the financial management of the GEF resources, as well as providing supervision and technical guidance to the project. The project will follow a participatory approach, involving local communities, community development associations (ADESCOS), women's groups, civil protection committees, church groups, and local water boards. In addition, the project will coordinate interventions with schools and health promoters (MINSAL).

The main objective of this Agreement is to provide additional technical support for the implementation and monitoring of project activities under Component 2: *Soil quality enhancement based on the increase of vegetation cover, Integrated Natural Resource Management (INRM), suitable land-use and gender-sensitive management, recovering flow of agro-ecosystem services in fragile micro-watersheds*. Through this LOA and in coordination with MAG-DGFCR and FAO, CENTA will provide supplementary technical support for the achievement of the outcomes and outputs of component 2 as set out in the project Results Framework and Work Plan.

2. Terms of Reference

2.1 Definition of Output(s) and/or Outcome(s)

Outcome 1

In the project pilot areas (3853 hectares located in 6 micro watersheds in two municipalities), 678 hectares have increased vegetation cover (fruit trees, forest trees, grass, shrubs) for the protection and conservation of soil and water (living barriers, living fences, gully control).

Outcome 2

In the project pilot areas, 678 hectares are covered by INRM practices in the wider landscape resulting in sustained agricultural productivity and reduced community vulnerability

Outputs : detailed performance indicators and means of verification:

1. Provide technical support for the distribution of inputs and vegetative material in 678 hectares of the project pilot area, including: 203,000 forest trees for living fences, 15,190 fruit trees and 231 hectares of pasture, and the establishment of family, community and municipal agro-forestry nurseries.
Oversight and monitoring will be done based on Delivery and reception acts of agricultural inputs and vegetative material signed by recipient household and systematically stored by the CENTA, farm management plans, monthly monitoring reports by CENTA extension agents tracking farm level activities, the MAG monitoring system.
2. Provide technical support for the preparation and implementation of INRM methodologies (agro-forestry, conservation agriculture, watershed management) to cover 678 hectares in the project intervention areas and maintain the level of agricultural productivity (2.89 tons of corn per hectare / year) over time.
Technical papers on INRM methodologies will be reviewed and approved by the PMCU, other means of verification will include: attendance lists of workshop participants, quarterly technical reports, farm management plans, six-monthly technical reports (PPRs) and annual reports (PIRs) and the MAG monitoring platform.
3. Provide technical support for the establishment of 3 Farmer Field Schools (FFS), providing training on INRM, soil conservation and protection to 96 families living in the micro-watersheds in Texistepeque and Candelaria de la Frontera municipalities (15 female headed households). Monitoring will be done through FFS monthly reports and attendance lists of participants to each training event; systematic records of activities in the 3 FFS, farm management plans of the FFS participants and evidence of knowledge of participants at the beginning and end of the FFS;
4. Provide technical support for training 63 demonstrator families (DF) on good agricultural practices and INRM in the project intervention area (24 female headed households).
The means of verification include: fact sheets on good agricultural practices prepared and approved by the PMCU, the training program of the DF, training assistance lists, training evaluation tests with participant DFs, six-monthly (PPRs) and annual (PIRs) project reports.

5. Technical support for the development of 4 good agricultural practices to be disseminated to 675 small-scale producers located in micro-watersheds in Texistepeque and Candelaria de la Frontera municipalities, through 70 DF.
Monitoring will be done through assistance lists, technical reports on the 5 good agricultural practices, knowledge-based surveys to irradiated families (IF), and PPRs.

2.2 Description of Services

FAO will provide procurement services for the acquisition of local and external inputs, and provision of vegetative materials for soil conservation (living barriers, living fences, gully control).

CENTA will be responsible for the distribution and the establishment of inputs and vegetative material in project intervention areas, as well as for the dissemination and implementation of INRM practices, through training programs and farmer field schools.

The main activities are described as follows:

Output 1: Provide technical support for the distribution of inputs and vegetative material in 678 hectares of the project pilot area, including 203,000 forest trees in living fences, 15,190 fruit trees and 231 hectares of pasture, and family, community and municipal agro-forestry nurseries established. It includes the following activities:

- i) Identification of sites for the implementation of agro-forestry nurseries and planting of vegetative material;
- ii) Identification of native non-invasive plant species based on the agro-ecological characteristics of each site;
- iii) Preparation of sites for the establishment of agro-forestry nurseries and vegetative material;
- iv) Distribution and planting of 203,000 forest trees in living fences, 15,190 fruit trees and 231 hectares of pasture.

Output 2: Provide technical support for the development and implementation of 3 INRM methodologies (agro-forestry, conservation agriculture, watershed management) applied on 678 hectares in the project intervention area, including:

- i) Preparation of 3 technical booklets, 3 promotional posters, 3 radio spots on soil conservation and agro-forestry, crop and grassland conservation management, in plain language, to be distributed in training events;
- ii) Preparation of 16 training events with 120 families of small local farmers on protection and soil conservation through demonstrations, field days, field schools and workshops;
- iii) Establishment of a monitoring plan to assess the implementation of the methodologies in the project intervention area.

Output 3: Technical support for establishing 3 Farmer Field Schools (FFS) including the following activities:

- i) Identification of the communities involved in 3 FFS and identification of the learning sites;

- ii) Design of training programme and materials for DF's including training evaluation forms
- iii) Implementation of 3 FFS;
- iv) Establishment of a monitoring plan to evaluate the adoption by the DFs of the methodologies promoted by the project, application modalities the introduction of technologies in their production systems, compliance of the DFs with their function to demonstrate their expertise to the IFs , decision-making at household level on farm management.

Output 4: Provide technical support for the training of 64 FD in good agricultural practices and INRM techniques in the project intervention area (19 female led households) including the following activities:

- i) Design of training programme materials (INRM techniques) and modules for DFs, including training evaluation forms;
- ii) Implementation of 69 training events and learning-by-doing activities on INRM and good agricultural practices to support the development of 64 FDs, promoting equitable participation between men and women;

Output 5: Provide technical support for the dissemination of 4 GAPs among 675 small-scale producers in micro-watershed in the municipalities of Texistepeque and Candelaria de la Frontera, through 64 FDs.

- i) Design of technical material (4 GAPs) to be disseminated through the FD-FI methodology;
- ii) Technical support for the planning and development of 69 training events with 64 FDs;
- iii) Establishment of 20 plots of vegetables, 50 drip irrigation systems for crops and 100 poultry modules.

2.3 Work Plan and Time Frame: 18 months

Products	Technical support activities:	Y1				Y2		Observations
		Q1	Q2	Q3	Q4	Q1	Q2	
Technical support for the distribution of inputs and vegetative material	Identification of sites for implementation of agro-forestry nurseries	X						In coordination with FAO SV, MAG-DGCFR, the Project Coordinator and the PMCU
	Identification of native non-invasive plant species		X				X	In coordination with FAO SV, MAG-DGCFR, the Project Coordinator and the PMCU
	Preparation of sites		X				X	In coordination with MAG-DGCFR, the Project Coordinator and the PMCU
	Establishment of vegetative material and agro-forestry nurseries			X			X	Monthly technical progress reports; data uploaded into MAG monitoring platform in collaboration with the Project Coordinator and the PMCU.

Technical support for the development and implementation of 3 INRM methodologies	Design of training programme and modules	X	X			X		In coordination with MAG-DGCFR, Project Coordinator and PMCU
	16 training events on soil conservation and protection		X	X			X	
	Establishment of a monitoring plan				X			
Technical support for the establishment of three farmer field schools (FFS)	Identification of participating communities and learning sites	X	X				X	
	Design of training programme and material	X						
	Implementation of 3 FFS		X	X	X	X	X	
	Design and establishment of monitoring plan				X			
Technical support for the training of 64 DFs on good agricultural practices and INRM in the project intervention area	Design of training material in INRM techniques	X	X					
	Implementation of 69 training events on INRM techniques and GAPs		X	X	X	X	X	
Technical support for the dissemination of 4 GAPs	Design of training material on GAPs	X	X					
	Establishment of 20 vegetable plots, 50 micro-irrigation systems for crops and 100 poultry modules.			X	X		X	

2.4 Monitoring Mechanisms and Reporting Requirements

CENTA will prepare and submit a technical and financial report every five months to the Project Coordinator for a total of three reports to be submitted in month 5,11 and 17 respectively. These reports will serve as inputs towards the preparation of project six-monthly (PPR) and annual reports (PIR).

3. **Inputs to be provided free of charge by Service Provider**

3.1 List of inputs

- i. *Supply of auxiliary personnel and four technical extension agents, two part-time Extension Agency Chiefs (local branches of CENTA in Candelaria de La Frontera and Texistepeque) and one part-time Regional Supervisor (CENTA Western Region) for the Department of Santa Ana;*
- ii. *Use of office space, services and facilities for six technical extension agents, two part-time Extension Agency Chiefs and one part-time Regional Supervisor;*
- iii. *Use of equipment and provision of materials and supplies such as transportation and gasoline for motorbikes used for field visits.*

1.3 Timing of inputs

The input schedule will be defined in the Project Monitoring Plan and will be agreed upon during the project inception workshop.

4. Inputs to be provided by FAO in-kind

Input list

Staff from FAO Representation in El Salvador and FAO Headquarters will provide technical guidance on GEF procedures for the formulation of project progress reports and overall project implementation;

Use of office space and services for strategic meetings in San Salvador;

Timing of inputs

The timing of inputs will be defined in the Project Monitoring Plan and will be agreed upon during Inception Workshop.

5. Detailed budget

The present LOA represents a total value of USD \$69,510 (sixty nine thousand five hundred and ten USD) . The following expenses will be covered :

Item	Unit	N. of Unit	Unit cost (USD)	Total cost (USD)
Part-time technical extension agent	month	18	1000	18000
Part-time technical extension agent	month	18	1000	18000
Trainings (basic equipment)	month	18	456	8210
Travel expenses (extension agents)	month	18	50	1800
Administrative expenses	month	18	1000	18000
Printing of training materials	month	18	306	5500
				69510

6. Responsible Officer

The FAO Representative, in quality of Budget Holder, will appoint a responsible officer/consultant to manage and monitor the proper implementation of the Agreement on behalf of FAO and to certify the budget holder that the conditions of the Agreement have been met satisfactorily and that the corresponding payments can be made.

7. Reimbursements

It is stipulated that the service provider will refund any excessive payments that may have been made or surplus funds which may remain after the conclusion of the service.

- First disbursement of 40% of the value of the Letter of Agreement after submission and validation of Progress Report 1;
- Second disbursement of 30% of the value of the Letter of Agreement after submission and validation of Progress Report 2;
- Third disbursement of 30% of the value of the Letter of Agreement after submission and validation of Progress Report 3.

8. **Additional important information**

ANNEX 1
TERMS OF AGREEMENT

1. Background

The project "*Climate Change Adaptation to Reduce Land Degradation in Fragile Micro-Watersheds located in the municipalities of Texistepeque and Candelaria de la Frontera*", submitted to the Global Environment Facility - GEF, aims to incorporate climate change adaptation and disaster risk reduction into Fragile Micro-Watershed Management Plans (FMWMPs), and to reduce land degradation and inappropriate management practices of land and water, through integrated natural resource management (INRM) and the participation of small-scale local producers - tied to Family Agriculture Plan (PAF) - in selected micro-watersheds in the following sub-basins: i) Atescatempa, Cusmapa, Guajoyo and Pampe (Candelaria de la Frontera) and ii) Barranca Honda, El Palmo, Ipayo and San Jacinto (Texistepeque), Department of Santa Ana.

The aforementioned FAO-GEF project will be executed and coordinated by the Project Management Coordination Unit (PMCU) composed of national focal points of the Ministry of Agriculture (MAG), Ministry of Environment and Natural Resources (MARN), and National Center for Agricultural and Forestry Technology (CENTA). The PMCU will ensure the coordination and execution of the project and will coordinate project interventions with other on-going activities. The MAG is the main government counterpart and executing partner, directly responsible for technical implementation of project activities. FAO will be the GEF implementing agency, providing procurement services in accordance with FAO rules and procedures, and will be responsible for the financial management of the GEF resources, as well as providing supervision and technical guidance to the project. The project will follow a participatory approach, involving local communities, community development associations (ADESCOS), women's groups, civil protection committees, church groups, and local water boards. In addition, the project will coordinate interventions with schools and health promoters (MINSAL).

The main objective of this Agreement is to provide additional technical support for the implementation and monitoring of project activities under Component 2: *Soil quality enhancement based on the increase of vegetation cover, Integrated Natural Resource Management (INRM), suitable land-use and gender-sensitive management, recovering flow of agro-ecosystem services in fragile micro-watersheds*. Through this LOA and in coordination with MAG-DGFCR and FAO, CENTA will provide supplementary technical support for the achievement of the outcomes and outputs of component 2 as set out in the project Results Framework and Work Plan.

2. Terms of Reference

2.1 Definition of Output(s) and/or Outcome(s)

Outcome 1

In the project pilot areas (3853 hectares located in 6 micro watersheds in two municipalities),

863 hectares have increased vegetation cover (fruit trees, forest trees, grass, shrubs) for the protection and conservation of soil and water (living barriers, living fences, gully control).

Outcome 2

In the project pilot areas, 863 hectares are covered by INRM practices in the wider landscape resulting in sustained agricultural productivity and reduced community vulnerability

Outputs : detailed performance indicators and means of verification:

1. Provide technical support for the distribution of inputs and vegetative material in 863 hectares of the project pilot area, including: 171,241 forest trees for living fences, 17,831 fruit trees and 286 hectares of pasture, and the establishment of family, community and municipal agro-forestry nurseries.
Oversight and monitoring will be done based on delivery and reception acts of agricultural inputs and vegetative material signed by recipient household and systematically stored by the CENTA, farm management plans, monthly monitoring reports by CENTA extension agents tracking farm level activities, the MAG monitoring system.
2. Provide technical support for the preparation and implementation of INRM methodologies (agro-forestry, conservation agriculture, watershed management) to cover 863 hectares in the project intervention areas and maintain the level of agricultural productivity (2.89 tons of corn per hectare / year) over time.
Technical papers on INRM methodologies will be reviewed and approved by the PMCU, other means of verification will include: attendance lists of workshop participants, quarterly technical reports, farm management plans, six-monthly technical reports (PPRs) and annual reports (PIRs) and the MAG monitoring platform.
3. Provide technical support for the establishment of 3 Farmer Field Schools (FFS), providing training on INRM, soil conservation and protection to 96 families living in the micro-watersheds in Texistepeque and Candelaria de la Frontera municipalities (15 female headed households). Monitoring will be done through FFS monthly reports and attendance lists of participants to each training event; systematic records of activities in the 3 FFS, farm management plans of the FFS participants and evidence of knowledge of participants at the beginning and end of the FFS;
4. Provide technical support for training 65 demonstrator families (DF) on good agricultural practices and INRM in the project intervention area (16 female headed households).
The means of verification include: fact sheets on good agricultural practices prepared and approved by the PMCU, the training program of the DF, training assistance lists, training evaluation tests with participant DFs, six-monthly (PPRs) and annual (PIRs) project reports.
5. Provide technical support for the development of 4 good agricultural practices to be disseminated to 675 small-scale producers located in micro-watersheds in Texistepeque and Candelaria de la Frontera municipalities, through 70 DF.
Monitoring will be done through assistance lists, technical reports on the 5 good agricultural practices, knowledge-based surveys to irradiated families (IF), and PPRs.

2.4 Description of Services

FAO will provide procurement services for the acquisition of local and external inputs, and provision of vegetative materials for soil conservation (living barriers, living fences, gully control).

CENTA will be responsible for the distribution and the establishment of inputs and vegetative material in project intervention areas, as well as for the dissemination and implementation of INRM practices, through training programs and farmer field schools.

The main activities are described as follows:

Output 1: Provide technical support for the distribution of inputs and vegetative material in 863 hectares of the project pilot area, including 171,241 forest trees in living fences, 17,831 fruit trees and 286 hectares of pasture, and family, community and municipal agro-forestry nurseries established, including the following activities:

- i) Identification of sites for the implementation of agro-forestry nurseries and planting of vegetative material;
- ii) Identification of native non-invasive plant species based on the agro-ecological characteristics of each site;
- iii) Preparation of sites for the establishment of agro-forestry nurseries and vegetative material;
- iv) Distribution and planting of 171,241 forest trees in living fences, 17,831 fruit trees and 286 hectares of pasture.

Main activities are described as follows:

Output 2: Provide technical support for the development and implementation of 3 INRM methodologies (agro-forestry, conservation agriculture, watershed management) applied on 678 hectares in the project intervention area, including:

- i) Preparation of 3 technical booklets, 3 promotional posters, 3 radio spots on soil conservation and agro-forestry, crop and grassland conservation management, in plain language, to be distributed in training events;
- ii) Preparation of 16 training events with 120 families of small local farmers on protection and soil conservation through demonstrations, field days, field schools and workshops;
- iii) Establishment of a monitoring plan to assess the implementation of the methodologies in the project intervention area.

Output 3: Technical support for establishing 3 Farmer Field Schools (FFS) including the following activities:

- i) Identification of the communities involved in 3 FFS and identification of the learning sites;
- ii) Design of training programme and materials for DF's including training evaluation forms
- iii) Implementation of 3 FFS;
- iv) Establishment of a monitoring plan to evaluate the adoption by the DFs of the

methodologies promoted by the project, application modalities the introduction of technologies in their production systems, compliance of the DFs with their function to demonstrate their expertise to the IFs , decision-making at household level on farm management.

Output 4: Provide technical support for the training of 64 FD in good agricultural practices and INRM techniques in the project intervention area (19 female led households) including the following activities:

- i) Design of training programme materials (INRM techniques) and modules for DFs, including training evaluation forms;
- ii) Implementation of 69 additional training events and learning-by-doing activities on INRM and good agricultural practices to support the development of 64 FDs, promoting equitable participation between men and women;

Output 5: Provide technical support for the dissemination of 5 GAPs among 675 small-scale producers in micro-watershed in the municipalities of Texistepeque and Candelaria de la Frontera, through 70 DFs.

- i) Design of technical material (1 additional GAPs) to be disseminated through the FD-FI methodology;
- ii) Technical support for the planning and development of 69 additional training events with 64 additional FDs;
- iii) Establishment of 25 plots of vegetables, 70 drip irrigation systems for crops and 125 poultry modules.

2.5 Work Plan and Time Frame: 18 months

Products	Technical support activities:	YEAR 2		YEAR 3				Observacions
		Q3	Q4	Q1	Q2	Q3	Q4	
Technical support for the distribution of inputs and vegetative material	Identification of sites for implementation of agro-forestry nurseries				X			In coordination with FAO SV, MAG-DGCFR, the Project Coordinator and the PMCU
	Identification of native non-invasive plant species	X				X		In coordination with FAO SV, MAG-DGCFR, the Project Coordinator and the PMCU
	Preparation of sites	X	X			X	X	In coordination with MAG-DGCFR, the Project Coordinator and the PMCU
	Establishment of vegetative material and agro-forestry nurseries		X			X	X	Monthly technical progress reports; data uploaded into MAG monitoring platform in collaboration with the Project Coordinator and the PMCU
Technical support for the development and implementation of 3 INRM methodologies	Design of training programme and modules	X	X			X		In coordination with MAG-DGCFR, Project Coordinator and PMCU
	16 training events on soil conservation and protection		X	X			X	
	Establishment of a monitoring plan to assess the implementation of the methodologies				X			
Technical support for the establishment of three additional farmer field schools (FFS)	Identification of participating communities and learning sites	X	X				X	
	Design of training programme and material	X						
	Implementation of 3 FFS		X	X	X	X	X	
	Establishment of a monitoring plan				X			
Technical support for the training of 64 additional DFs on good agricultural practices and INRM in the project intervention area	Design of technical training material	X	X					
	Implementation of 69 training events		X	X	X	X	X	
	Promoting the use of organic fertilizers and rational use of chemical fertilizers			X	X	X	X	
Technical support for the dissemination of 5 GAPs	Design of 1 additional good agricultural practices	X	X					
	69 additional training events with 70 DFs		X	X	X	X	X	
	Establishment of 25 vegetable plots, 70 micro-irrigation systems for			X	X		X	

2.4 Monitoring Mechanisms and Reporting Requirements

CENTA will prepare and submit a technical and financial report every five months to the Project Coordinator for a total of three reports to be submitted in month 5,11 and 17 respectively. These reports will serve as inputs towards the preparation of project six-monthly (PPR) and annual reports (PIR).

3. **Inputs to be provided free of charge by Service Provider**

3.2 List of inputs

- iv. *Supply of auxiliary personnel and four technical extension agents, two part-time Extension Agency Chiefs (local branches of CENTA in Candelaria de La Frontera and Texistepeque) and one part-time Regional Supervisor (CENTA Western Region) for the Department of Santa Ana;*
- v. *Use of office space, services and facilities for six technical extension agents, two part-time Extension Agency Chiefs and one part-time Regional Supervisor;*
- vi. *Use of equipment and provision of materials and supplies such as transportation and gasoline for motorbikes used for field visits.*

3.3 Timing of inputs

The input schedule will be defined in the Project Monitoring Plan and will be agreed upon during the project inception workshop.

4. **Inputs to be provided by FAO in-kind**

4.1 Input list

- a) Staff from FAO Representation in El Salvador and FAO Headquarters will provide technical guidance on GEF procedures for the formulation of project progress reports and overall project implementation;
- b) Use of office space and services for strategic meetings in San Salvador;

4.2 Timing of inputs

The timing of inputs will be defined in the Project Monitoring Plan and will be agreed upon during Inception Workshop.

5. **Detailed budget**

The present LOA represents a total value of USD 53,730 (fifty three thousand seven hundred and thirty USD) which will cover the following expenses:

Item	Unit	N. of Unit	Unit cost (USD)	Total cost (USD)
Part-time technical extension agent	month	14	1000	14000
Part-time technical extension agent	month	14	1000	14000
Trainings (basic equipment)	month	14	95	1330
Travel expenses (extension agents)	month	14	100	1400
Administrative expenses	month	18	1000	18000
Printing of training materials	month	14	357,14	5000
				53730

6. Responsible Officer

The FAO Representative, in quality of Budget Holder, will appoint a responsible officer/consultant to manage and monitor the proper implementation of the Agreement on behalf of FAO and to certify the budget holder that the conditions of the Agreement have been met satisfactorily and that the corresponding payments can be made.

7. Refunds

It is stipulated that the service provider will refund any excessive payments that may have been made or surplus funds which may remain after the conclusion of the service.

- First disbursement of 40% of the value of the Letter of Agreement after submission and validation of Progress Report 1 ;
- Second disbursement of 30% of the value of the Letter of Agreement after submission and validation of Progress Report 2;
- Third disbursement of 30% of the value of the Letter of Agreement after submission and validation of Progress Report 3.

APPENDIX 10: ESRF

ENVIRONMENTAL AND SOCIAL REVIEW FORM

PROJECT NAME	Climate Change Adaptation to Reduce Land Degradation in Fragile Micro-Watersheds located in the municipalities of Textistepeque and Candelaria de la Frontera (GCP/ELS/014/GFF and GCP/ELS/015/SCF)
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Project description: The objective of the proposed project, located in the municipalities of Textistepeque and Candelaria de la Frontera (Department of Santa Anna, El Salvador), is to mainstream climate change adaptation and disaster risk reduction into Fragile Micro-Watershed Management Plans, and to reduce land degradation and unsustainable land/water use, through multi-stakeholder processes and the integrated management of natural resources (INRM) in the micro-watersheds of the sub-basins: i) El Jute ii) Mojarras Blancas iii) Santa Gertrudis (Municipality of Candelaria de La Frontera) and iv) San Jacinto v) Cujucuyo vi) Guarnecia (Municipality of Textistepeque).

The project will target 1200 vulnerable rural households which are exposed to environmental and social risks. Project components are as follows: 1) Institutional strengthening to design and implement fragile micro-watershed management plans that increase adaptation capacities to the adverse impacts of Climate Change, based on participatory and gender-sensitive approach; 2) Soil quality enhancement based on the increase of vegetation cover, Integrated Natural Resource Management (INRM), suitable land-use and gender-sensitive management, recovering flow of agro-ecosystem services in fragile micro-watersheds; 3) Increasing water quality and quantity to diversify livelihoods and income sources of vulnerable sectors in targeted micro-watersheds, enhancing participatory and gender-sensitive management; 4) Improving disaster risk management to increase adaptive capacity to Climate Change, in vulnerable sectors living in targeted micro-watersheds.

The project will dynamize local farmers organizations (including agriculture and livestock associations) and communal institutions (community-based development associations, community-based education associations, churches, women groups, water boards, micro-watershed management committees) in their interaction with higher levels of government including municipal governments (municipalities of Textistepeque and Candelaria de la Frontera) and their committees (Civil Protection committees, Food and Nutritional Security committee) which bind together communities and municipal level decision-making bodies; and central government institutions (MAG, MARN, Ministry of Governance-Civil Protection, Ministry of Health, Ministry of Education), particularly those present in the territory (extension and outreach services, national public schools, health clinics, civil protection services).

Project activities include outreach, awareness-raising, capacity building and investment interventions in natural resources management, watershed planning, climate change adaptation and disaster risk management with a participatory, bottom-up and gender-sensitive

approach. The project includes interventions at the community, farm and household level, which will have a demonstrative effect on the benefits of CCA and INRM activities, including the promotion of agro-forestry, soil and water conservation and other sustainable agriculture practices that increase food productivity and reduce agrochemical use; enhancement of pastures; protection and reforestation of critical watershed areas and local water sources; and investments in rainwater collection and water distribution systems for domestic and productive use. Finally, the project will horizontally and vertically integrate local institutions and communities into the national civil protection system.



CERTIFICATION

Project Category C	Yes	No
I affirm that I have performed an environmental review of this project and certify that the project conforms to the pre-approved list of projects excluded from the environmental assessment and that the project will have minimal or no adverse environmental or social impacts. No further analysis is required.	✓	

Title, name and signature of project lead technical officer: *Tomás Lindeman*
Natural Resources Officer, NRC
 Date: *23/04/2013*