Building climate resilience in supply chains for the mobilization of adaptation funding

Part I: Project Information

GEF ID
10934

Project Type
MSP

Type of Trust Fund
SCCF

CBIT/NGI
CBIT **No**
NGI **No**

Project Title
Building climate resilience in supply chains for the mobilization of adaptation funding

Countries
Regional, Guatemala, Honduras, Guatemala, Honduras

Agency(ies)
CI

Other Executing Partner(s)
Heifer International

Executing Partner Type
CSO

GEF Focal Area
Climate Change

Taxonomy
Focal Areas, Mainstreaming, Biodiversity, Agriculture and agrobiodiversity, Ceritification - International Standards, Protected Areas and Landscapes, Productive Landscapes, Climate Change, Climate Change

Adaptation, Mainstreaming adaptation, Innovation, Private sector, Livelihoods, Influencing models, Demonstrate innovative approache, Transform policy and regulatory environments, Strengthen institutional capacity and decision-making, Convene multi-stakeholder alliances, Stakeholders, Communications, Beneficiaries, Local Communities, Private Sector, Large corporations, Individuals/Entrepreneurs, SMEs, Civil Society, Community Based Organization, Type of Engagement, Partnership, Consultation, Participation, Information Dissemination, Indigenous Peoples, Gender Equality, Gender Mainstreaming, Sex-disaggregated indicators, Gender-sensitive indicators, Gender results areas, Knowledge Generation and Exchange, Access to benefits and services, Capacity Development, Participation and leadership, Integrated Programs, Commodity Supply Chains, Sustainable Commodities Production, Adaptive Management, Smallholder Farmers, Food Systems, Land Use and Restoration, Food Value Chains, Sustainable Food Systems, Sustainable Commodity Production, Capacity, Knowledge and Research, Knowledge Exchange, Learning, Adaptive management, Enabling Activities, Knowledge Generation

Sector
Mixed & Others

Rio Markers
Climate Change Mitigation
Climate Change Mitigation 0

Climate Change Adaptation
Climate Change Adaptation 0

Submission Date
3/14/2022

Expected Implementation Start
7/1/2022

Expected Completion Date
6/30/2024

Duration
24In Months

Agency Fee($)
82,569.00

A. FOCAL/NON-FOCAL AREA ELEMENTS

Objectives/Programs	Focal Area Outcomes	Trust Fund	GEF Amount($)	Co-Fin Amount($)
CCA-2	Mainstream climate change adaptation and resilience for systematic impact	SCCF-A	917,431.00	8,831,011.00
		Total Project Cost($)	**917,431.00**	**8,831,011.00**

B. Project description summary

Project Objective

Project Objective: Develop and launch the Adaptation Equivalency Index (AEI) in Guatemala and Honduras to ensure decreased loss of habitat, improved ecological resiliency, sustainable living income for smallholder producers (men and women) and an increase in adaptation investment from the private sector through the use of a standardized, quantifiable approach Objective Indicators: Indicator A: Area of land managed for climate resilience Target A: 2,054 hectares managed for climate resilience Indicator B: Livelihoods and sources of income strengthened/introduced (agriculture, agro-processing, reduced supply chain) Target B: 12, 125 producers have strengthened/new livelihoods and sources of income

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing($)	Confirmed Co-Financing($)

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing($)	Confirmed Co-Financing($)
Component 1: Pilot improved climate smart agriculture practices that increase resiliency throughout the value chains	Technical Assistance	**Outcome 1.1:** Improved climate smart production practices in ecologically vulnerable areas of Guatemala and Honduras ***Indicator 1.1****: Total # of hectares of production land under improved management* ***Target 1.1:*** *Total: 2054 hectares* *Guatemala: 1,212 hectares* *Honduras: 842 hectares* **Outcome 1.2:** Increased resiliency and ability of male and female small holder producers to adapt to climate change and shocks related to economic and environmental volatility ***Indicator 1.2.a.:*** *# of male*	**Output 1.1.1:** Producers identified for participation in climate smart practices ***Indicator 1.1.1:*** *# of male and female producers identified* ***Target 1.1.1:*** *480 male and* *120 female producers* **Output 1.1.2:** Technologies, tools, and skills needed to implement climate smart practices are obtained and utilized by producers ***Indicator 1.1.2:*** *# of male and female producers with knowledge about new technologies, tools and skills for climate smart agriculture* ***Target***	SCCF-A	499,535.00	4,558,506.00

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing($)	Confirmed Co-Financing($)
Component 2: Develop an Adaptation Equivalency Index by identifying, cataloguing, and quantifying measures of climate smart production practices	Technical Assistance	**Outcome 2.1:** There is one functional Adaptation Equivalency Index that is flexible, scalable, and capable of catalyzing increased investment in adaptation and resiliency measures across value chains ***Indicator 2.1:*** *# of indices developed with potential to catalyze investment in adaptation and resiliency measures across value chains* ***Target 2.1:*** *1 index is ready for piloting by companies*	**Output 2.1.1:** Climate smart production practices identified for inclusion in the AEI ***Indicator 2.1.1:*** *# of climate smart production practices identified for inclusion in the AEI* ***Target 2.1.1:*** *4 distinct categories of climate smart production practices identified* **Output 2.1.2:** The AEI is created ***Indicator 2.1.2:*** *# of indices developed to catalyze investment in adaptation and resiliency measures across value chains* ***Target 2.1.2:*** *1*	SCCF-A	122,471.00	1,585,000.00

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing($)	Confirmed Co-Financing($)
Component 3: Pilot AEI ? integrate AEI into three premium value chains	Technical Assistance	**Outcome 3.1:** The AEI is adopted as a valuable tool by companies to achieve key adaptation outcomes aligned with GEF adaptation strategy ***Indicator 3.1:*** *# of companies signing agreements with Heifer to launch pilot projects to use the AEI* ***Target 3.1:*** *6 companies signing agreements* **Outcome 3.2:** Increased knowledge of linkages between climate change adaptation and the target value chains ***Indicator 3.2:*** *% of key industry leaders and members of the general public surveyed during the project showing increased*	**Output 3.1.1:** AEI companies define KPIs and measure progress on their targets and metrics ***Indicator 3.1.1:*** *# of companies that report metrics on AEI use* ***Target 3.1.1:*** *6 companies measuring progress on AEI pilots* **Output 3.2.1:** Companies develop communication plans about the AEI and its relevance targeting consumers, key industry leaders, and public sector authorities ***Indicator 3.2.1****: # of communications plans on the AEI developed by companies to target key industry leaders and the general public*	SCCF-A	164,166.00	1,360,000.00

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing($)	Confirmed Co-Financing($)
M&E				SCCF-A	48,234.00	524,742.00
			Sub Total ($)		**834,406.00**	**8,028,248.00**

Project Management Cost (PMC)

SCCF-A	83,025.00	802,763.00
Sub Total($)	**83,025.00**	**802,763.00**
Total Project Cost($)	**917,431.00**	**8,831,011.00**

Please provide justification

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

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Investment Mobilized	Amount($)
Civil Society Organization	Heifer International	Grant	Investment mobilized	119,420.00
Civil Society Organization	Heifer International	In-kind	Recurrent expenditures	1,749,848.00
Civil Society Organization	ICADE (Institute for Cooperation and Self Development) ? Honduras	In-kind	Recurrent expenditures	300,000.00
Civil Society Organization	CATIE ? Honduras	Loans	Investment mobilized	600,000.00
Civil Society Organization	FUNDER ? Honduras	In-kind	Recurrent expenditures	1,000,000.00
Private Sector	Banrural ? Honduras	In-kind	Recurrent expenditures	2,000,000.00
Civil Society Organization	Fundacion Defensores de la Naturaleza ? Guatemala	In-kind	Recurrent expenditures	500,000.00
Civil Society Organization	Federacion Nacional de Cooperativas de ahorro y credito R.L. ? Guatemala	In-kind	Recurrent expenditures	500,000.00
Private Sector	Nueva Kerala, S.A. ? Guatemala	In-kind	Recurrent expenditures	450,000.00
Civil Society Organization	Oro Verde ? Tropical Forest Foundation ? Guatemala	In-kind	Recurrent expenditures	350,000.00

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Investment Mobilized	Amount($)
Recipient Country Government	Municipalidades de Alta Verapaz: Chahal, Cob?n, Raxruh?, Fray Bartolom? de Las Casas y Chisec ? Guatemala	In-kind	Recurrent expenditures	500,000.00
Civil Society Organization	CATIE	In-kind	Recurrent expenditures	400,000.00
GEF Agency	Conservation International	In-kind	Recurrent expenditures	161,743.00
Civil Society Organization	ICADE (Institute for Cooperation and Self Development) ? Honduras	Loans	Investment mobilized	200,000.00
			Total Co-Financing($)	**8,831,011.00**

Describe how any "Investment Mobilized" was identified

Heifer International has mobilized $1,869,268 in co-financing from non-GEF funding for activities in Honduras and Guatemala that will directly contribute to this project. Heifer International is providing investment mobilized support - $119,420 that will cover gaps in project costs including for personnel, equipment, and office operations. This also includes in-kind support - $1,749,848 from BID-LAB in Honduras for activities that are increasing the resilience of specialty coffee and cocoa producers in Honduras. Additionally, this includes support for several projects in Guatemala with smallholder spice farmers to help them achieve sustainable living incomes and contribute to the protection of tropical forests. The work in Guatemala is being supported by several donors including OroVerde ? please see Annex K for co-financing support letters.

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

Agency	Trust Fund	Country	Focal Area	Programming of Funds	Amount($)	Fee($)	Total($)
CI	SCCF-A	Regional	Climate Change	NA	917,431	82,569	1,000,000.00
			Total Grant Resources($)		**917,431.00**	**82,569.00**	**1,000,000.00**

E. Non Grant Instrument

NON-GRANT INSTRUMENT at CEO Endorsement

Includes Non grant instruments? **No**

Includes reflow to GEF? **No**

F. Project Preparation Grant (PPG)

PPG Required **false**

PPG Amount ($)

PPG Agency Fee ($)

Agency	Trust Fund	Country	Focal Area	Programming of Funds	Amount($)	Fee($)	Total($)
			Total Project Costs($)		**0.00**	**0.00**	**0.00**

Meta Information - SCCF

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

Is this project LDCF SCCF challenge program?
true

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

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

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

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

This Project has an urban focus. false

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

Agriculture	**25.00%**
Natural resources management	**25.00%**
Climate information Services	**0.00%**
Costal zone management	**0.00%**
Water resources Management	**0.00%**
Disaster risk Management	**0.00%**
Other infrastructure	**0.00%**
Health	**0.00%**
Other (Please specify:)	**50.00%**
Total	**100%**

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

Sea level rise false
Change in mean temperature false
Increased Climatic Variability true
Natural hazards true
Land degradation true
Costal and/or Coral reef degradation false
GroundWater quality/quantity false

To calculate the core indicators, please refer to Results Guidance

Core Indicators - SCCF

CORE INDICATOR 1	Total	Male	Female	% for Women
Total number of direct beneficiaries	12,125	7,275	4,850	40.00%

CORE INDICATOR 2	
Area of land managed for climate resilience (ha)	2,054.00

CORE INDICATOR 3	
Total no. of policies/plans that will mainstream climate resilience	2

CORE INDICATOR 4		Male	Female	% for Women
Total number of people trained	1,075	600	475	44.19%

OUTPUT 1.1.1

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

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		Male	Female
Total number of direct beneficiaries from more resilient physical assets	**12,125**	**7,275**	**4,850**

Ha of agriculture land	Ha of urban landscape	Ha of rural landscape	No. of residential houses
1,027.00	**0.00**	**1,027.00**	**0**

No. of public buildings	No. of irrigation or water structures	No. of fishery or aquaculture ponds	No. of ports or landing sites
0	**0**	**0**	**0**
Km of road	Km of riverban	Km of coast	Km of storm water drainage
0.00	**0.00**	**0.00**	**0.00**
Other	Other(unit)	Comments	
0			

OUTPUT 1.1.2

Livelihoods and sources of income of vulnerable populations diversified and strengthened

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		Male	Female
Total number of direct beneficiaries with diversified and strengthened livelihoods and sources of income	**0**	**0**	**0**

Livelihoods and sources of incomes strengthened / introduced

Agriculture	Agro-Processing	Pastoralism/diary	Enhanced access to markets
true	**false**	**true**	**true**
Fisheries /aquaculture	Tourism /ecotourism	Cottage industry	Reduced supply chain
false	**false**	**false**	**true**

Beekeeping	Enhanced opportunity to employment	Other	Comments
false	**false**	**false**	

OUTPUT 1.1.3

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

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		Male	Female
Total number of direct beneficiaries from the new/improved climatic information systems	**0**	**0**	**0**

Climate hazards addressed

Flood	Storm	Heatwave	Drought
false	**false**	**false**	**false**

Other	Comments
false	

Climate information system developed/strengthened

Downscaled Climate model	Weather/Hydromet station	Early warning system	Other
false	**false**	**false**	**false**

Comments

Climate related information collected

Temperature	Rainfall	Crop pest or disease	Human disease vectors
false	**false**	**false**	**false**

Other	Comments
false	

Mode of climate information disemination

Mobile phone apps	Community radio	Extension services	Televisions
false	**false**	**false**	**false**

Leaflets	Other	Comments
false	**false**	

OUTPUT 1.1.4

Vulnerable natural ecosystems strengthened in response to climate change impacts

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Types of natural ecosystem

Desert	Coastal	Mountainous	Grassland
false	**false**	**false**	**false**

Forest	Inland water	Other	Comments
false	**false**	**false**	

OUTPUT 1.2.1

Incubators and accelerators introduced

	Male	Female
Total no. of entrepreneurs supported	**0**	

	Comments
No. of incubators and accelerators supported	

	Comments
No. of adaptation technologies supported	

OUTPUT 1.2.2

Financial instruments or models to enhance climate resilienced developed

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Financial instruments or models

PPP models **false**	Cooperatives **false**	Microfinance **false**	Risk insurance **false**
Equity **false**	Loan **false**	Other **false**	Comments

OUTPUT 2.1.1

Cross-sectoral policies and plans incorporate adaptation considerations

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Will mainstream climate resilience	Of which no. of regional policies/plans	Of which no. of national policies/plan
0		

Sectors

Agriculture	Fishery	Industry	Urban
false	**false**	**false**	**false**

Rural	Health	Water	Other
false	**false**	**false**	**false**

Comments

OUTPUT 2.1.2

Cross sectoral institutional partnerships established or expanded

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No. of institutional partnerships established or strengthened

Comments

OUTPUT 2.1.3

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

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No. of systems and frameworks

Comments

OUTPUT 2.1.4

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

---

No. of systems and frameworks

Comments

OUTPUT 2.2.1

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

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No. of institution(s)

Comments

OUTPUT 2.2.2

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

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No. of mechanism(s)

Comments

OUTPUT 2.2.3

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

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No. of initiatives or technologies

Comments

OUTPUT 2.2.4

Public investment mobilized

Amount of investment (US$)

Comments

OUTPUT 2.2.5

Private investment mobilized

Amount of investment (US$)

Comments

OUTPUT 2.3.1

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

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

Of which total no. of small private business owners	**0**

	Male	Female
Of which total no. school children, university students or teachers	**0**	

Other Comments

OUTPUT 2.3.2

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

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

Please describe how their awareness was raised

OUTPUT 3.1.1

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

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No. of national climate policies and plans	**2**

Comments

OUTPUT 3.1.2

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

No. of systems and frameworks	**0**

Comments

OUTPUT 3.1.3

Vulnerability assessments conducted

No. of assessments conducted	**0**

Comments

OUTPUT 3.2.1

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

No. of institution(s)	**0**

Comments

OUTPUT 3.2.2

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

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No. of mechanism(s) **0**

Comments

OUTPUT 3.2.3

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

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

Comments

OUTPUT 3.3.1

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

---

		Male	Female
Total no. of people trained	**1,075**	**600**	**475**
Of which total no. of people at line ministries	**270**	Male **150**	Female **120**
Of which total no. of community/association	**325**	Male **200**	Female **125**
Of which total no. of extension service officers	**220**	Male **100**	Female **120**
Of which total no. of hydromet and disaster risk management agency staff	**0**	Male **0**	Female **0**
Of which total no. of small private business owners	**260**	Male **150**	Female **110**
Of which total no. school children, university students or teachers	**0**	Male **0**	Female **0**
Other	Comments		

OUTPUT 3.3.2

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

		Male	Female
No. of people with raised awareness	**0**	**0**	**0**
Please describe how their awareness was raised			

Part II. Project Justification

1a. Project Description

a. The global environmental problems (or climate change adaptation problems if this is an adaptation project), root causes and barriers that need to be addressed

Regional Overview

Both Guatemala and Honduras fall within Latin America?s Dry Corridor, a region on the Pacific Coast which extends from Southern Mexico through El Salvador, Guatemala, Honduras, Nicaragua and Costa Rica. This area is prone to prolonged periods of drought, followed by intense rain events and flooding. This erratic weather affects crop cycles and contributes to food insecurity. Extreme weather patterns in the region are forecasted to increase with climate change, leading to further food insecurity and rising rates of migration. One of the main reasons for these countries? high vulnerability is their location. Both countries lie on a thin strip of land between the Atlantic and Pacific Oceans. Guatemala lies mainly on the Pacific Ocean where Honduras lies mainly on the Atlantic Ocean. Neither country has a buffer from the harsh weather events that the tropical oceans cause.

According to the Germanwatch Climate Risk Index (2015), Guatemala is one of the countries most affected by climate change. Events such as extreme droughts usually result in poor harvests or heavy rains in landslides, with both affecting the rural population particularly strongly. Additionally, deforestation and habitat destruction has been a major issue, compounding the issues and instabilities brought on by climate change.

Honduras is also prone to natural disasters and is vulnerable to climate change. Sixty percent of Honduras? GDP is agricultural, with coffee corn and beans being the main crops. A decrease in agricultural production due to climate change would have a huge economic impact on the country, especially in rural regions where the poor depend on agriculture. Though it has had strong economic growth rates relative to the region (as measured pre pandemic), it is one of the poorest countries in the Western hemisphere with almost half of the country living on less than USD $5.50/day (as of 2019), and has the largest level of income inequality of any country in Latin America. The agricultural sector employs around 39%, though the sector has seen nearly a one-third reduction in revenue over the past two decades; as of 2014, 65% of rural households lived in poverty. Honduras also has rising levels of food insecurity, linked in large part to the impacts of climate change.

Over the last decade the country has suffered from repeated droughts that have increased food insecurity, particularly for subsistence farmers in the Dry Corridor, where some areas have experienced annual crop loss greater than 70% of the initial harvest (and heavy damaged up to 50% of the second harvest). In 1998, Hurricane Mitch devastated the country with unprecedented flooding, and more recently the country suffered from the back-to-back hurricanes Eta and Iota in 2020 whichhad a devastating humanitarian impact and severely affected infrastructure and food security. The effects of the pandemic are contributing to what was already a desperate situation for many living in Honduras.

Description of the Ecoregions

For maps of the project areas, please see 1b. Project Map and Geo-Coordinates and Annex C: Project Map(s) and Coordinates.

Table 1: Overview of Project Areas

Country	Name of Project Area	Area (in ha)	Land Uses	Target Crops
Guatemala	Cob?n	33,073 ha	5% Livestock 40% Agriculture 45% Forestry 10%% Urban	Cardamom Allspice Cinnamon Turmeric Black pepper Broadleaf Forest species of high economic value
Guatemala	Chisec	18,938 ha	10% Livestock 40% Agriculture 40% Forestry 10% Urban	Cardamom Allspice Cinnamon Turmeric Black pepper Clove Annatto Broadleaf Forest species of high economic value
Guatemala	Raxruh?	21,000 ha	15% Livestock 30% Agriculture 35% Forestry 15% Urban 5% Oil palm	Cardamom Allspice Cinnamon Turmeric Black pepper Clove Annatto Broadleaf Forest species of high economic value
Guatemala	Fray Bartolom? de Las Casas	17,000 ha	15% Livestock 30% Agriculture 35% Forestry 10% Urban 10% Oil palm	Cardamom Allspice Cinnamon Turmeric Black pepper Clove Annatto Broadleaf Forest species of high economic value
Guatemala	Chahal	23,000 ha	10% Livestock 35% Agriculture 40% Forestry 10% Urban 5% Oil palm	Cardamom Allspice Cinnamon Turmeric Black pepper Clove Annatto Broadleaf Forest species of high economic value

Guatemala	La Tinta	19,000 ha	05% Livestock 40% Agriculture 45% Forestry 10% Urban	Cocoa Honey Broadleaf Forest species of high economic value Black pepper Clove Cinnamon Allspice Cardamom
Guatemala	Sierra de Las Minas, San Antonio	200 ha	40% Agriculture 45% Forestry 5% Urban	Cocoa Honey Broadleaf Forest species of high economic value
Guatemala	Sierra de Las Minas, San Vicente I	221 ha	40% Agriculture 45% Forestry 5% Urban	Cocoa Honey Broadleaf Forest species of high economic value
Guatemala	Panz?s	21,000 ha	05% Livestock 30% Agriculture 45% Forestry 10% Urban 10% Oil palm	Cocoa Honey Broadleaf Forest species of high economic value Black pepper Clove Cinnamon Allspice Cardamom
Guatemala	Bocas del Polochic, Selempim	100 ha	35% Agriculture 60% Forestry 5% Urban	Cocoa Honey Broadleaf Forest species of high economic value
Honduras	Dulce Nombre de Culm?	305,460 ha	55% Forestry 35% Grazing 0.26% Coffee 0.10% Cocoa 9.64% Other	Coffee Cocoa
Honduras	Gualaco	211,853 ha	60% Forestry 30% Grazing 0.21% Coffee 9.79% Other	Coffee Cocoa
Honduras	Santa Mar?a del Real	26,129 ha	55% Forestry 35% Grazing 0.54% Coffee 9.46% Other	Coffee Cocoa

Honduras	Catacamas	725,619 ha	50% Forestry 40% Grazing 0.07% Coffee 0.10% Cocoa 9.83% Other	Coffee Cocoa

In Guatemala, the project will take place in the Transversal Strip of the North and Polochic Basin in the department of Alta Verapaz, within the municipalities of Coban, Chisec, Raxruha, Fray Bartolome de las Casas, San Fernando Chahal, La Tinta, and Panzos, and in the municipality of El Estor located in the department of Izabal. There are three protected areas in this territory: Reserva Biosfera Sierra de las Minas, Refugio de Vida Silvestre Bocas del Polochic, and ?rea protegida de Laguna Lachua.

Guatemala ranks 4th in the world on the United Nation?s World Risk Report (2014), situated in an area highly susceptible to earthquakes, hurricanes and volcanic eruptions, as well as floods, droughts and landslides. The department of Alta Verapaz is an area facing particularly high risks of climate and weather-related disasters. Families in the Polochic watershed continue to be at risk from (a) severe storms causing crop losses, flooding, and severe landslides, and (b) low yields of cash crops such as cardamom, due to insects and disease. While new crops planted in agroforestry systems (AFS) have great potential as a new source of income generation for farmers, this has not been widely promoted and people lack the training required to get high yields. Potential exists for families to diversify farm production and not only to stabilize their income levels, but to increase them. As for rural people who rely on farming for food and income, seasonal changes and natural disasters strongly increase the risk of hunger and malnutrition.

The population living around the protected areas is of indigenous Queqchi origin. These farming families farm an average of 4-6 ha and on average, a family living in this area has an annual income of $2,232 per year. According to Heifer International, it is estimated that an income of $4,688 per year is needed for these families to cover their basic needs (defined by Heifer as a ?Living Income Benchmark?). These families are facing an income gap of $2,456 per year. This income gap is projected to be closed as a result of farmers using best practice agroforestry systems on an average of only one ha. Agroforestry systems are an important tool for climate change adaptation in agriculture. Agroforestry produces adaptation benefits for local climate, including reducing the impact of five types of extreme weather events evaluated by the study (drought, heatwaves, cold waves, heavy rain and floods), improving soil and water availability, attracting pollinators and improving biodiversity.

Alta Verapaz has the highest poverty rates in Guatemala, with 83% living in poverty and 54% living in extreme poverty.The communities of the Northern Transversal Strip (FTN) face high levels of social and economic exclusion. Families have an average of six children, with an income of about $2/day, and face pressure from the spread of agribusiness (mainly African palm), extensive livestock use areas, agrarian conflicts, and insecurity due to illicit activities. People struggle to find adequate income to support their families, suffer low literacy rates, poor housing conditions and have limited access to all kinds of basic needs and services). Most alarmingly, children in Alta Verapaz suffer very high rates of malnutrition (ranging from 42-70 % in some areas) and half of children under 5 suffer from stunting.

Communities have been growing cardamom for the last 106 years in the Alta Verapaz department (it was introduced to the country in 1914), and allspice for the last 25 years. There are entire communities that base their economy on these crops. Unfortunately, production is characterized by inadequate crop management and limited technical capacity, resulting in low yields, combined with the effects of climate change and insects such as Thrips. Most spices are sold dehydrated; it is estimated that there are more than 4,500 drying facilities for cardamom and for black pepper and allspice located throughout the Northern Transversal Strip. According to a 2014 report, these drying facilities, which use fuelwood as their primary source of energy, were estimated to contribute to 3,192 ha of deforestation annually (a number which Heifer field teams now estimate to be closer to 4,000 ha of deforestation annually).

Producers of cardamom and spices have little access to markets that buy processed products directly (with higher value added) and with high levels of intermediation, reducing their profit margins. Furthermore, the current sources of production of these products are monoculture plots and intensive predation/extraction of forest products. On the intermediary side, there is rampant use of inefficient technology, which is more than 50 years old. These intermediaries, by selling in a dehydrated form to the exporter, concentrate on receiving the highest profit margins of spices and cardamom (30%).

In Honduras, the project will take place in the department of Olancho, in four municipalities: Dulce Nombre de Culm?, Gualaco, Santa Mar?a del Real, and Catacamas. These areas are rich in natural resources encompassing nine protected areas and six major rivers including: the Guayape River that together with the Guayambre forms the Patuca River, the Sico or Grande River, the Mangulile or Mirajoco, the Mame and Jimine or Lim?n, the last two being tributaries of the Agu?n. In addition, the region also includes four basins: Cuenca del Aguan, Sico, Patuca and Coco Segovia.

In Honduras, more than 90% of the population depends on agriculture. In the areas proposed for attention by the project, producers are dedicated to small and medium-sized agriculture, especially basic grains (corn and beans) and on small and medium-sized dual-purpose extensive livestock farming. A low percentage (less than 5%) is dedicated to producing coffee, cacao, fruits, and vegetables. According to the Chocolat4All project (in the planned intervention zone in Olancho), the average living income is approximately $234.24 per month.

In Olancho, the project will aim to work with producers from the coffee and cocoa value chains. Due to the vulnerability of the crops to rains and drought, as well as the lack of resiliency in community members, investment funds for adaptation to climate change are essential in the region. Producers living in the department of Olancho earn on average $187 per month, and suffer from a gap of $213 per month to reach a living income. While some of the farmers and producers have diversified their crops such as with fruit trees, corn, and livestock, community members are still not able to obtain a living wage.

In Honduras, 95% of coffee producers are smallholder famers, primarily using agroforestry systems, primarily without any advanced technology. In the processing of the coffee, most drying is done at the intermediary or exporter level, and is commercialized via local level intermediaries, or through wholesale intermediaries. Likewise, 95% of cacao producers are smallholder farmers which are organized in associations. Production usually consists of agroforestry techniques with low to medium levels of technology. The majority of processing is done by associations, with natural drying mostly used, though some mechanical drying is being introduced. Associations are

able to undertake direct marketing with exporters. In coffee, most of the product is marketed through intermediaries, who pay prices based on the New York Stock Exchange; these intermediaries then commercialize it with exporting companies such as the Compa??a Hondure?a del Caf? CO HONDUCAF?.

The main buyer of Honduran cacao is Chocolats Halba (from Switzerland) which pays a price of up to $4,000 per metric ton of quality A cocoa, with certification seals (Organic and Fair Trade). This company pays estimated prices of $1,500.00 per metric ton of regular cocoa. Approximately 30% of cocoa is traded in formal markets, while the difference is traded in the informal market, with intermediaries who buy cocoa directly from producers.

Adaptation Problems

Loss of functional ecosystem resiliency in both agricultural and biodiversity systems. As habitats decline and ecosystems lose their functional resiliency, the inability of habitats to recover to pre-disturbance levels is amplified. This has implications for adaptation processes in both productive and non-productive landscapes. For example, loss of pollinator species impacts farming practices and productivity. Loss of endemic species exposes productive land to increased threat from invasive species, pests, and disease. In Central America?s Dry Corridor and in the project areas, the forecasted effects of climate change include an overall decrease in and less consistent precipitation, higher average temperatures, and greater frequency and intensity of extreme weather events. These impacts, combined with the effects of sustained habitat degradation, will lead to a lack of ecosystem services in productive and non productive landscapes after disturbances. Less stable or degraded ecosystems will not be able to provide adequate protection from land or mudslides during heavy rain events, and soil quality will worsen, further threatening agricultural harvests that are already under pressure from a changing climate.

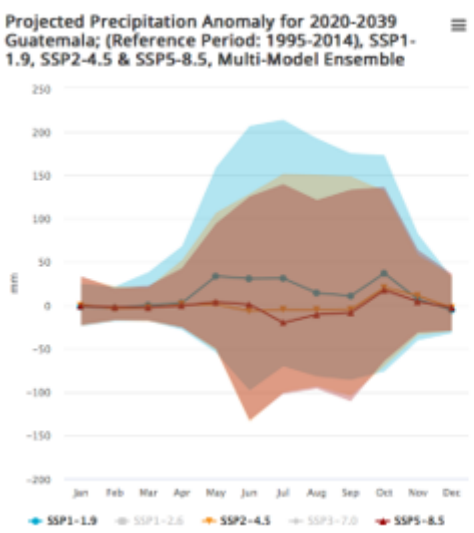
Habitat degradation. Deforestation and habitat degradation also threaten climate change adaptation. In the Northern Transversal Strip of Guatemala, the use of fuelwood in the drying process for spices leads to an estimated 4,000 ha of deforestation annually. This, along with other drivers of deforestation such as clearing land for subsistence farming and fuelwood (especially in Honduras, where fuelwood accounts for 65% of the country?s energy), are not only degrading ecosystems, but are also worsening the effects of climate change for local inhabitants. For instance, after hurricane Mitch struck Honduras in 1998 it was observed via aerial surveys that mudslides were worse in areas that had been deforested. More recently, the back-to-back hurricanes of Eta and Iota in 2020 destroyed the livelihoods of many smallholder producers, contributing to the migration of hundreds of thousands both internally and externally. In the department of Izabal, the municipality of El Estor has seen some of the highest rates of deforestation of any of the project areas (in Guatemala or Honduras), with an estimated 46.6k ha of tree cover loss from 2001-2020, representing an estimated 25.3Mt CO_2e in emissions.There is also an ongoing threat to Lake Izabal and its associated ecosystems from unsustainable monoculture agriculture practices, which degrade land and introduce pollutants such as chemical products into the ecosystem. These threatened ecosystems, such as mangroves and coral reefs, are the source of many valuable ecosystem services such as water filtration and fisheries.

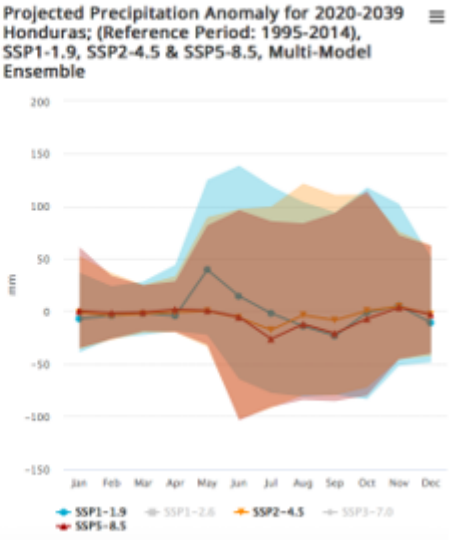
Extreme weather including rise in temperatures, heavy/unpredictable rain resulting in landslides, drought, increased severity and frequency of storms. The combination of habitat degradation and lack of resiliency makes residents of these regions vulnerable to the effects of extreme weather linked to climate change. Significant weather events such as extended droughts and hurricanes will become more frequent in the Dry Corridor as climate change progresses. Climate change has decreased the amount of available agricultural land in both Honduras and Guatemala. Large storms like Hurricane Mitch flood neighborhoods by the shores, destroy homes, and ruin crops.

Guatemala and Honduras are both exposed to multiple climate hazards and hazards do not occur independently and may trigger multiple secondary hazards (e.g., an increase in precipitation can lead to landslides in deforested areas).

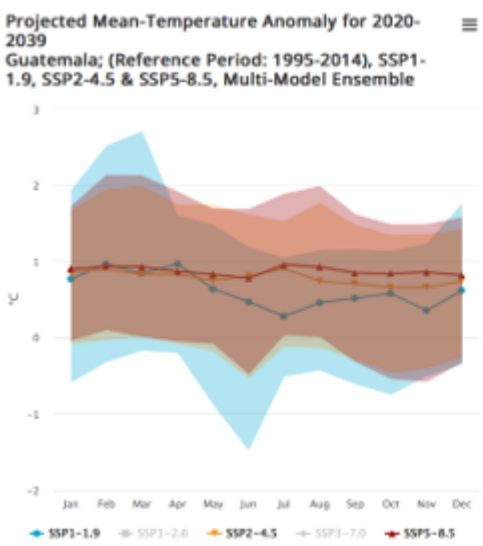
Based on data from the World Bank?s Climate Change Knowledge Portal, both Honduras and Guatemala will both have adverse effects from climate hazards. From the analysis of the data for precipitation and temperature under the Shared Socioeconomic Pathway (SSPs) 2-4.5 and 5-8.5 both countries will suffer a decline in precipitation with a projected increase in mean temperature

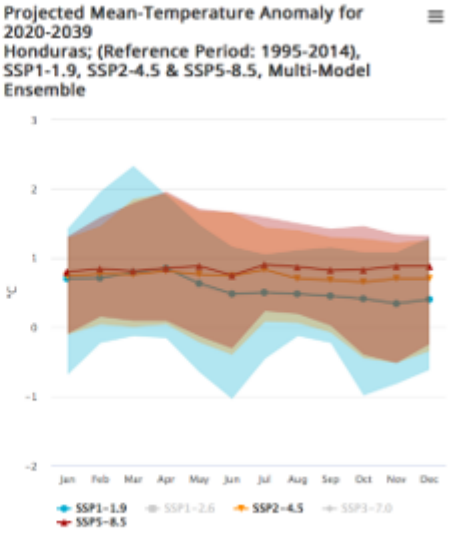
Anomalous precipitation:





Increased temperature:





According to a USAID study (2014), a 10 to 20 percent reduction in precipitation and an increase in temperature by between 1.0 and 2.5?C will have profound impacts on water resources in Honduras. This change will interact with and exacerbate other human-induced pressures affecting water quantity and quality. Possible effects of climate projections ? including an increase in temperature by between 1.0 and 2.5 ?C as well as a 10 to 20 percent reduction in precipitation, on water resources include: reduced surface water availability for direct use by communities and urban areas, agriculture, and economic processes; and decreased groundwater recharge rates, which could substantially affect dry season flows.

Climate change projections for Guatemala point to a 2.5 ? 4 degree Celsius increase in temperature by 2050, with an increase incidence and intensity of extreme rainfall events, droughts and floods; and more frequent and prolonged heat waves and droughts. The climate impacts will be felt in the Agriculture sector ? crop loss/failure, shifting production zones, increased food prices and foot imports, Ecosystem loss - loss of critical ecosystems, coastal defense and carbon sinks, expansion of arid areas, Water Resources ? water shortages, reduced quantity and quality of water supplies.

Climate Change projections for Honduras predict a 1-2.5 degree Celsius increase in temperatures by 2050, increased frequency of extreme rainfall and flood events, reduction in rainfall with more intense, prolonged droughts. In terms of climate impacts, in the Agriculture sector ? crop loss/failure, soil erosion, increased pests and rising food prices and food imports, Ecosystems and Fisheries ? loss of forest cover, mangroves, coral reefs and fisheries and associated ecosystem services and livelihoods, and Water Resources ? shortages, degraded water quality and increased flood and landslide risk.

Without resiliency and adaptive measures in place, smallholder producers are more likely to have their livelihoods jeopardized; this might come in the form of repeated crop harvest failure due to extended drought conditions, or due to physical damage from storms and flooding (e.g., with eroded hillsides more prevalent to mudslides).

Honduras is prone to natural disasters. The entire country has been affected by hurricanes such as Fifi, Mitch and in 2020 by hurricanes ETA and IOTA that left floods, landslides, roads in poor condition, and municipalities incommunicado, among other effects. Just as the effects of climate change (e.g., flooding) are made worse by deforestation caused by issues like unsustainable subsistence or commodity agriculture, the effects of climate change will only serve to aggrandize these pressures (e.g., by increasing poverty and limiting the ability to harvest certain varieties or harvests of crops), in an unsustainable cycle.

As with Honduras, Guatemala is also prone to hurricanes (Guatemala was also hit by Eta and Iota, causing widespread flooding and damage, with emergency levels of food insecurity tripling in the country after the hurricanes). According to the World Bank, ?Guatemala ranks ninth in the world for level of risk of risk to the effects of climate change,? with rural populations more vulnerable to these effects. Degraded ecological areas exacerbate the effects of flooding due to extreme rain events, along with extended periods of lack of precipitation, both of which are forecast to increase with the effects of climate change.

In Honduras, additional environmental threats in Olancho include deforestation from illegal logging stemming from subsistence farming, clearing for cattle pastures, collection of fuelwood (65% of the country's energy comes from fuelwood), mining activities, timber harvesting, and forest fires. From 2002 to 2020, Olancho lost 208,000 ha of humid primary forest, making up 55% of its total tree cover loss in the same time period. Total area of humid primary forest in Olancho decreased by 30% in this time period. By some estimates, as much as 85% of timber production in the country is illegal. The illicit timber trade feeds corruption that involves politicians, bureaucrats, timber companies, mayors, police, and other officials. The effects of deforestation are evident during tropical storms and hurricanes that periodically batter the country.

Guatemala also faces widespread deforestation and lack of soil conservation, making rural families more vulnerable to disasters. Between 1990 and 2015, Guatemala lost 17% of its forest (100,000+ ha between 2010 and 2016). While commercial illegal logging, clear-cutting, large-scale agriculture and open cast mining are all part of the issue, poverty compounds the problem. Poor families cut down trees to farm steep hills, and use wood for cooking and heating. All of this causes erosion, loss of soil quality, severe biodiversity losses, and leaves large swaths of land bare and exposed. As a result, the landscape has been altered to such a degree that landslides are more common and flooding is more severe than ever.

Root Causes

There are a number of root causes underpinning the adaptation problems highlighted above including local poverty and food insecurity, inefficient and unsustainable production practices by farmers that lack access to climate-smart alternatives, and a lack of perceived value (and therefore investment) by outside investors for climate-smart benefits ? particularly from the private sector.

Inefficient, unsustainable production practices with limited access to climate-smart alternatives. Current agricultural methods and production practices in the project regions are not sustainable, and in many cases are inefficient. For instance, while production of cocoa in Honduras reached 1-1.5 MT in 2015, over 930 MT of cocoa beans did not meet standards required by the fermented cacao industry, representing an astounding 84% failure rate. Crops such as coffee require a specific sequencing of seasons and weather patterns, both of which are becoming less predictable with climate change. Climate change is likely to bring increased temperatures, which exacerbates additional threats to crops such as La Roya, a fungus which infects coffee plants and thrives in warmer temperatures. Warmer temperatures are also leading to increased need for water for both subsistence and commodity crops.

In Guatemala, traditional and inefficient wood-fired dryers are causing the loss of 4,000 ha of forest each year. In the case of cardamom, the value chain involves the participation of more than 350,000 producers (90% of which are smallholders). The current market system keeps small farmers in a cycle of poverty, as they cannot add value to their products and access markets that value sustainable production and compliance with human rights. Current production conditions have a negative impact on the environment, on tropical forests and biodiversity, on soil erosion and loss of water sources and emit thousands of tons of CO2, with every harvest and drying of cardamom and other spices.

These practices and others (such as monocropping) lead to an increasingly untenable situation for smalholder producers and are exacerbated by their lack of access to climate-smart measures which could help mitigate these pressures. The lack of access to adaptation measures exacerbates poverty and food insecurity as climate-related pressures increase, which lead to further degradation, including of soils.

The governments of Guatemala and Honduras recognize the urgent need for adaptation measures, but also lack the resources and capacity to widely deploy these practices, particularly in rural regions such as Alta Verapaz, Izabal, and Olancho.

Local poverty and food insecurity. Poverty and food insecurity are significant drivers of habitat degradation in Alta Verapaz, Izabal, and Olancho. In Alta Verapaz, an average family has an annual income of $2,232 per year while an estimated income that would cover basic needs is benchmarked at $4,688 per year, leaving a gap of $2,456. Financial and food insecurity can lead to increased resource extraction, which only exacerbates the cycle of deforestation and unsustainable practices. Poverty and food insecurity pressures also contribute to families not having the time or resources to implement resiliency measures.

Lack of perceived value and investment, by private sector for climate smart benefits. Historically, adaptation investments lag in comparison to mitigation in part because of the lack of private sector participation. Supply Chain Management (SCM) has concentrated on calculating carbon footprint and ways to reduce greenhouse gas (GHG) emissions. Existing investments in adaptation from the private sector tend to protect private property through climate proofing assets or risk management such as through insurance schemes. Additionally, almost 70% of funds committed to developing countries for climate action are tied to loans and credit, and generally occur unilaterally and outside of national adaptation strategies.

Guatemala?s national climate change strategy estimates that there is a 71% funding gap between plans for climate and adaptation measures and the ability to implement these measures. The government expects these remaining funds to be largely sourced from the private sector and other development actors. However, there is a clear lack of perceived value and willingness by investors and the private sector to invest in climate smart agricultural practices.

Current adaptation programming lacks a unified systematic approach, a coherent strategy, nationally determined contributions (NDCs), alignment with national strategies, formal standards, or the ability to track investment in adaptation. There are not currently well-defined metrics that the

private sector can use to quantify the impact or return on investment (ROI) of adaptation, on consumers or on the stabilizing effect of adaptation measures on supply chains. Incentivizing the uptake of adaptation measures in supply chains will incur upfront, additional costs by private sector enterprises. Without a clear means of demonstrating potential ROI, private sector investment is unlikely to happen without outside intervention.

Barriers to Address

There are several barriers in place that contribute to the adaptation problems, including:

Lack of resiliency among smallholder producers. There is a general lack of resiliency currently among the smallholder farmers and producers in the region, in terms of the sustainability of their livelihoods and general living conditions. The effects of climate change are already destabilizing harvests crops grown both for subsistence and livelihoods, to the extent that they are already driving both internal and external migration. Beyond their impact on subsistence farming, these climate changes are also directly relevant to the value chains associated with the proposed project, since commodity crops such as cardamom and coffee require relatively consistent moisture patterns for optimal growth. Without a means to adapt to new climate norms, smallholder producers in the project regions will likely not be able to sustain a stable income ? especially given that the average income for families in the area is currently well below Heifer?s living income benchmark.

Limited funding/access to information for men and women producers regarding sustainable practices, including extension services. There is not currently a formalized system for smallholder producers to access information on adaptive measures. Smallholder producers often will need additional funding to implement these practices, but there is not currently adequate funding or mechanisms for extension services to facilitate adaptive practices. There is a lack of government funding for implementing national adaptation strategies, especially among rural populations, and the private sector does not have a systematized framework for catalyzing or quantifying investment in adaptation measures.

Limited capacity/knowledge regarding climate smart production practices. Though the governments of Guatemala and Honduras have adaptation plans in place, they lack resources to implement them. Hand in hand with this issue is the lack of capacity-building measures for climate smart adaptation practices, as the government does not have the resources to implement capacity-building with producers for adapation measures, exacerbating the lack of capacity and knowledge regarding climate smart production practices, and meanwhile private sector companies do not have a systematized framework for promoting or implementing adaptation measures for their supply chains.

Limited incentives for investment, especially by the private sector for climate smart benefits. Though there are plenty of reasons that the private sector could benefit from investment in adaptation, ranging from stabilization of supply chains to enhanced reputation, there is not currently a developed methodology that quantifies private sector investment. Funding adaptation measures in supply chains will incur an upfront cost to private sector enterprises, and without a method for demonstrating possible return on investment (ROI), private sector actors do not necessarily have an adequate way to quantify the positive effect of their investment in promoting adaptation measures.

Lack of standardized measurement and data for climate smart measures for customers. Consumers are not currently incentivized to make purchases which promote climate-

smart adaptation. Adaptation interventions propose a complex set of interventions which are not easily conveyed in marketing and messaging to end users. This is largely due to the fact that there is not a defined set of metrics or standardized measurements which can be translated to help customers understand the full impact of their purchases with respect to adaptation.

Cultural norms inhibiting uptake of adaptation practices and participation in value chains. Cultural norms may also serve as a potential barrier to the uptake of climate-smart adaptation practices. While both men and women smallholder producers currently lack access to climate smart techniques and capacity-building measures, traditionally women are largely excluded from decision-making processes, as well as from participating fully in value chains. The department of Olancho, like the rest of Honduras, has a predominantly machismo culture that prevents women from entering the value chain. Education, machismo, and traditional gender roles function as barriers for women to participate in economic activities outside the home. In Heifer?s work within the coffee and cocoa value chains in Olancho, 25% of participants are women. These women are integrated at different points in the value chain, mostly in the harvest and transformation of cocoa and coffee derivatives.

2) The baseline scenario and any associated baseline projects

In the proposed project areas in Guatemala and Honduras (14 total: 10 in Guatemala and 4 in Honduras), smallholder producers lack knowledge and capacity to implement sustainable climate-smart agricultural techniques. This is due in large part to a lack of funding and investment in adaptation measures. In both countries, there is a distinct funding gap between adaptation aims and implementation. This is especially true at the regional level, where there is a distinct lack of specific planning for adaptation measures in rural areas. Without a cohesive framework to spur private-sector investment, it is unlikely that there will be sufficient funding to invest in necessary adaptation measures in the near-term. A significant uptake in the climate-smart adaptation measures is needed to change the environmental and socioeconomic trajectory of the region. As such, unless the funding gap is supplemented from other sources, the business-as-usual scenario will likely be perpetuated.

Current agricultural methods and processes within the value chain for target crops in the project areas are leading to sustained deforestation. These pressures, combined with ongoing clearing for subsistence farming, use of fuelwood, and unsustainable agriculture (e.g., setting wildfires to clear land for cattle), are projected to incur continued loss and degradation of habitat and soils, and the loss of associated biodiversity and ecosystem services, all of which will continue to hamper adaptation and resilience in the project areas.

In Guatemala, in limited circumstances and with support from Heifer International and private sector partners including McCormick, Carcao Forest, Koppert Biological Systems, JM Thomasson, and De la Selva, farmers are beginning to use climate-smart crop management practices such as spacing, tissue management for trees, shade management, fertilization, use of agroforestry systems, harvest management and post-harvest drying, and use of forestry incentives from the Government of Guatemala. However, in Alta Verapaz gross deforestation is estimated at 48,084 ha equivalent to a rate of 1.2%, mainly due to poor cultivation practices (such as monoculture in full sun, use of pesticides, limited nutrition practices of plantations, among others) and environmental management (mainly inefficient drying processes), generating deforestation of some 4,000 ha per year (283,000 tons of CO2).

Around 350,000 producers participate in the production of cardamom, and they are mostly smallholders (90%). Of these, approximately 75% are indigenous and 10% are women, the majority living in poverty (at least 60%) and are highly vulnerable to the effects of climate change. This sector contributes an average of $350 million to GDP, however, despite these benefits, the current production and processing system produces a highly negative environmental impact, so its conversion to a sustainable system is an opportunity to generate positive environmental benefits, including climate change mitigation and adaptation benefits.

Farmers are also one of the most economically and socially vulnerable populations. The rural agricultural sector in Guatemala is not only characterized by its informality, low productivity, limited associativity and limited access to markets that result in low economic income, but it is also characterized by poverty. These structural characteristics coincide with difficulties of access and legality of land ownership, and consequently with a lack of real assets that act as collateral to guarantee access to loans from the formal financial system.

From the financial point of view, fluctuations in the prices of basic products both in local and international markets, inflation, currency devaluations, and insecurity and instability in terms of access to markets, limit the ability of producers to have certainty about their incomes, and real capacity to pay. Consequently, expected repayment by financial institutions tends to be uncertain.

In Olancho in Honduras, business-as-usual equates to continued deforestation from illegal logging stemming from subsistence farming, clearing for cattle pasture, collection of fuelwood (65% of the country?s energy comes from fuelwood), mining, timber harvesting, and forest fires. By some estimates, as much as 85% of timber production in the country is illegal. The illicit timber trade feeds endemic corruption and there is a severe lack of financing mechanisms for promoting agroforestry systems that promote income generation while forests are restored. Investment is needed from the private sector and the Government of Guatemala in order to promote these systems with small producers. Without deliberate intervention and increased funding for and implementation of climate-smart adaptive measures, environmental degradation in Honduras and in Olancho in particular will likely continue on its current trajectory.

In Honduras, the vulnerability of the agricultural sector to climate change is considered medium-level, and the project area is considered to be at the same level of risk. By 2030, a loss of up to 5% of the area suitable for agriculture, an increase in temperature of 1.4 degrees Celcius, with intensification of dry periods and reduction of of the water regime is estimated. In the case of coffee, it is estimated that 86% of the municipalities where this crop is managed will lose areas suitable for this crop. Losses of up to 25% of the areas suitable for growing coffee are estimated. However, the areas that lose suitability for crops such as coffee do occasionally become areas suitable for crops such as cocoa, with use of agroforestry systems and supplemental irrigation.

Despite these facts, it is important to note that in limited circumstances, and with intervention from organizations such as Heifer International, a small number of coffee and cocoa producers in Honduras are implementing practices to adapt to climate change such as: agroforestry, organic fertilizer, and solar dryers. There are unmet needs for the development, promotion and widespread use of practices such as: use of new drought tolerant crops, more efficient water use, use of nutrition plans based on soil analysis, new technology for more efficient processing and drying of crops, greater diversification of production systems, and expanding the coverage of climate variable measurement systems for decision-making.

Although companies, producer associations and development projects have invested in the establishment of technologies that improve the efficiency of processing and drying processes, coverage is quite limited. There is chronic under-investment related to creating measurement systems for climate variables and in the use of systems for the efficient use and exploitation of water. There are needs for new financing mechanisms that incentivize greater uptake by farmers for adaptation technologies, climate-oriented insurance systems, testing and establishment of new crop varieties, and diversified production systems.

While there is promotion of adaptation measures in project areas in both countries, this is not yet done in a way that promotes consistent and quantifiable external investment in climate-smart measures.

In Honduras, cocoa producers, through the associations to which they belong, market their quality and conventional product with the Swiss company Chocolats Halba, who pays a price of up to $4,000 per metric ton of quality A cocoa with certification seals (Organic and Fair Trade). This company pays estimated prices of $1,500.00 per metric ton of regular cocoa. Approximately 30% of cocoa is traded in formal markets, while the difference is traded in the informal market, with intermediaries who buy cocoa directly from producers. In coffee, most of the product is marketed

through intermediaries, who pay prices based on the New York Stock Exchange; these intermediaries then commercialize it with exporting companies such as the Compa??a Hondure?a del Caf? CO HONDUCAF?. Producers, with technical advice from institutions such as Heifer International, the Institute for Cooperation and Self-development ICADE, and the Honduran Coffee Institute IHCAFE, implement some climate-smart production practices and limited critical investments have been made in processing structures such as solar dryers.
In Guatemala, Heifer International has a long-term commitment to the promotion of agroforestry systems and the development of the cardamom value chain and the diversification of income sources for small producers and their adaptation to climate change and the promotion of climate smart agriculture. Work will continue in close coordination with MARN and the National Institute of Forests ? INAB, to promote access to the forestry incentive, in favor of cardamom and other culinary spice producers. However, there is not currently sufficient funding or resources available to implement adaptation and investment in climate-smart practices in a wider scale in the project areas.

Baseline on adaptation indices:
There are nascent efforts at certification and accreditation of adaptation benefits, such as the Adaptation Benefit Mechanism (ABM) and the Vulnerability Reduction Credit. The ABM builds upon experience with the Clean Development Mechanism under the Kyoto Protocol?s carbon market. The ABM de-risks and incentivizes investments by facilitating payments for delivery of Adaptation Benefits. ABM certifies the social, economic and environmental benefits of adaptation activities. The value of adaptation action captured in these certificates, including the incremental costs of generating the benefits, will be promoted to potential investors or lenders. The Vulnerability Reduction Credit offers a method for helping to quantify adaptation results across an array of different sectors, while also ensuring that some fundamental, qualitative principles and standards are met including avoidance of harm, consultation with impacted communities, sustainability, and transparency.

While these two efforts are operational, without the GEF investment, there is still a need for a mechanism that looks at the whole of the supply chain, particularly production and processing. In addition, current mechanisms do not necessarily quantify adaptation actions to allow both companies and farmers to make trade-offs based on their circumstances. Particularly for farmers, there is a need for a mechanism that is able to support better market prices and enhanced resiliency and access to finance and tradeable credit schemes. Without GEF financing for the development and creation of an adaptation index, there would be no cohesive advocacy work to reduce the rate of deforestation in the project areas.
Table 2. Existing Programs and Projects Linked to the Project

Project Name	Project Duration	Donor(s)	Brief description of how it is linked to this GEF project
Heifer Impact Capital Business Development Support Program	Started in 2020; for more information please visit here.	SEAF / Heifer International	Heifer International and impact investment management group Small Enterprise Assistance Funds (SEAF) are working through a partnership to increase investments in local food and farming businesses in the United States, Africa, Asia, Central and Latin America. The partnership is enabling Heifer International?s impact investing division ? Heifer Impact Capital ? and SEAF to build on SEAF?s global network and experience raising over $1.2 billion in impact investments over the last 31 years. The groups are leveraging SEAF?s global fund management activities to catalyze private investment in rural communities around the world.

BioFORESA I, II	Phase 1: 2012- 2015 Phase 2: 2015-2018	Heifer (Guatemala)	2,400+ families, 20 communities. Targets increased water supply, improved agroecological production, and sustainable reforestation and adaptation strategies.
BOSQUES-Productive Partnerships for Conservation	Phase 1: 2015-2020 Phase 2: 2021- 2023	Heifer (Guatemala)	2,000 smallholder farmer families working in strategic value chains in protected areas, linking products to local and international markets. Recovers & protects +180,000 hectares of forests.
Green Business Belt	Phase1: 2020-2024 Phase 2: 2025-2029 (anticipated)	Heifer (Guatemala)	11,200+ families A market-system model focused on high-demand spice value chains and livelihoods, agroforestry systems, climate smart agriculture, that supports production and connections to markets.
BID-LAB projects in Honduras	Chocolat4All: Nov 2019 - Sept 2022 Coffee Chain: December 2020 ? June 2023	BID-LAB	These are two projects funded by BID-LAB that are contributing to increasing the resilience of specialty coffee and cocoa producers in Honduras
LEVERAGING SUCCESS and Chocolat4All	Chocolat4All: Nov 2019 - Sept 2022	Heifer (Honduras)	Has a presence in the intervention area and promotes climate-smart production practices in the livestock chain
BIADES/CHOCOLATES (Chocolat4All) project	Chocolat4All: Nov 2019 - Sept 2022	Heifer (Honduras)	Promotes climate-smart production practices in the livestock chain in the cocoa chain in the area.
Cardaforestry Project	October 2020- September 2023	Partnership McCormick and Heifer International	Promotion of agroforestry system, and support to 500 families farmers involved in value chain of cardamom and allspice. Innovation in drying technology for cardamom and other spices.
Carcao Forest	October 2020- December 2025	Partnership 12Tree Finance / Germany and Heifer International	Agroforestry systems promotion for production of cardamom and cocoa, including technical assistance for 500 families, and improved market access.
ICADE (Honduras)	Permanent program	ICADE (Honduras)	ICADE also supporting the coffee and cocoa chains in the Honduras project area, with technical assistance, training, access to certification, and some small investments.
National University of Agriculture (UNAG)	Permanent program	National University of Agriculture (UNAG)	Conducts training and technical assistance actions for coffee and cocoa producers in the area.

Secretariat of Agriculture and Livestock (SAG)	Permanent program	Secretariat of Agriculture and Livestock (SAG)	Facilitates the Olancho MESCAOLA Regional Cocoa Table, which is a space for planning and coordination of direct and indirect actors linked to the cocoa chain. Coordinated with the Programa Nacional de Desarrollo Agroalimentario (PRONAGRO).

3) The proposed alternative scenario, with a brief description of the expected outcomes and components of the project:

An alternative to the baseline scenario is to spur the implementation of adaptation measures to climate change in the project areas by incentivizing private investment in adaptation measures by piloting, developing, and deploying an Adaptation Equivalency Index (AEI) in Guatemala and Honduras, along with a toolkit for adoption and implementation of the index. The Adaptation Equivalency Index is a framework that will allow for the quantification of impact of investments in adaptation measures for supply chains. The AEI will build on nascent efforts to develop a new asset class (adaptation credits) that monetizes adaptation benefits such as reduced vulnerability to the effects of climate change, and improved resiliency for the environment and for men and women living in smallholder farming communities. The AEI will provide a framework in which the private sector can quantify its investment in adaptation measures to climate change within corresponding supply chains (including both smallholder producers and other value-added steps of the process), providing a quantifiable unit of investment that corresponds to adaptation benefits incurred by the supported adapatation measures.

The AEI will be developed initially by piloting adaptation measures in target communities within the project areas, tailored through consultation with smallholder producers and communities and with experts in adaptation. The impact of these measures will be monitored and evaluated, assessing the adaptation and financial impact for the different types of adaptation measures. These results will be collated and developed into a framework for analyzing the impact of different adaptation measures ? the ?Adaptation Equivalency Index?. This index will come with a toolkit developed for introduction by private sector enterprises; the AEI will also be developed with ESG/CSR metrics in mind, so that businesses will be able to more fluidly integrate the AEI metrics into their business practices and models.

The AEI will make it easier to summarize the complexities of adaptation interventions as they take multi-dimensional realities and synthesize them into a format that is more readily applied in decision making. This process makes it easier to interpret than a battery of separate indicators and allows for assessment over time. This process makes it possible to reduce the visible size of indicators without dropping the underlying information base. Consequently, it is possible to include more information within a bandwidth or information communication constraint. The AEI will also help communicate with the general public or specific, non-technical stakeholders and promote accountability throughout value chains. Finally, the AEI will allow the comparison of complex systems more efficiently.

Working with partners the AEI will be developed through several reiterative steps including:

- *Development of a theoretical framework.* A theoretical framework will be developed to provide the basis for the selection and combination of single indicators into a meaningful composite indicator under a fitness-for-purpose principle.

- *Data selection.* Indicators will be selected on the basis of their analytical soundness, measurability, country coverage, relevance to the phenomenon being measured and relationship to each other. The use of proxy variables will be considered when data are scarce.

- *Manage imputation of missing data.* Working with partners we will determine approaches for imputing missing values. Extreme values will also be examined to avoid unintended benchmarks.

- *Conduct multivariate analysis.* An exploratory analysis will be used to investigate the overall structure of the indicators, assess the suitability of the data set and explain the methodological choices, e.g. weighting, aggregation.

- *Normalisation of indicators*. Indicators will be normalised to render them comparable. Extreme values will be assessed so as not to influence subsequent steps in the process of building a composite indicator. Skewed data will be identified and accounted for.

- *Weighting and aggregation.* Indicators will be aggregated and weighted according to the underlying theoretical framework. Correlation and compensability issues among indicators will considered and either be corrected for or treated as features of the phenomenon that need to retained in the analysis.

Once fully developed, the AEI will serve as a framework for companies to invest in adaptation measures within their supply chains. This will help to ameliorate the funding gap present for implementation of adaptation measures to climate change, especially in rural areas with smallholder producers who are highly vulnerable to the effects of shifting climatic norms and extreme weather events.

As part of the proposed project the AEI will be integrated via premium value chains (cardamom, allspice, coffee, and cocoa), incentivizing the uptake of climate-smart agriculture practices. The AEI will be developed by working directly with 2,425 smallholder producers in the departments of Alta Verapaz and Izabal in Guatemala, and the department of Olancho in Honduras. Climate-smart agriculture and production practices will be researched, developed, and implemented within these communities, working within in the value chains of cardamom, allspice, and cocoa in Guatemala, and in the value chains for coffee and cocoa in Honduras. This will result in the uptake of climate-smart adaptation measures being implemented in these regions, leading to improved resiliency and lessened deforestation and other environmentally destructive practices within the scope of these value chains, while preserving and enhancing biodiversity in some previously degraded areas.

Likewise, these adaptation measures also aim to stabilize, and potentially increase, the income of smallholder producers participating in the project. This stabilization (and potential increase) of income, as well as a potential diversification of livelihoods, will help to alleviate poverty and decrease food insecurity among smallholder producers, which will further reduce environmental

pressures in the project areas. Monitoring living income is a standard procedure for Heifer and will be applied in this programming.

This highly innovative approach will aim to standardize investment and action across supply chains and commodities, thereby enabling a systematic portfolio approach to adaptation investments and dynamic responses to risk making for corporations (and potentially for farmers who are diversified). It will empower farmers and producers to make decisions based on individual circumstances, risk exposure (real or perceived), and access to a variety of assets. The AEI will also enable farmers and corporations to respond to a variety of shocks and stressors in different ways while ensuring the motivation to act remains intact.

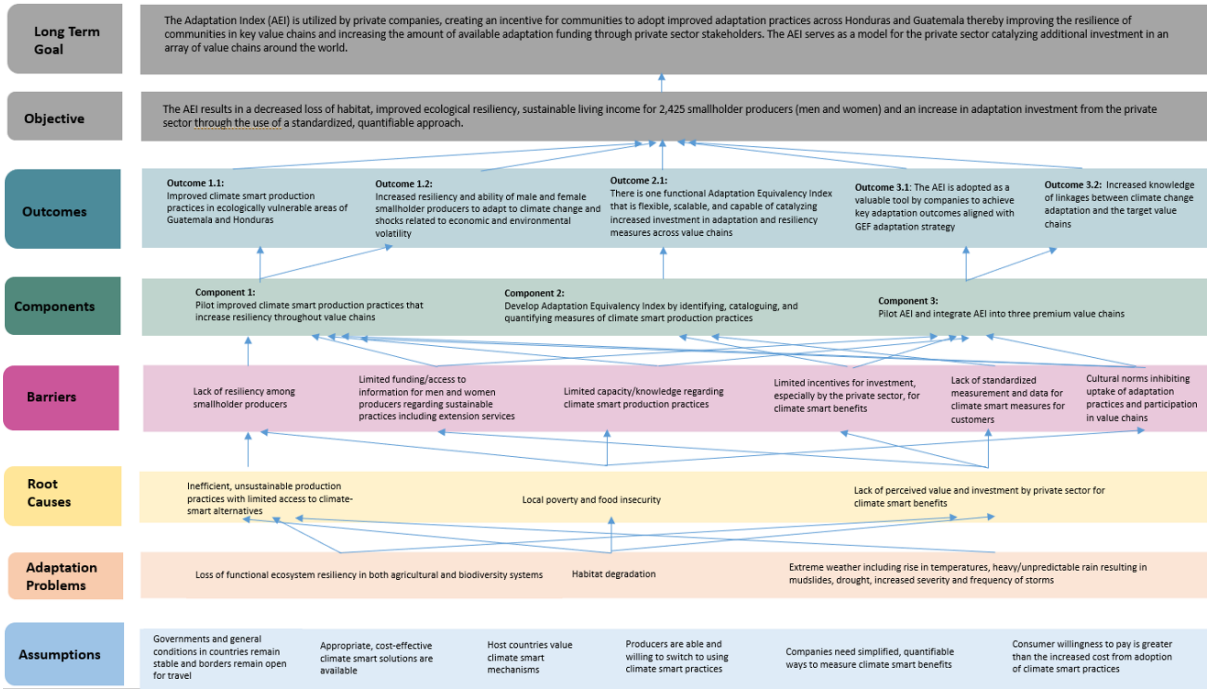
Ultimately, the theory of change is that the AEI will enable farmers, processors, and private sector actors to capture the value of adaptation action, including the incremental cost of generating benefits, and to promote investment. Beyond directly impacting project participants, the potential overall impact of this toolkit through the potential to scale is vast. The AEI has the potential to serve as a crucial building block to the broader certification of adaptation benefit credits, as well as standardization of programs across regions and across implementing partners.

This intervention is especially important in the post-pandemic era, as there is a need to ensure livelihood development in ecologically vulnerable areas beyond tourism, ensure food security, and stabilize international supply chains. This investment will also help to overcome the large funding gap currently presented in the BAU scenario for implementing adaptation measures in the agricultural sector.

The AEI will be developed with the aim of potentially inducing much wider and further reaching benefits. According to the project?s theory of change, once adopted, the AEI will have the effect of increasing adaptation investments in supply chains including an array of financial instruments. Investments will be motivated because, in addition to improved resilience and stability in supply chain management, the private sector will have a quantifiable method for articulating return on investments and will be able to integrate the AEI into current and emergent ESG/CSR strategies. Currently, there exists a clear, articulate ROI mechanism for mitigation ? the carbon credit. No such analog exists for adaptation. ESG strategies around adaptation are relegated to qualitative descriptors and lack simple, quantitative results. Composite indexes, such as the AEI, are useful tools in this circumstance.

The AEI will be designed to integrate with generic ESG/CSR metrics, which will facilitate its integration with companies? ESG strategies and business models ? allowing for the addition of their impact on climate change adaptation onto already their preexisting ESG/CSR portfolio. In other words, companies will be able to easily report on investments and outcomes for adaptation in a similar manner to which they report on mitigation strategies. In addition to private sector benefits, this market-based solution will ultimately increase adaptation funding more broadly and in a manner that aligns with national strategies, increases resiliency in vulnerable populations, and increases the uptake of smart climate approaches for smallholder farmers and processors at scale.

Figure 1. Project Theory of Change



The proposed project is structured around three components, as described below, along with associated outcomes and outputs.

Objective: Develop and launch the Adaptation Equivalency Index (AEI) in Guatemala and Honduras to ensure decreased loss of habitat, improved ecological resiliency, sustainable living income for smallholder producers (men and women) and an increase in adaptation investment from the private sector through the use of a standardized, quantifiable approach.

Objective Indicators:

Indicator A: Area of land managed for climate resilience
Target A: 2,054 hectares managed for climate resilience

Indicator B: Livelihoods and sources of income strengthened/introduced (agriculture, agro-processing, reduced supply chain)
Target B: 12,125 producers have strengthened/new livelihoods and sources of income

COMPONENT 1. Pilot Improved climate smart agriculture practices that increase resiliency throughout the value chains

The first component will utilize social capital to introduce the idea of the AEI and its associated adaptation measures and funding mechanisms to smallholder producers and communities in the selected project areas, and to work with them to determine which adaptation measures will be best suited for each community?s needs. The climate smart agriculture practices would be developed and deployed in consistent communication and consultation with local stakeholders. The funding, via the first component of the project, will at a minimum provide adaptation solutions and ensure uptake of climate smart agriculture production techniques with an estimated 2,425 smallholder farmers in two countries focused on the cardamom, allspice, cocoa, and coffee supply chains.

This initial two-year phase, in which target communities are introduced to the concept of the AEI and specified adaptation measures are tailored and piloted, will help determine which climate-smart adaptation measures will have the highest likelihood of positive impact (the formalized quantification of their efficacy being determined in the second component of the project). Heifer?s PMU will work directly with local smallholder farmers/producers, with external consultation from

relevant institutions, governments, and enterprises. The PMU will work to identify participant communities, assess their needs regarding adaptation, increase the capacity of the participating smallholder producers in these measures, and develop a plan for their implementation, and carry out demonstration projects. Capacity-building and monitoring will be conducted also by the Field Technicians.

Some possible measures to be piloted and implemented to increase the climate resiliency and adaptation capacity of smallholder farmers include adoption of climate smart practices and technologies such as transition to drip irrigation, solar powered technologies, diversified livelihood practices, weather and market condition reporting, livelihood creation for communities/individuals living in ecologically vulnerable areas, habitat restoration, time poverty alleviation strategies, micro-insurance administration, and targeted or restricted micro-finance mechanism, among others.

Small scale producers are forced to make a series of decisions, trade-offs, and adjustments on a regular basis. Approaches to sustainability change as variabilities in climate, markets, and other opportunities fluctuate. It is therefore necessary as part of Component 1 to evaluate the impact of different approaches on resiliency and the ability of farmers to adapt to climate change. For example, farmers growing shade grown coffee face a series of obstacles and opportunities that differ from non-shade grown coffee.

Component 1 will introduce beneficiaries to the concept of the AEI and specified adaptation measures will be tailored and piloted to determine which climate-smart adaptation measures will have the highest likelihood of positive impact (the formalized quantification of their efficacy being determined in the second component of the project). Some possible measures include drip irrigation, solar powered technologies for drying spices, weather and market condition reporting, shade management, pruning, plantation density, pest and disease management, nutrition/fertilization, processing of crops, and research into genetic material topics.

Component 1 will lay the groundwork for development of the AEI under Component 2.

Understanding the complexities of these decisions is critical to building the composite index model so that the trade-offs can be properly considered and accounted for. The AEI will be developed by identifying, cataloguing, and quantifying measures of adaptable sustainable practices.

Outcome 1.1. Improved climate smart production practices in ecologically vulnerable areas of Guatemala and Honduras

Indicator 1.1: *Total # of hectares of production land under improved management*

Target 1.1:
Total: 2,054 hectares
Guatemala: 1212 hectares
Honduras: 842 hectares

In order for the AEI to be developed, appropriate climate smart practices must be first implemented and monitored in target communities in the project areas. A toolkit of these practices will be tailored for specific communities? needs, and pertain to particular value crops. As part of this process, climate smart production practices will be implemented in the ecologically vulnerable areas that the target communities inhabit.

Output 1.1.1. Producers identified for participation in climate smart practices

Indicator 1.1.1: *# of male and female producers identified*
Target 1.1.1: *480 male and 120 female producers (600 total)*

This output will be accomplished by developing toolkits for climate-smart adaptation practices tailored for participant communities, and then piloting them with these communities. This will be

done by first identifying smallholder producers for participation in trialing the climate-smart practices, via consultation and informing possible participants about the aims of the project, obtaining formal letters of support from communities, and conducting a baseline study of their current agricultural practices (as well as socioeconomic aspects and gender dynamics). Note that the targeted number of hectares under improved management and/or implementing climate smart agriculture is only for the areas associated with the piloting of adaptation measures in order to monitor impact and use the results to develop the AEI framework (which can eventually lead to a much more significant impact in terms of area under improved management / CSA practices).

Output 1.1.2. Technologies, tools, and skills needed to implement climate smart practices are obtained and utilized by producers

Indicator 1.1.2: *# of male and female producers with knowledge about new technologies, tools and skills for climate smart agriculture*
Target 1.1.2: *360 male and 90 female producers (450 total)*

The next step is to introduce technologies, tools, and skills needed to implement climate smart practices, and ensure they are obtained and utilized by producers. This will be done by first holding virtual workshops with relevant experts, enterprises, and institutions in both Guatemala and Honduras to identify climate smart technologies, tools and best practices related to the selected value chains. This will be combined with obtaining existing tools and knowledge regarding adaptation already being used by communities in the project area, to develop a more robust and tailored toolkit. From this information, adaptation toolkits will be developed, and a plan to implement them will be formed over the course of a series of workshops resulting in the creation of an overall adaptation plan for communities.

Under this component, examples of technologies, tools, and skills that could encompass the pilots include:

? **Technologies** ? e.g., shade management, pruning, plantation density, pest and disease management, nutrition/fertilization, irrigation, processing of crops, genetic material research, solar-powered drying technology, etc.
? **Tools** ? e.g., Farmer field schools, exchange visits for knowledge sharing, use of drones to measure progress and impacts in Honduras (drones will be purchased through other Heifer projects)
? **Skills** ? e.g., Improved land management/improved production

Output 1.1.3. Demonstration projects of climate smart interventions implemented in rural communities in both countries

Indicator 1.1.3: *# of demonstration projects implemented in rural communities*
Target 1.1.3*: 20 demonstration projects*

Finally, demonstration projects of climate smart interventions will be implemented in rural communities in both countries and throughout target areas. This will involve identifying 20 target communities and their needs regarding adaptation, and then implement the demonstration adaptation measures, with follow-up, technical support, market access support, and monitoring provided during the process to ensure smooth delivery of the demonstrations.

Outcome 1.2 Increased resiliency of livelihoods and ability of male and female small holder producers to adapt to climate change and shocks related to economic and environmental volatility

Indicator 1.2.a.: *# of male and female producers that are better equipped to effectively adapt to climate change by using adapted farming practices*
Target 1.2.a.: *12,125 producers (7,275 males, 4850 females)*

Indicator 1.2.b.: *# of producers that have higher incomes as a result of their participation in the project (considering actual income compared to the baseline)*
Target 1.2.b.: 6,042 producers (3,626 men and 2,416 women)

As a result of implementing climate smart practices in agriculture production and processing, the livelihoods of smallholder producers will be ameliorated and made more resilient to the effects of climate change. Likewise, diversification of livelihoods will also allow for increased living incomes and better resiliency against economic and environmental volatility.

Of the 2,425 producers under the target 1.2.a., this would include 1,950 men and 475 women. Of the 1,212 producers under target 1.2.b., it is anticipated that 737 will be men and 475 will be women.

Output 1.2.1. Information on climate change adaptation disseminated in both countries across target areas

Indicator 1.2.1: *# of communities that have received information about climate change and adaptation strategies*
Target 1.2.1: *14 communities*

This will be done both by developing a report that captures case studies, best practices and recommendations arising from the demonstration projects (e.g., adaptation benefits, carbon sequestration, etc.), and by creating a single webpage for the project to host communications materials for the dissemination of information on adaptation practices with communities and other relevant stakeholders.

Output 1.2.2: Strengthened capacity of producers in rural communities to implement climate smart measures

Indicator 1.2.2: *# number of male and female producers trained on climate adaptation practices such as climate smart agriculture, drip irrigation, solar dryers, etc.*
Target 1.2.2:
Total: 1,075 producers (600 male and 475 female)
Guatemala: 475 producers
Honduras: 600 producers

Using this information, the capacity of producers in rural communities to implement climate smart measures will be strengthened. This will be done by organizing and delivering virtual workshops or intercommunity exchange events per country about climate smart agriculture and how to measure its benefits, as well as developing a monitoring system (with participation by communities) to monitor the impacts of these adaptation measures. We will complete baseline of resiliency at start of project (within six months of start of project per timeline).

COMPONENT 2. Develop Adaptation Equivalency Index by identifying, cataloguing, and quantifying measures of climate smart production practices

The second component is to develop the Adaptation Equivalency Index (AEI) by identifying, cataloguing, and quantifying measures of adaptable sustainable practices. To advance the AEI toolkit and the adaptation index, Heifer and its partners will identify, test, rank, and score adaptation solutions in the toolkit. Though it will initially be utilized for the project regions and associated value chains in Guatemala and Honduras, the AEI will be able to be modified for and deployed in a variety of contexts once properly developed. The aim of creating the AEI is to have it be utilized by private sector to quantify their impact in adaptation investment, thus catalyzing increased engagement and investment in adaptation and resiliency measures across value chains developed.

Outcome 2.1: There is one functional Adaptation Equivalency Index that is flexible, scalable, and capable of catalyzing increased investment in adaptation and resiliency measures across value chains

Indicator 2.1: *# of indices developed with potential to catalyze investment in adaptation and resiliency measures across value chains*
Target 2.1: *1 index is ready for piloting by companies*

The AEI, while designed based on pilots pertaining to the initial value chains (cardamom, allspice, coffee, and cacao), will also be flexible so as to incorporate additional potential value chains. This flexibility will widen the potential scope and scalability of use across various potential value chains, geographies, leading eventually to increased investment in adaptation by the private sector.

Output 2.1.1. Climate smart production practices identified for inclusion in the AEI

Indicator 2.1.1: *# of climate smart production practices identified for inclusion in the AEI*
Target 2.1.1: *4 distinct categories of climate smart production practices identified*

Output 2.1.2. AEI is created

Indicator 2.1.2: *# of indices developed to catalyze investment in adaptation and resiliency measures across value chains*
Target 2.1.2: *1 Index developed*

This outcome will be accomplished alongside the activities for piloting and implementing the adaptation measures in the target communities, in Component 1. The purpose is to establish and launch the AEI. This will be done by engaging with the governments of Guatemala and Honduras via in-person and virtual meetings to identify key adaptation metrics, and to analyze and integrate these metrics into the AEI framework and analysis. A Project Steering Committee and governance structure will also be established for the AEI including stakeholders from government, the private sector, communities, and producers, as well as operational guidelines and measurement tools for the AEI, and guidelines will be provided for government. A cost-effective customized software system will be developed to translate/quantify adaptation metrics into the AEI. The AEI will then be validated with stakeholders via virtual meetings/webinars with stakeholders from government, the private sector, communities, and producers.

COMPONENT 3. Pilot AEI ? integrate AEI into three premium value chains
The third component is to pilot the AEI by integrating the AEI into three premium value chains. This component will involve integrating the AEI into the business practices, organizational commitments, policies, and supply chains of both national and multi-national companies and corporations. Heifer will work with its corporate partners to drive demand for AEI scoring especially through incorporating adaptation programming and AEI metrics into ESG/CSR reporting that it standard policy for many companies such as public filings, annual reports, corporat social responsibility reports and policy setting such as corporate governance, corporate operating procedures (such as defining a minimum acceptable score, goal setting, established price points across an array of AEI scores, and balancing of targets across supply chains trading to achieve goals). Where possible, this will be done by integrating the AEI with private enterprises with existing CSR/ESG programming interested in investing in adaptation. This outcome will be accomplished by the PMU and with support from Heifer?s private sector engagement department on engagement with multinational companies.

The target value chains are fully contained within Guatemala and Honduras. In Honduras, Heifer has 42 years of continuous on-the-ground presence, with eight years working in coffee and cocoa. In Guatemala, Heifer has 52 years of continuous on-the-ground presence, with ten years of experience working in cardamom and five years in allspice. These are economically significant value chains, and Heifer will leverage our established partnerships and in depth experience and knowledge to ensure applicability of AEI in different countries.

Outcome 3.1: The AEI is adopted as a valuable tool by companies to achieve key adaptation outcomes aligned with GEF adaptation strategy

Indicator 3.1: *# of companies signing agreements with Heifer to launch pilot projects to use the AEI*

Target 3.1: *6 companies signing agreements*

An essential feature of the project will be demonstrating the applicability of the AEI in real-life and business contexts. Demonstrating the successful uptake of the AEI framework by private sector project partners will elucidate a paradigm for other private sector enterprises to utilize the index. The AEI will incentivize funding in and the uptake of adaptation outcomes that align with the GEF adaptation strategy.

Output 3.1.1 AEI companies define KPIs and measure progress on their targets and metrics

Indicator 3.1.1: *# of companies that report metrics on AEI use*
Target 3.1.1: *6 companies measuring progress on AEI pilots*

An important measure of the understanding and commitment of the AEI companies will be when they are defining KPIs and measure progress on their targets and metrics. To reach this target, the project team will promote the AEI and ensure its use by the private sector, the project will demonstrate use of AEI by corporate partners and other stakeholders. Heifer will partner with certain private sector enterprises, and Heifer GPA team will provide orientation and guidance to these prospective companies on the AEI. A virtual workshop covering the use of the AEI, and how to integrate it with business practices and strategies, will be delivered with corporate partners in Honduras and Guatemala and relevant stakeholders (including Ministries of Environment and communities). As a result of this engagement, agreements will be signed with at least 2 corporate partners to work in the value chains for spices, coffee and/or cocoa, in order to launch pilot projects to use the AEI to improve adaptation practices.

Outcome 3.2 Increased knowledge of linkages between climate change adaptation and the target value chains

Indicator 3.2: *% of key industry leaders and members of the general public surveyed during the project showing increased knowledge about the linkages between climate change adaptation and the target value chains*
Target 3.2: *75% of survey respondents*

A crucial piece of the overall success of the AEI will be allowing consumers to understand the linkages between their purchases and adaptation investments (and implementation). By increasing consumer knowledge of this link, and making an easily identifiable system for letting them know the impact of their purchase, consumers can help to support the funding and uptake of adaptation practices among smallholder producers in relevant value chains.

Output 3.2.1: Companies develop communication plans about AEI and its relevance targeting consumers, key industry leaders, and public sector authorities

Indicator 3.2.1*: # of communications plans on the AEI developed by companies to target key industry leaders and the general public*
Target 3.2.1: *6 communications plans*

Another essential piece of ensuring wider uptake of the AEI is for companies to develop formal communications plans targeting key industry and public sector stakeholders to extend engagement beyond the initial partners. This involves working closely with national environmental authorities and relevant stakeholders to target key industry leaders and the general public, and creating an online tracking platform to consolidate key information and monitor the delivery of the AEI communications plans. The communications plans will encourage increased consumer awareness of the AEI and the impact of consumer behavior on climate change adaptation in relevant value chains.

4) Alignment with GEF focal area and/or impact program strategies

The AEI supports the overall LDCF/SCCF strategy to ?strengthen resilience and reduce vulnerability to the adverse impacts of climate change in developing countries, and support their efforts to enhance adaptive capacity. The project aligns well with the first two Objectives of the GEF programming, and with the strategy of enhancing engagement from the private sector.

The project will support Objective 1 by reducing vulnerability and increasing resilience to adverse effects of climate change by incentivizing investment in adaptation practices, as well as through capacity-building in these practices and technologies used for climate-smart agriculture and production methods among smallholder producers. The AEI itself is also a highly innovative investment vehicle which has the potential to aid in reducing vulnerability in the project areas in Guatemala and Honduras, but also on a global scale, including being adaptable to incentivize investment for adaptive tools and technologies specific to certain LDCs.

The creation of the AEI will also support Objective 2, the mainstreaming of climate change adaptation and resilience, by creating a quantified methodology for investment. Specifically, the project aligns with the SCCF strategy of introducing and testing/adopting adaptation practices in new areas, and enhancing the resiliency of supply chains for targeted commodities.

Within the general GEF programming strategy, the AEI could also be utilized across sectors to integrate adaptation into other aims, such as addressing climate mitigation, sustainable land use, and preserving biodiversity while addressing the causes of degradation and vulnerability. This project also aligns with strategy of supporting ?regional and global initiatives to demonstrate and test early concepts with high adaptation potential on a global scale, before they are ready for national implementation.

The AEI also integrates specifically with the LDCF/SCCF?s aim of enhancing private sector engagement in adaptation, aligning with both pillars of this strategy by providing an innovative investment vehicle and potentially integrating adaptation into business models, and by partnering with private companies to spur ?the development of climate resilient products and goods?. The AEI would also help to ?mobilize the private sector as an agent for adaptation by supporting the mainstreaming of climate change adaptation and resilience considerations into business models and risk management capabilities, including by enhancing business codes, standards and practices.

The AEI is a scalable investment approach for catalyzing adaptation measures in value chains, which also aligns with the SCCF?s approach of enhancing private sector engagement in facilitating and funding adaptive measures. Both in the project areas in Guatemala and Honduras, and in many other countries around the world, private sector investment in creating resilient value chains will be necessary to address funding gaps in adaptation strategies.

Although the project and AEI will be developed in Guatemala and Honduras, the AEI framework can be applied at a potentially global scale, including in LDCs. In addition to supporting the SCCF strategies, the AEI will potentially help to support Objective 3, fostering enabling conditions for effective and integrated climate change adaptation, via supporting the implementation of the NAPs/NAPAs of LDCs. The project also aligns with the GEF?s programming strategy to enhance gender equity, as it will work throughout each component to further incorporate women throughout the targeted value chains, while responsively addressing the difficult gender norms in Guatemala and Honduras.

5) Incremental or additional cost reasoning and expected contributions from the baseline, LDCF/SCCF and co-financing

Without this incremental support from the GEF, adaptation practices in the project regions and value chains will continue to be sporadically implemented in a non-standardized manner, without standardized metrics and extra investment from sources such as private enterprise, contributing to the continuation of the adaptation gap. While individual companies and agencies (such as Heifer International) would likely continue to implement adaptation measures, there would not be a

coherent, unified structure or methodology to this implementation. Private sector enterprises will find it more difficult to justify investment in adaptation measures in their supply chains, as there would not be a quantified method demonstrating return on investment. This will go hand-in-hand with associated effects, such as continued trends of deforestation and soil degradation, and a general lack of resiliency to the effects of changing climatic norms and extreme weather events.

Funding from the GEF is imperative for galvanizing private sector investment that will build resilience in three important value chains for Honduras and Guatemala. The GEF funding adds to the project baseline and will aid in the creation and piloting of the AEI, which will serve as an investment vehicle to further incentivize private sector funding in these measures. This will also incentivize further uptake of adaptation practices by smallholder producers in the project regions and value chains, as well as standardizing (and improving) their implementation and incentivizing their continuance. Globally, the creation and integration of the AEI into value chains and corporate CSR/ESG strategies has the potential to multiply these adaptative effects across value chains and geographies. The integration of adaptive impacts into product rating and marketing will also help to drive consumer behaviour that promotes adaptation within relevant value chains.

Co-financing

In addition to the financing from the GEF, co-financing provided in a ratio of more than **1:8.** The majority will be sourced from in-kind contributions, primarily from the governments of Guatemala and Honduras, which will assist in coordination among stakeholders and in providing assistance to the communities with piloting adaptation efforts. Please see Annex K for more information.

GEF funding for this project will build on Heifer?s current investments in the region and globally, including ongoing work with producers and processors in the same geographic areas to be covered by this project. Heifer is working with exploratory funding from the Dutch Fund for Climate and Development (DFCD) to scope the feasibility of building a private sector entity that would aggregate three supply chains into one trade company. Heifer is also investing $5 million in smart infrastructure in Guatemala and has recently completed a global inventory with CIAT to catalogue climate smart technologies currently being deployed in project sites globally.

Heifer International has mobilized **$8,669,268** in co-financing from non-GEF funding for activities in Honduras and Guatemala that will directly contribute to this project. Heifer International is providing **cash support (investment mobilized)** that will cover gaps in project costs including for personnel, equipment, and office operations. Heifer?s support also includes **in-kind financing** from active projects from donors such as BID-LAB for activities that are increasing the resilience of specialty coffee and cocoa producers in Honduras. Additionally, this includes support for several projects in Guatemala with smallholder spice farmers from donors such as Oro Verde to help them achieve sustainable living incomes and contribute to the protection of tropical forests.

Adaptation measures (such as agroforestry and reforestation) are promoted in Heifer programs in the project areas, and other adaptation measures are sporadically utilized in value-chain processes (such as using solar dryers for drying of spices) in the regions. This is also true of the governments of Guatemala and Honduras, as well certain private sector partners. However, there is not yet a quantified methodology for tracking the impact of these practices, or of incentivizing further investment in adaptation measures by external sources such as the private sector.

6) Adaptation Benefits (LDCF/SCCF):

Beyond direct beneficiaries, the AEI could potentially lead to adaptation benefits on a much wider scale. As a framework, the AEI has the potential to serve as an investment vehicle for adaptation

measures across geographies and value chains. The development of the AEI will align with the Adaptation Tracking Tool?s core indicators in the following specific ways:

Core Indicator 1: 12,125 total direct beneficiaries (7,275 male, 4,850 female)
This indicator was calculated for Guatemala and Honduras and is based on the number of producers that Heifer works with in the selected project areas. It is estimated that there are five household members/beneficiaries per producer.
Progress on this indicator will be achieved by building the capacity of smallholder producers in Component 1 of the project, via community outreach and capacity-building workshops on implementation of climate smart agriculture practices. This will be done in consultation with target communities to assess needed CSA implementation methods. Progress on this indicator will be measured through a series of interviews, surveys, collection of data on implementation on climate smart agriculture techniques (as per indicators in results framework). Progress reporting will be done by collection of standardized information on the beneficiaries of sustainable production activities supported by the project.

Core Indicator 2: 2,054 ha of land managed for improved climate resilience
For both Guatemala and Honduras, the hectares of land managed is based on the number of hectares of land owned by the producers that Heifer works with in the selected project sites.This target will be achieved by building the capacity of smallholder producers in Component 1 of the project, through support of the actual implementation of climate smart practices on lands of target communities / smallholder farms. Progress on this indicator will be measured through a series of interviews, surveys, collection of data on implementation on climate smart agriculture techniques. Monitoring of land managed for improved climate resilience will also be done through site vists conducted by field teams to assess implementation of climate smart practices.

Core Indicator 3: 3 policies/plans that will help mainstream climate resilience
In both countries, Heifer will deliver activities working together with the respective ministries of environment, both of whom have shared letters of support for this project. Heifer will also work directly with municipal authorities in project areas to build their capacity on adaptation strategies. The AEI will be developed in collaboration and used by governments, and it is expected that both the governments of Honduras and Guatemala will use the AEI to inform adaptation policies as they are currently being developed by each government. Progress on this indicator will be monitored through surveys with governments.

Core Indicator 4: 1,075 people trained (540 male, 535 female)
The target has been calculated based on Heifer?s previous experience working with local communities in the project areas, the project duration, and the project budget.

Progress on this indicator will be achieved by building the capacity of smallholder producers in Component 1 of the project, via community outreach and capacity-building workshops on implementation of climate smart agriculture practices. This will be done in consultation with target communities to assess needed CSA implementation methods. Progress on this indicator will be measured through a series of interviews, surveys, collection of data on implementation on climate smart agriculture techniques (as per indicators in results framework). Progress reporting will be done by collection of standardized information on the beneficiaries of sustainable production activities supported by the project.

The AEI will support Objective 1 of the GEF adaptation results framework, by distributing information and access to climate-smart measures, and building project participants? capacity in these activities and in diversified livelihoods. The proposed project will also support Objective 2 of the GEF adaptation results framework by supporting Outcome 2.3 (Institutional and human capacities strengthened to identify and implement adaptation measures).

7) Innovation, sustainability and potential for scaling up

Innovation

This project aims to bridge the adaptation gap present in Central America ? and potentially globally ? by creating an innovative Adaptation Equivalency Index (AEI), which will integrate both a

mechanism for implementing adaptation measures, as well as a ready-made, quantifiable toolkit for private sector investors to integrate into their business strategy, targets, metrics, and marketing/brand development. Though there is a significant need for private sector investment in climate change adaptation measures, there is not currently a way to quantify (and thus properly incentivize) this investment in the region. Though several new forms of adaptation accreditation schemes are simultaneously being developed, such as the Adaptation Benefit Mechanism (ABM) and Vulnerability Reduction Credits (VRC), none are yet being developed or implemented in Central America. The Vulnerability Reduction Credit (VRC) program is designed to offset the impacts of climate change, adjusted for the income levels of communities. This program is aligned with the AEI but is substantially different in that the AEI is a composite index approach as opposed to the VRC which is more linear and designed as an offset as opposed to a portfolio of actions which more accurately reflects on-the-ground realities and allows flexibility for both farmers and end users of the credit. Additionally, the AEI works across value chains rather than exclusively at the individual project level. VRC, as we understand it, is a singular accreditation that does not accommodate other similarly situated certifications. On the other hand, the AEI is compatible with and accounts for other accreditations and offers an umbrella hierarchy that does not discount or compete with other investments but rather builds on those efforts.

Certified Adaptation Benefits (CABs) created by the African Development Bank are a non-market commodity that is intended to represent progress toward resiliency. The credits are project specific and are not subject to trade. CABs are targeted at governments initially. Once the benefits are created and traded, they are surrendered. This vision is in stark contrast to the AEI which is not project-based, is intended as a composite evaluation, and to run at least the length of the commodity production life cycle. The AEI is intended to underpin a new, tradeable, asset class.

The AEI also differs from existing certification and accreditations schemes in several important ways: 1. the AEI can be applied to both production and processing; 2. the quantification of adaptation action allows companies and farmers to make trade-offs based on their individual circumstance; and 3. farmers will have the ability to benefit not only through better market prices and enhanced resiliency but also through access to finance and tradeable credit schemes.

Communities in the project regions are significantly affected by climate change, but currently do not have a way to access the techniques for climate-smart practices, nor the funding needed to implement these measures. In both Guatemala and Honduras there is a nationally recognized need for adaptation, but both governments do not have the funding or capacity necessary to actualize uptake of adaptation measures at the necessary scale. The AEI is a highly innovative approach that drives this much-needed engagement from the private sector on adaptation measures by standardizing investment and action across supply chains and commodities, thereby enabling a systematic portfolio approach to adaptation investments and dynamic responses to risk making for corporations (and potentially for farmers who are diversified).

The AEI is also innovative in its ability to address the multiple facets and stakeholders involved in adaptation. It will be capable of incorporating a significant number of variables that together influence the overall value of an adaptive measure; these include metrics such as the effect of an adaptive practice on livelihood and income, losses avoided, enhancing gender equity throughout value chain, the types of ecosystems and ecosystem services affected, methodologies used, and emissions mitigated, etc. The adaptation activities of the AEI will be developed and piloted in conjunction with adaptation experts, local smallholder producers, and value chain representatives, and thus will have a higher likelihood of positively affecting adaptation issues at all levels of value chains, all while successfully addressing the root causes of environmental degradation. Moreover, the adaptation toolkit will be developed in a manner that supports and adheres to relevant governments? National Adaptation Plan (NAP) and National Adaptation Programs of Action

(NAPA), thus helping to accomplish national adaptation priorities via partnership with the private sector (and other potential users of the AEI).

The AEI is also able to address adaptation activities at different levels of the selected value chains, and can be utilized by both smallholder farmers and value-added producers/processors. For instance, smallholder producers will be able to implement climate-smart agriculture techniques which positively benefit their production land and make their crops more resilient to the effects of climate change, and value-added producers will be able to utilize the AEI to implement sustainable and climate-smart methods of processing (such as using solar dryers in place of fuelwood). In this way, the AEI will give access to funding for implementing adaptation changes directly to participants at various levels of value chains. Smallholder producers, through access to investment opportunities including mechanisms such as Heifer International Capital, can also utilize supplementary funding by obtaining and selling or trading adaptation credits directly, further incentivizing an uptake of adaptation measures. This innovative approach empowers farmers and producers to make decisions based on individual circumstances, risk exposure (real or perceived), and access to a variety of assets. The proposed methodology also enables smallholder farmers to respond to a variety of shocks and stressors in different ways while ensuring the motivation to act remains intact.

For the private sector, the creation of the AEI is a quantifiable method to incentivize, measure, and enact their adaptation investments. The implementation of the AEI itself will be developed and piloted in conjunction with private sector partners to ensure maximum fluidity and ease of uptake by the private sector. In addition to providing a metric for directly measuring the impact of their adaptation investment, a major innovation of the AEI is the inclusion of a toolkit for companies to incorporate this adaptation investment into their ESG/CSR (Environmental, Social and Governance / Corporate Social Responsibility) strategies and policy setting (e.g., via defining a minimum acceptable score, goal setting, established price points across an array of AEI scores, and balancing of targets across supply chains trading to achieve goals). This will be combined with a support for communication strategies for marketing their products that showcases the adaptation benefits associated with a certain product, providing a means for end-user consumers to gauge the social and environmental impact of their purchase, and thus incentivize the purchase of sustainable products.

With rapidly increasing market demand for climate and socially conscious goods, companies will be able to capitalize on and generate a quantifiable ROI based on these investments. All of this will in turn incentivize further adaptation investments in the region, helping to close the adaptation funding and capacity gap, as well as enabling the governments? implementation of their national climate strategies and NAP/NAPAs.

Institutional Sustainability

This project is developing the AEI with the goal of a variety of stakeholders ? including private and public enterprise, governments, NGOs, and importantly by smallholder farmers and producers ? eventually utilizing it in broad and generic fashion. Rather than a one-off action, the development of the AEI is meant as a building block for adaptation benefit credits to be more broadly recognized and utilized. Once the AEI is developed and piloted, and lessons learned from these processes have been incorporated, it will be ready for broader deployment. Additionally, there is considerable overlap between stakeholders in the private sector, already existing alliances and associations, and robust number of information exchange systems to utilize in scaling the mechanism.

Heifer is committed to working with partners to determine the optimal method for making the AEI, its methodology, and its best use case information available. Financially, the AEI is designed to be self-perpetuating, as it involves an incentive for continual (and eventually increasing) investment from the private sector, as well as investment in the resultant ?adaptation credits? from the private sector and additional institutions.

In addition to sustaining the AEI, Heifer has extensive experience in creating lasting, sustainable entitities that benefit local communities. Heifer itself has operated in Guatemala for over 60 years and in the regions of this project for over 40 years.

Potential for Scaling

Beyond directly impacting project participants in this first phase, the overall impact of this toolkit through the potential to scale is significant. Ultimately, the theory of change is that the AEI will enable farmers, processors, and private sector actors to capture the value of adaptation action, including the incremental cost of generating benefits, and to promote investment. The AEI will serve as a crucial building block to the broader certification of adaptation benefit credits as well as standardization of programs across regions and across implementing partners. In this process Heifer anticipates working with an array of partners including government and civil society ? such as UNFCCC, FAO, CIAT, NGOs, governments, and private sector partners.

The initial development and implementation of the AEI in this project will be designed around four premium value chains (cardamom, coffee, cocoa, and allspice), and will be tailored for the adaptation needs of the smallholder farmers and producers in the project areas. However, the AEI toolkit will be modifiable so as to potentially support a variety of supply chains and adaptive measures, and the AEI toolkit, lessons learned, and corporate reporting benefits generated as a result of this project will be scalable and replicated across geographies and supply chains including textiles, agriculture, and livestock. According to the project?s theory of change, once adopted, the AEI will have the effect of increasing adaptation investments in supply chains including through an array of financial instruments.

There is potential for significant scalability within the initial selected value chains. For example:

There are around 25 million farmers growing coffee on 11 million ha of land in more than 60 countries globally, most of them classified as smallholders. Though Guatemala is the world?s top exporter of cardamom, Indonesia is the world?s top producer, and India produces an amount roughly equivalent to that of Guatemala (~38,000 metric tons in 2019).

While cocoa is an important commodity crop in Honduras, the vast majority of cocoa is grown elsewhere ? the majority in African nations such as Ivory Coast (38.95% of global production), Ghana (14.5%), and Nigeria (6%) ? along with other nations such as Indonesia (14%) and Ecuador (5%)

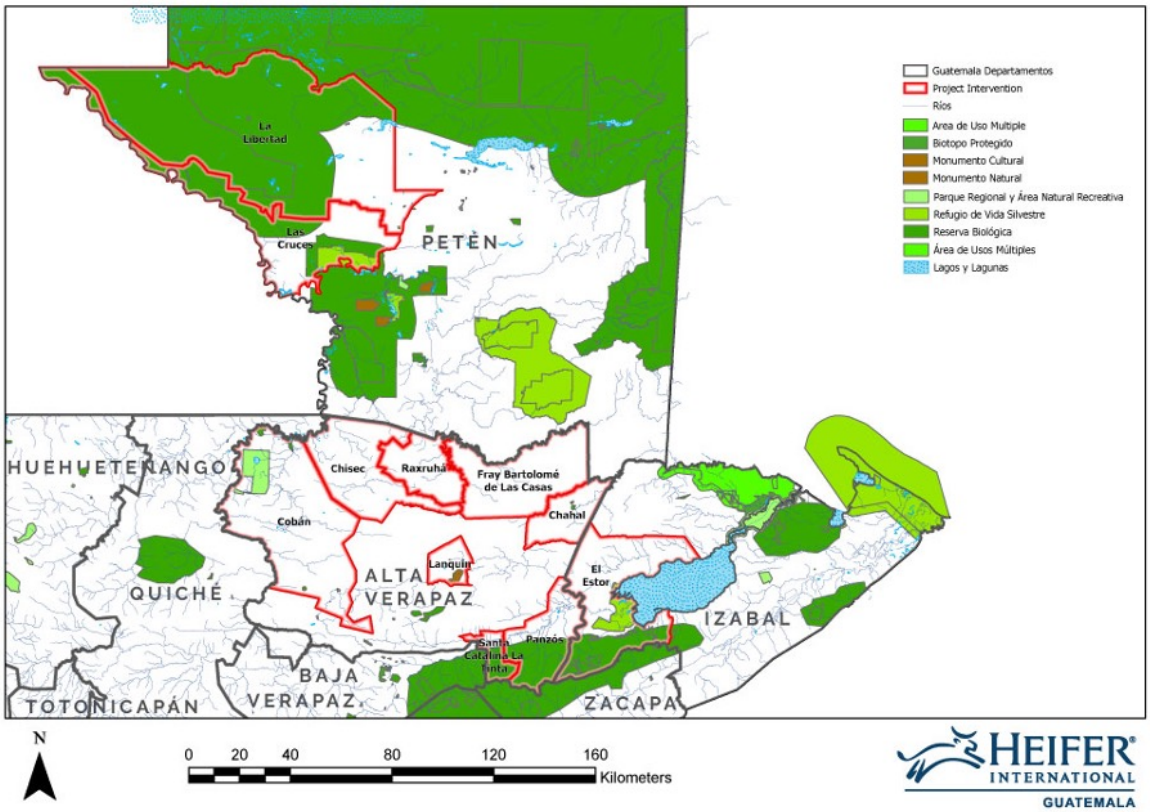
Though allspice an important commodity crop in the project areas of Guatemala, the majority is grown elsewhere, primarily in Jamaica.

Given these crops require similar ecosystems and climatic conditions for production regardless of geography, and face many of the same climactic, environmental, and financial risks and as such they can utilize a similar methodology developed in this initial project to be potentially scaled across their value chains globally.

1b. Project Map and Coordinates

Please provide geo-referenced information and map where the project interventions will take place.

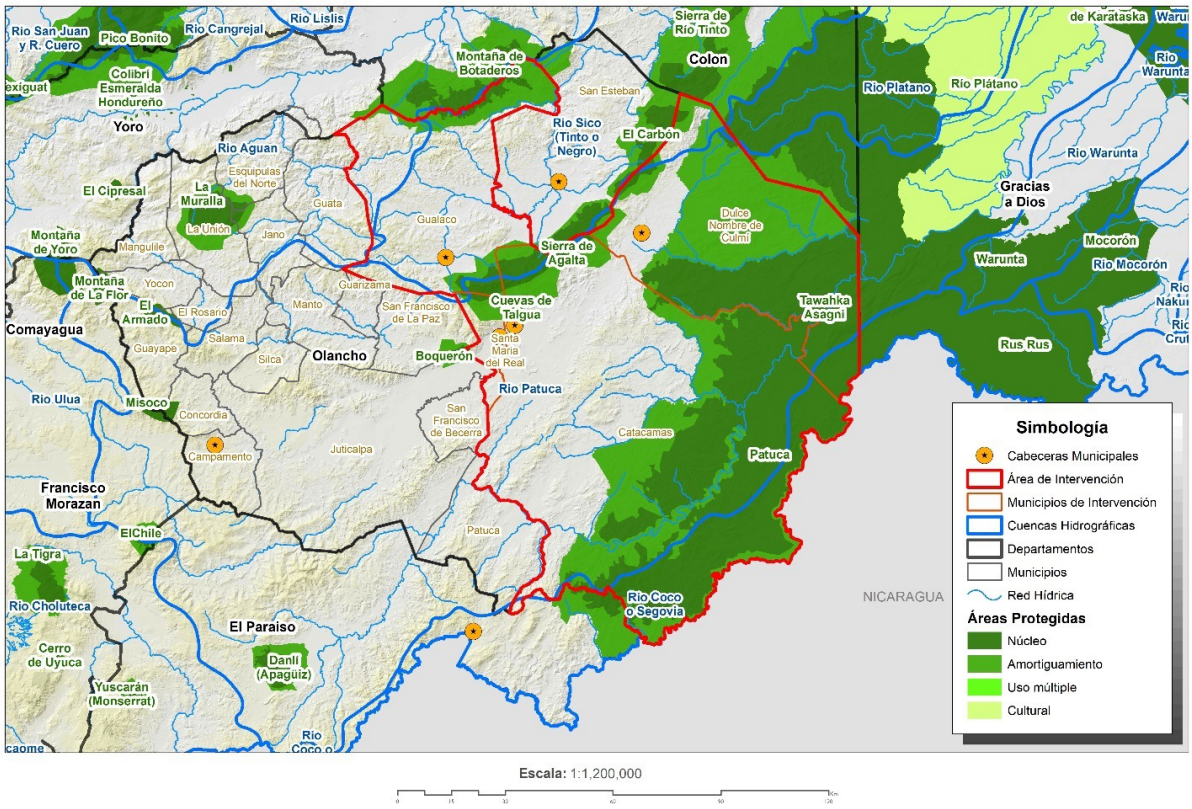
GUATEMALA PROJECT INTERVENTION MAP



GUATEMALA Coordinates (10 project sites)	Latitude	Longitude
Cob?n	15.841073357580171	-90.74835903552768
Chisec	15.813849640756505	-90.29096607486422
Raxruh?	15.866344632472586	-90.04418122571548
Fray Bartolom? de Las Casas	15.80545710438589	-89.86119039021011
Chahal	15.792294453255158	-89.6020245971044
La Tinta	15.31167618935276	-89.88500834511544
Sierra de Las Minas, San Antonio	15.26063863406945	-89.8413024206138
Sierra de Las Minas, San Vicente I	15.23770645200451	-89.77575031231189
Panz?s	15.39843509143048	-89.64359191218428
Bocas del Polochic, Selempim	15.324293364938923	-89.38666479271797

Honduras

Project Intervention Map



Honduras Coordinates (4 project sites)	Latitude	Longitude
Dulce nombre de culm?	15.0418782	-85.324444
Gualaco	15.2242208	-86.1296722
Santa maria del real	14.7817475	-85.960863
Catacamas	14.8445355	-85.8960213

1c. Child Project?

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

N/A

2. Stakeholders

Please provide the Stakeholder Engagement Plan or equivalent assessment.

See attached stakeholder engagement plan.

In addition, provide a summary on how stakeholders will be consulted in project execution, the means and timing of engagement, how information will be

disseminated, and an explanation of any resource requirements throughout the project/program cycle to ensure proper and meaningful stakeholder engagement.

The Stakeholder engagement plan is attached. There are numerous stakeholders that implement important programs within the priority areas. These stakeholders come from different sectors including forestry and environment, agriculture/livestock, land-use planning and research. The project team will work with national environmental authorities in Guatemala and Honduras, local communities, institutions with interests in sustainable production and conservation, development and land use, the private sector, civil society, and other relevant institutions in the conservation and agricultural development arenas.

The project team will develop participatory assessments to create a base line in economic, social, gender and indigenous aspects through meetings and workshops with communities to disclosure information about the project, its goals and outcomes. The projects will develop a relationship with academia, NGOs and private sector to partner in the construction and launch the AEI index that will inform final consumers about the benefit for CC and adaptation of the product.

Select what role civil society will play in the project:

Consulted only; Yes

Member of Advisory Body; Contractor; Yes

Co-financier;

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

Executor or co-executor; Yes

Other (Please explain)

3. Gender Equality and Women's Empowerment

Provide the gender analysis or equivalent socio-economic assesment.

The Gender Analysis with subsequent project level considerations is attached. This document contains the gender analysis, as well as the gender action plan. The gender analysis was conducted to comply with the Global Environment Facility?s Gender Mainstreaming Plan. This document was prepared with information gathered from secondary sources, including different national household surveys, statistical data compilations, and territorial development plans. This information allowed for the development of gender equality indicators, with the aim of giving more visibility and importance to the local circumstances that women face in the project?s proposed intervention areas. With these indicators it is possible to further understand the gender gaps between men and women, which in turn will allow for the measurement of existing gender inequalities, especially those relevant to women and other vulnerable groups.

Successful implementation of the project, and the AEI more broadly, cannot be achieved without consideration of gendered roles, responsibilities, biases, and barriers. Especially important in successful implementation of the project in both Guatemala and Honduras, and more broadly as the

project scales, is the consideration of intersectionality including indigenous groups, elderly, and youth among other vulnerabilities.

In Guatemala and Honduras women are consistently identified as vulnerable due to systematic discrimination. Women in both countries lack access to education (especially Guatemala), decent work and parity of income lack of access social security, and participation in decision-making arenas. Research indicates that women in both countries experience higher levels of both poverty and as well as increased time poverty because of longer working days, more domestic chores, and other reproductive and household duties that fall outside of the formal economy. In both countries, gender roles and stereotypes remain deeply entrenched and women, particularly indigenous women and girls face extraordinary challenges. In Guatemala for example, illiteracy is at 31% among women 15 years of age and older and reaches 59% among indigenous women. In Honduras, a recent national survey indicated while rural illiteracy is high for girls and boys, it is similar for both gender. Illiteracy is highest for both men and women who are over the age of 36 years and older and reaches its maximum among the population over sixty years of age, among which 30.2% are illiterate.

Despite higher levels of education obtained by girls and women at all levels of education in Honduras, the presence of women falls dramatically once they enter the labor force. In 2011, only 40% of women (ages 15 and older) were employed compared to 57% of men. The gender disparity reflects a deep rooted bias in the society, pointing woman to a subordinate position as child bearers and homemakers.

Does the project expect to include any gender-responsive measures to address gender gaps or promote gender equality and women empowerment?

Yes

Closing gender gaps in access to and control over natural resources; Yes

Improving women's participation and decision making Yes

Generating socio-economic benefits or services or women Yes

Will the project?s results framework or logical framework include gender-sensitive indicators?

Yes

4. Private sector engagement

Elaborate on private sector engagement in the project, if any

There is a significant need for private sector funding in adaptation measures. According to a study by UNEP, the developing world will require between $280 and $500 billion per year by 2050 to adapt to climate change. To close the adaptation gap, an increase of up to thirteen times current adaptation investments is required by 2030. The purpose of developing and deploying an Adaptation Equivalency Index (AEI) is to engage the private sector in a methodical fashion, demonstrating a quantifiable impact from their investment, as well as potential ROI, which will incentivize further funding.

The private sector itself has pressing reasons to invest in adaptation, but currently lacks a cohesive framework for quantifying this investment. Supply chains are already beginning to destabilize from the effects of climate change on crop production, a trend which will be further exacerbated as climate norms continue to shift in production areas. Beyond needing to ensure a secure and

consistent supply chain, the private sector is also facing increasing pressure from consumers to produce sustainable products as a result of increasing consumer awareness of the climate crisis and social issues. Investors are likewise pressuring companies to adopt sustainability policies, with companies now having to demonstrate their commitment to ameliorating their effect on the environment and society, specifically through demonstrating applicable ESG (Environment, Social, and Governance) metrics and ratings. Indeed, companies? ESG ratings are often required to be above a certain threshold to be considered for investment by an increasing number of firms.

Despite the pressing need, there is not yet a mechanism that easily facilitates private sector investment in adaptation measures. The purpose of creating the AEI is to bridge this gap. In order to facilitate this process, the private sector will be consulted and partnered with on component two and three of the project. Certain private sector partners associated with the pertinent value chains will be selected and consulted on the integration of the AEI into business practices and ESG metrics (and marketing).

Heifer?s private sector partners are interested in ensuring that smallholder farmers use sustainable, climate-smart approaches to reach high-value markets by strengthening links with climate-conscious and socially oriented buyers and seek to quantify and enhance the value of their adaptation investments to generate ROI, enhanced brand value, decreased risk, and improved supply chain stability. Examples of Heifer global partners to be engaged in this project include McCormick & Company, the world?s largest spice company. At the national level, for coffee in Honduras, Heifer anticipates continued collaboration as part of this project with exporters such as Honducafe, Compa??a Hondure?a del Caf? S.A. De C.V., Sogimex, Olam Honduras, and Caf?s Finos de Exportaci?n S. de R.L. (Hawit-Caffex). There will also be anticipated collaboration with private sector partners In Guatemala, such as Nueva Kerala and A3K. Multinationals spanning both countries will also be involved, such as Cargill and McCormick.

5. Risks to Achieving Project Objectives

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

Climate Risk

The project sites in both Honduras and Guatemala will be exposed to potential drought conditions, extreme temperatures, and other natural hazards including fire, flooding and landslides. Crop productivity including quality and quantity of product could be disrupted. Additionally, disease that impact coffee and cardamom production, such as roya ? or coffee rust ? is potentially amplified by climate change.

A significant portion of community members in the project site live below poverty and are extremely vulnerable. In many cases, families rely on single crop production for income obtaining a large portion, if not their entire income, from agriculture production in some capacity. All of these risks have resulted in an increase in out-migration often leaving the most vulnerable members of society behind. Indigenous groups are the most exposed in terms of cumulative vulnerabilities.

While some efforts have been made in the project areas to increase access to climate change information, ensure the implementation of early warning systems, and otherwise support vulnerable populations ? these efforts by the governments are still nascent, unorganized, and narrow in scope. Strong climate hazard monitoring linked to early warning systems can inform early action and

contingency plans to reduce disaster risk and disaster impacts. However, early warning systems are underdeveloped in LAC region, particularly in Central and South America. Hazard-specific monitoring systems such as FAO's Agricultural Stress Index System (ASIS) is an example of a useful tool to allow governments to issue early warning alerts for specific sectors like the agriculture but that has not had significant uptake in the region.

Similarly, local efforts for early warning also have barriers to uptake. For example, The Guatemala Secretariat for Food and Nutrition Security (SESAN) recently started the nation-wide implementation of a food security monitoring and early warning system. The system was developed together with researchers from Bioversity International and the CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS), and food security and climate risk management specialists from Action Against Hunger (ACH) under the AgroClimate project.

Shifting patterns in duration and onset of the midsummer-drought that occurs during the rainy seasons regularly challenges subsistence farm families in Guatemala. Seasonal hunger and acute undernutrition are a recurring problem in the country. Just this year, an estimated 1.5 million people are at risk of increasing food insecurity due to partial or total losses in small-scale primary grain production. This problem is not new to the country. However, with increasing climate variability, occurrences of extended mid-summer droughts during the rainy season appear to be increasing, whereas the recovery time between unusual dry years is decreasing.

While the early warning system has been established, it relies on timely and relevant information at the right scale in order to identify communities and families at risk. Decision-makers have expressed the need to have more information on what happens in the communities at risk. Currently, drought and food security information is only available on a coarse scale. In addition, the Guatemalan food security law mandates the development and implementation of a local, community-based food security monitoring and early warning system.

In some communities, local organizations are leading the effort to adapt to climate change, but access to technical, financial, and social resources is still meager.

Climate Risk Mitigation

In Guatemala, the project will specifically work with the government to develop an adaptation index to further facilitate and grow the country?s capacity to implement adaptive measures. The information will also be shared with the Honduran government. It is anticipated that this work will help inform the adaptation plans of both countries and support adaptation strategic planning. The project will result in the dissemination of climate adaptation information and solutions to vulnerable groups living in and around protected areas and other ecologically vulnerable areas. This project is specifically focused on strengthening the ability of communities to adapt to and respond to climate change especially indigenous community members.

At the national levels, governments are committing to a strategic approach regarding climate change adaptation, while at the local level, producers generally lack adequate knowledge on climate change adaptation, and climate change adaptation is rarely integrated into land and/or farm management plans.

The proposed project will aim at building cost-effective and long-term sustainable management capacity with direct beneficiaries. By supporting producer's, the project will directly contribute to improving the adaptive capacity of producers regarding adverse climate change impacts on the relevant vale chains. Producers with supported by the project will be more able to implement adaptation measures to face climate change, in relation with the integration of climate change adaptation within their agricultural practices.

Furthermore, climate change adaptation topics will be included in training activities so that producers will have improved knowledge and capacity to respond appropriately to potential climate change impacts with appropriate adaptation measures. The proposed project will also support experience sharing activities, including on climate change adaptation actions among beneficiary producers in order to better address climate change issues at local, national and regional levels. While this project is principally focused on adaptation including climate smart agriculture activities, it is anticipated that the efforts under this project will also contribute to mitigation measures especially with regard to post-harvest production activities. From climate friendly, green drying technologies to improved farming practices, GHG reductions in the agriculture sector are anticipated.

The project will therefore increase the adaptive capacity of targeted beneficiaries and beyond, which will in turn contribute to mitigate the negative consequences of adverse climate change impacts. Without the support of this project, the risks and consequences associated with climate change would be higher.

Contribution to climate resilient recovery after the COVID-19 pandemic:
In the region, restrictions on mobility and suspension of farming activities have dramatically affected food production systems, making farmers and communities more vulnerable to climate variability stemming from reduced income, increased costs, and disrupted markets. Surveys conducted by CGIAR in 2021 indicate that farmers require increased information, tools, and methodologies for increasing sustainable crop production via adapted production which this project will provide. Additionally, farmers indicate the need for differentiated strategies to enable economic recovery and improved access to markets. These elements are central to the proposed project.

Other Risks to Consider:

Risks	Risk Description	Risk Mitigation Measures	Risk Level

1. Spread of Covid and other transmissible diseases	There is a chance that the project will introduce covid and other transmissible disease into areas which otherwise may not have the same level of exposure, such as the rural areas and buffer zones in which the project occurs. Project areas may have minimal access to treatment facilities, and may also lack access to vaccines, which could further exacerbate any outbreaks introduced by the project. Likewise, the project may run the risk of introducing new variants of COVID-19 which could overcome potential existing immunity.	Heifer ensures that projects avoid or minimize the potential for community exposure to health risks that could result from or be exacerbated by programming activities. Heifer ensures that projects avoid or minimize transmission of communicable diseases that may be associated with the influx of temporary or permanent project labor including COVID-19. Heifer has extensive COVID-19 protocols in place, both in office and field settings. In office settings, personnel are not allowed into work premises if they are displaying symptoms, and notifying superiors immediately if they begin to do so while at work. Any suspected case incurs a disinfecting protocol in the work areas occupied by the personnel, as well as notifying of immediate contacts. All close contacts are advised to isolate and maintain quarantine for 14 days, with Human Resources monitoring their situation. Masks are to be worn inside office spaces. Temperatures are taken of personnel to ensure no signs of fever, and personnel are encouraged to disinfect their workplaces routinely. Social distancing of 1.5 m is to be maintained when possible, along with refraining from physical contact. Electronic communication is encouraged over physical paper, and meetings are encouraged to be virtual. Personnel are responsible for disinfecting any exterior items (including food) brought into the office. General disinfecting is done on a regular basis in common areas such as entryways, and disinfecting materials such as sanitizing gels are made easily available. In field settings, prior to in-person visits a check is done with appropriate authorities that there are not any confirmed cases of COVID-19 in the area. Technical officers previously identify safe places of lodging and eating in the communities that will be visited. Personnel will carry with them hygiene / disinfecting kits, including sanitizing gels, gloves, extra masks, protective lenses, and plastic bags for disposal, as well as their own bedding and eating utensils. For any in-person meetings or activities, attendance of any persons considered at risk for complications from COVID-19 will be avoided, including young children, older adults, and individuals with chronic or underlying conditions. Posters with hygiene and safety information will be made visible at such events, and personnel will wash / sanitize their hands, and encourage	Low

2. Influx of revenue may disrupt community cohesion, traditional community norms and could potentially reproduce existing discrimination against vulnerable groups especially women	The project could potentially limit women?s ability to use, develop and protect natural resources, taking into account different roles and positions of women and men in accessing benefits. For instance, cultural norms, specifically those regarding gender roles, may prevent the full integration of women into various points along value chains. ?Machismo? male-centric culture may cause backlash against women who do participate, increasing the risk of gender-based violence (GBV) due to women potentially earning new sources of / increased income, as well as gaining more responsibility and access to decision-making processes.	The first mitigation measure will be to implement the Gender Action Plan for Guatemala (Ministry of Agriculture, Livestock, and Food, 2016) and Honduras (Gender Equality for the coffee sector, 2021), which encompasses the implementation of all the project activities the Gender Action Plans includes carrying out a review of the AEI modalities and requirements to address any barriers related to that limit the participation of women. The project will have a targeted gender assessment and all relevant metrics during the project will be gender disaggregated. Heifer and partners will identify additional gender-responsive actions throughout the course of the project. Gender equity will be integrated into each step of the program. Social capital will be spent to ensure the ability of women to participate in these roles, and to participate in capacity-building programs, etc. Women participating in the project will be consulted at various points to ensure that they feel secure in their participation. A line of communication will be ensured with trusted local community representatives, who will serve as a potential node through which women can notify project leaders of potential or ongoing issues. A protocol will be established for dealing with gender, and specifically GBV issues, as and when they arise.	Low

3. Personnel involved in the implementation of the project and beneficiaries might lack full capacity and updated training on best practices and international legislation related to human rights, especially with regard to indigenous people	This could further exacerbate some of the other risks associated with working with stakeholders (e.g., see risk 5 applying to indigenous people?s traditional land use practices and management below). Additionally, this lack of capacity could inhibit the proper integration and uptake of best adaptive practices, thus limiting the project?s effectiveness.	Existing capacity building and information mechanisms for personnel and beneficiaries of the AEI will be reviewed and reinforced. Training and capacity building will be included in project preparation activities. A stakeholder engagement plan will be developed, building on national strategies. Heifer has a Grievance mechanism already in place called the Global Grievance Policy in multiple languages ? including Spanish that addresses and responds to grievances related to the implementation of the AEI. This policy is intended to supplement, and not discourage or replace, informal discussions between Employees and supervisors. This policy applies to every country or territory in which Employees are employed. In the event any provision of the policy directly conflicts with applicable law, applicable law will supersede with regard to that provision. Any Employee may use the Grievance process, in good faith, to request review of a Tangible Adverse Employment Action with which he/she has a legitimate disagreement. No Employee may be retaliated against for filing a grievance in good faith.	Low
4. Risk of economic displacement of farmers and communities NOT associated with commitments under the AEI programming could potentially limit future opportunities and drive inequality in the community	As farmers and producers participating in the project will likely see a stabilization and increase in income, those not participating in the project will continue to be subject to increasing levels of economic instability, particularly driven by the effects of climate change on crop yields and additional effects of adverse weather.	Heifer provides an array of technical assistance and access to technologies, credit, and marketplace access for vulnerable community members. Heifer also ensures communities work together to stabilize all community members. Our signature program, passing on the gift, is intended to tackle income inequality. Additionally, community members set prices and even farm size in a collaborative manner. Moreover, as evidence of the adaptation benefits accrued as part of the project become evident, smallholder farmers / producers who do not initially participate in the program will likely begin incorporating adaptive measures, the toolkits for which will be made available to communities as a whole upon completion of lessons learned.	Low

5. The project could affect negatively indigenous peoples traditional land use practices and land management by applying standard from the AEI	Despite the fact that such new methodologies are voluntary, once deployed it may be difficult to revert to prior practices, as adaptation measures will need to remain in place in order to quantify a verifiable and accredited impact. Additionally, as economic growth occurs, it is possible that indigenous peoples lack the time and ability to engage in historic practices.	Guatemala and Honduras have robust legal framework that allows the protection of the rights of indigenous peoples (Ips). Historically, IPs in the region have been included in the extensive consultations in the development of the Green Business Belt, the foundation project of the AEI. During this work, key improvements for the mechanism to ensure the interests of IP were included in the improved GBB and AEI. Indigenous peoples will be consulted closely during the formation and implementation of the AEI and adaptation activities as a primary stakeholder, to ensure that their traditional practices are still able to be practiced if desired while undertaking the activities within the project. Please see the Indigenous People?s Plan in Annex I for extensive information.	Low
6. Reversals (non-permanence) of forest conservation, sustainable management and other activities as a result of the voluntary withdrawal of adaptation practices	If project participants withdraw from the program and planned activities, adaptation benefits may not be sustained, resulting in increased vulnerability to risks from climate change and economic instability. Continued environmental degradation related to unsustainable practices will also further dampen resilience.	While non-permanence is always a risk, farmers who engage with Heifer have this risk minimized because of multiple benefits to individuals as well as to community. Premium product, prices, and market access are strong retention tools. The social capital of projects is also advantageous to farmers. Because farmers emerge with a certification, the tangible outcomes offer additional incentives to remain engaged. Adaptation benefits such as increased resilience and increased income (as well potential finances derived from their accreditation) accrued during the project will also serve as a retention tool.	Low
7. Implementation of AEI does not work as intended, with companies not utilizing the toolkits or methodology as planned	AEI is not effectively monetized and/or is not embraced by the private sector as an effective adaptation investment vehicle. This could lead to lack of further capital investment by the private sector.	The development of the AEI will be done in partnership and consultation with several distinguished multinational corporations, as well as other national-level private enterprises who will utilize the AEI in the value chain. This cooperation during development is key to ensuring that the AEI can be utilized as intended, and is effective to the point of further uptake. The integration of marketing and CSR/ESG strategies into the toolkit will help to facilitate integration, and will help to drive end-consumer demand, furthering uptake of AEI by other actors.	Low

6. Institutional Arrangement and Coordination

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

CI GEF will serve as the Implementing Agency and Heifer International will act as the Executing Agency. As the Implementing Agency, CI GEF will approve the overall structure of the project, and will approve annual workplans, budgets, project implementation reports, and quarterly reports. As the Executing Agency, Heifer International will be responsible for managing project activities directly, reporting on project progress, managing consultants, project staffing, partnerships, and use of project funds. Heifer International will work with CI GEF to ensure that the components and objectives of the project are met within the proposed timeline and budget.

A project management unit (PMU) will be named within Heifer International with members based in Guatemala and Honduras. This PMU will consist of a Program Director (based in Guatemala) overseeing operations in both countries and working closely with a Project Lead overseeing operations in Guatemala, and a Project Coordinator to oversee operations in Honduras. Country teams will implement activities with support from additional project-specific staff responsible for monitoring and technical aspects. Heifer offices in both Guatemala and Honduras are branch offices, reporting to Heifer International HQ. Heifer International will utilize consultants to support project communications, safeguards, and gender elements working across the three project components. An organizational chart for the PMU is available upon request.

Institutional Structure for Project Implementation

Government

The PMU will work in close coordination with the Ministry of Environment and Natural Resources (MARN ? both countries). In Guatemala,
MARN will provide technical assistance for the development and launch of the Adaptation Equivalency Index, and will also provide support in
coordinating the participation of relevant actors and stakeholders, universities, research centers, NGOs, private sector, and civil society
stakeholders in this process.

Additionally, the PMU will work with the municipalities of the Alta Verapaz department in piloting improved climate smart agriculture practices.
In Honduras, the Secretariat of Agriculture and Livestock (SAG) will facilitate the Olancho MESACOLA Regional Cocoa Table, a space for
planning and coordination of direct and indirect actors linked to the cocoa value chain, in which Heifer will participate during project activities.

The Honduran Coffee Institute IHCAFE (the governing body for coffee policy and strategy in Honduras) will coordinate with Heifer Honduras to

define actions to strengthen the coffee value chain through training, technical assistance, and critical investments, with a climate-smart agriculture approach.

Project Steering Committee

A Project Steering Committee (PSC) will be established to provide guidance for strategy and oversight of the Project Management Team.

Members of the PSC will be made up of delegates from Heifer International and government representatives (GEF focal points for Guatemala and Honduras). CI GEF will be included as a non-voting member of the PSC.

The PSC will be convened by the Heifer International as the Executing Agency for bi-annual meetings for decision-making, oversight, and advice on project alignment to national priorities. The PSC will also serve as a conduit to further ensure information sharing among relevant parties, as well as review any grievances and responses among stakeholders. This project will be implemented in coordination with several ongoing related projects including:

Initiative	Coordination
GEF Challenge Program	The project will continue to collaborate with the GEF Challenge Program by sharing lessons learned with the Secretariat and other agencies/partners
Agroforestry landscapes and sustainable forest management that generate environmental and economic benefits globally and locally (GEF ID 9262)	Communication for exchange of experiences and lessons learned.
Promoviendo Territorios Sostenibles y Resilientes en Paisajes de la Cadena Volc?nica Central en Guatemala *(Promoting Sustainable and Resilient Territories in the Central Volcanic Chain Landscapes in Guatemala)*	Communication for exchange of experiences and lessons learned.
Primer Reporte Bienal y Tercera Comunicaci?n Nacional de Cambio Clim?tico *(First Biennial Report and Third National Communication on Climate Change)*	Communication for exchange of experiences and lessons learned.

7. Consistency with National Priorities

Describe the consistency of the project with national strategies and plans or reports and assesments under relevant conventions from below:

NAPAs, NAPs, ASGM NAPs, MIAs, NBSAPs, NCs, TNAs, NCSAs, NIPs, PRSPs, NPFE, BURs, INDCs, etc.

GUATEMALA

National Action Plan (NAP)

Guatemala?s NAP has a national priority action of integrating Agriculture, Livestock, and Food Security in its adaptation strategy. Likewise, the Action Plan of 2018-22 identifies promotion of the use of good agricultural practices adapted to the climate and science and technology transfer for adaptation as adaptation strategic lines. The project aligns with all of these.

National Biodiversity Strategies and Action Plan (NBSAP) under the UNCBD

Guatemala has been a signatory of the CBD since 1995. One of the primary thematic areas of the 2012-22 NBSAP is promoting the sustainable use of biodiversity and ecosystem services, as well as role of biodiversity in climate change mitigation and adaptation. The project is in alignment with both of these.

UNFCCC

In 2017 Guatemala ratified the Paris Agreement under the United Nations Framework Convention on Climate Change (UNFCCC). Under Guatemala?s first NDC, the country aims to utilize agriculture and forestry for mitigation purposes, and to adapt the agriculture sector and promote soil protection to help reduce vulnerabilities to climate change. The AEI project will promote adaptation practices in the rural agricultural sector, including to protect soils, and is consistent with the NDC and will contribute to achieving the related country?s commitments.

HONDURAS

NAP

The National Action Plan of Honduras is currently in development with support from the Green Climate Fund.

NBSAP

Honduras is a signatory to the CBD as of 1995. The AEI project is consistent with the National Biodiversity Strategy and Action Plan (NBSAP) which recognizes the importance of poverty reduction as a pillar of biodiversity conservation. The NBSAP prioritizes agrobiodiversity to transform food production systems, including the sustainable use of livestock, forestry, and agricultural resources. The NBSAP proposes that sustainable use of these assets will help achieve appropriate use of water and soil resources. The AEI project will thus help achieve the stated goals of the NBSAP.

UNCCD

In 1997, Honduras ratified the United Nations Convention to Combat Desertification (UNCCD). The AEI aligns with the National Action Program (NAP) 2005-2021 under the UNCCD. The NAP provides guidance that includes approaches to preventing the degradation of natural resources. The NAP identifies the causes of the limited sustainability including the use of inappropriate production technologies, the inequitable distribution of land, limited production infrastructure, lack of agricultural incentives and limited market access, and prioritizes the improvement, participatory validation and scaling up of sustainable agricultural and ranching systems. This project is consistent with the NAP?s approach specifically as pertains to generating resilient food production systems; planning, conservation, and reforestation in watersheds; and institutional strengthening and development of local capacities.

UNFCCC

In 1995 Honduras ratified the United Nations Framework Convention on Climate Change (UNFCCC). Honduras was one of the first countries in Latin America to join the Nationally Determined Contribution (NDC) Partnership. As part of this process, Honduras developed a road map for the fulfillment of its NDCs as part of the Paris Agreement/UNFCCC. Honduras commitment to reduce GHG emissions from the agricultural production sector by 15% and to restore 1 million ha affected by deforestation and forest degradation. The project is consistent with the NDC and will contribute to achieving the related country?s commitments.

Additionally, Honduras has drafted a Country Vision (2010-2038) and a National Plan (2010-2022). These plans propose to improve the agriculture sector by ensuring that small holder producers have access to financial and technical assessment and through forest protection programs including activities that prevent deforestation.

The project is also consistent with EN-REDD+, which promotes the restoration of landscapes that have been degraded and deforested due to the production of commodities such as palm oil and beef/milk. Similarly, the project is consistent with the National Program for the Recovery of Degraded Ecosystems? Goods and Services, created though Ministerial Agreement No. 1030-18 of MiAmbiente+, which outlines strategic options for restoring areas in northern Honduras where the proposed project will be implemented.

8. Knowledge Management

Elaborate the "Knowledge Management Approach" for the project, including a budget, key deliverables and a timeline, and explain how it will contribute to the project's overall impact.

Heifer has over 70 years of experience implementing sustainable agriculture projects, building livelihoods, and advancing social capital. This experience has been honed, captured, and disseminated through tools such as the 12 Cornerstones toolkits, self-savings groups, and other mechanisms. These tools and processes are used around the world and are constantly being refined by new information, lessons learned, and best practices. Heifer uses these tools to build the capacity of our staff and our community members. At the core of our 12 Cornerstones toolkit is the active engagement of community members, especially the vulnerable including women and indigenous peoples, the recognition that local management is necessary to fully protect natural resources, and the understanding that the reduction of poverty is integral to natural resource conservation.

At its core, Heifer is a capacity building and training organization that works in communities to disseminate information at scale. Heifer will be utilizing its social capital toolkits in this program to build an adaptation mechanism with, for, and on behalf of communities. Heifer will work with all levels of government including elected community officials and ancestral community leaders, and with the engagement of vulnerable groups. Heifer will be utilizing its 12 Cornerstone toolkit and feedback from these efforts will be integrated into regular 12 Cornerstone review sessions. Importantly, Heifer works closely with community committees and these committees work closely with Heifer?s Social Capital experts. These experts are trained in community engagement techniques, meeting facilitation, and inclusive project engagement.

Communication is a key aspect of Heifer?s work and critical to the success of our mission. Over the course of this project, Heifer will utilize its communication expertise to support the projects goals and objectives. The lessons learned and successes of this project will be shared with our community, government, corporate stakeholders through a series of meetings, workshops, and other communication opportunities. Heifer has integrated regular meetings throughout the project timeline and will document lessons learned and feedback during these meetings. Heifer will also convene a webinar mid-way through the project to discuss, share, and learn best practices with our teams, key stakeholders, and partners.

With regards to the AEI itself, as noted in Annex A and in the budget, there will be ample outreach efforts with corporations to share the benefits as well as to solicit feedback on the AEI and to solicit feedback for its improvement. In addition to the AEI, the PMU and Heifer HQ staff will work closely with our corporate partner stakeholders to ensure that we are able to support their communication efforts. This information will be made available to our partners, and it is anticipated that a wider audience will be informed about the AEI through partner and stakeholder engagement.

Notable knowledge products to be produced include:
? At least 3 toolkits will be developed to document climate smart practices to be used with producers based on consultations and other research (Y1 ? Q2, Q3)
? One report will be developed to capture case studies, best practices and recommendations arising from the demonstration projects, e.g., adaptation benefits, carbon sequestration, etc. (Y2 ? Q1, Q2)
? One webpage will be created for the project to host communications materials for the dissemination of information on adaptation practices with communities and other relevant stakeholders (Y1 ? Q4)
? Development of the AEI and guidelines for companies to operationalize the AEI across their value chains (Y1 ? Y2, all quarters)

It is expected that each member of the PMU dedicate at least 5% of their time to support the creation of knowledge products during the project period.

9. Monitoring and Evaluation

Describe the budgeted M and E plan

Project monitoring and evaluation (M&E) will be conducted in accordance with established CI GEF procedures. The project M&E plan will be presented and finalized at the project inception workshop, including a review of indicators, means of verification, and the full definition of project staff M&E responsibilities.

Monitoring and Evaluation Roles and Responsibilities
The PMU will be responsible for initiating and organizing key monitoring and evaluation tasks. This includes the project inception workshop (to be held virtually) and report, quarterly progress reporting, annual progress and implementation reporting, documentation of lessons learned, and support for and cooperation with the independent external evaluation exercises.

Heifer International will be responsible for ensuring the monitoring and evaluation activities are carried out in a timely and comprehensive manner, and for initiating key monitoring and evaluation activities, such as the independent evaluation exercises. The PMU will be responsible for providing any and all required information and data necessary for timely and comprehensive project reporting, including results and financial data, as necessary and appropriate.

The Project Steering Committee (PSC) will play a key oversight role for the project, with regular meetings to receive updates on project implementation progress and approve annual workplans. The PSC will provide continuous ad-hoc oversight and feedback on project activities, responding to inquiries or requests for approval from the PMU or Executing Agency.

The CI-GEF Project Agency will play an overall assurance, backstopping, and oversight role with respect to monitoring and evaluation activities. CI will be responsible for contracting and oversight of the planned independent external terminal evaluation (no mid-term evaluation is planned).

Monitoring and Evaluation Components and Activities
The M&E Plan will include the following components (see M&E table 8 for details):

Inception Workshop
The project inception workshop will be held virtually within the first three months of project start with project stakeholders. An overarching objective of the inception workshop is to assist the project team in understanding and taking ownership of the project?s objectives and outcomes. The inception

workshop will be used to detail the roles, support services and complementary responsibilities of CI GEF and Heifer International.

Inception Workshop Report
Heifer International will produce an inception report documenting all changes and decisions made during the inception workshop to the project planned activities, budget, results framework, and any other key aspects of the project. The inception report will be produced within one month of the inception workshop, as it will serve as a key input to the timely planning and execution of project start-up and activities.

Project Results Monitoring Plan (Objective, Outcomes, and Outputs)
A Project Results Monitoring Plan has been developed by Heifer International, and includes objectives, outcomes, and output indicators, metrics to be collected for each indicator, a methodology for data collection and analysis, baseline information, locations for data collection, the frequency of data collection, responsible parties, and indicative resources needed to complete the plan. The Project Results Monitoring Plan is available in Annex J. In addition to the objective, outcome, and output indicators, the Project Results Monitoring Plan table also includes all indicators that are identified in the four required Safeguard Plans.

Baseline Data Collection and Analysis
All necessary baseline data will be collected and documented by Heifer International within the first year.

GEF Core Indicators
Relevant GEF Core Indicators will also be completed i) prior to project start-up, ii) prior to mid-way point in the project, and iii) at the time of the terminal evaluation.

Project Steering Committee Meetings
PSC meetings will be held semi-annually, or as appropriate. The PSCwill review and approve project annual budget and work plans, discuss implementation issues and identify solutions, and increase coordination and communication between key project partners.

CI GEF Project Agency Field Supervision Missions
CI GEF will conduct annual visits to the project countries and field sites based on the agreed schedule in the project's Inception Report/Annual Work Plan to assess first hand project progress. Oversight visits will most likely be conducted to coincide with the timing of PSC meetings. Other members of the PSC may also join field visits. A Field Visit Report will be prepared by CI GEF staff participating in the oversight mission, and will be circulated to the project team and PSC members within one month of the visit.

Quarterly Progress Reporting
Heifer International will submit quarterly progress reports to CI GEF including budget follow-up and requests for disbursement to cover quarterly expenditures.

Annual Project Implementation Report (PIR)
Heifer International will prepare an annual PIR to monitor progress since project start and in particular for the reporting period (July 1st to June 30th). The PIR will summarize the annual project result and progress. A summary of the report will be shared with the PSC.

Final Project Report
Heifer International will draft a final report at the end of the project.

Independent Terminal Evaluation
An independent Terminal Evaluation will take place within six months after project completion and will be undertaken in accordance with CI GEF guidance. The terminal evaluation will focus on the delivery of the project?s results as initially planned (and as corrected if any such correction took place). Heifer International in collaboration with the PSC will provide a formal management answer to the findings and recommendations of the terminal evaluation.

Lessons Learned and Knowledge Generation

Results from the project will be disseminated within and beyond the project intervention area through existing information sharing networks and forums. The project will identify and participate, as relevant and appropriate, in scientific, policy-based and/or any other networks, which may be of benefit to project implementation though lessons learned. The project will identify, analyze, and share lessons learned that might be beneficial in the design and implementation of similar future projects. There will be a two-way flow of information between this project and other projects of a similar focus.

Financial Statements Audit

Annual Financial reports submitted by Heifer International will be audited annually by external auditors appointed by Heifer International. The Terms of References for the evaluations will be drafted by CI GEF in accordance with GEF requirements. Procurement and contracting for the independent evaluations will handled by CI?s General Counsel?s Office. The funding for the evaluations will come from the project budget, as indicated at project approval and within the attached budget. There will be two audits, equivalent to one per year, with audit activities conducted in both countries.

PROJECT M&E PLAN SUMMARY

Type of M&E	Reporting Frequency	Responsible Parties	Indicative Budget from GEF (USD) ? these are the total amounts for both countries
Inception workshop	Within three months of signing of CI Grant Agreement for GEF Projects	? Project Team ? Executing Agency ? CI-GEF PA	$12,752
Inception Workshop Report	Within one month of holding inception workshop	? Project Team ? CI-GEF PA	$884
Project Results Monitoring Plan (Objective, Outcomes and Outputs)	Annually (data on indicators will be gathered according to monitoring plan schedule shown on Appendix IV).	? Project Team ? CI-GEF PA	$9,132
GEF Indicator Tracker	i) Project development phase; ii) prior to project mid-term evaluation; and iii) project completion	? Project Team ? Executing Agency ? CI-GEF PA	$14,602.5
CI-GEF Project Agency Field Supervision Missions	Approximately annual visits	? CI-GEF PA	CI GEF to cover costs
Annual Project Implementation Report (PIR)	Annually for year ending June 30	? Project Team ? Executing Agency ? CI-GEF PA	$5,737
Project Completion Report	Upon project operational closure	? Project Team ? Executing Agency ? Project Team ? CI-GEF PA	$8,389
Independent Terminal Evaluation	Evaluation field mission within three months prior to	? CI Evaluation Office	$25,000

	project completion.	? Project Team ? CI-GEF PA	
Summary M&E total			**$76,496.50**
Type of PMC	**Reporting Frequency**	**Responsible Parties**	**Indicative Budget from GEF (USD)**
Project Steering Committee Meetings (virtual)	Annually	? Project Team ? Executing Agency ? CI-GEF PA	$18,500
Quarterly Progress Reporting	Quarterly	? Project Team ? Executing Agency ? Executing Agency ? CI-GEF PA	$25,399.92
Financial Statements Audit	Annually	? Executing Agency ? CI-GEF PA	$14,500
Summary PMC total			**$58,399.25**

10. Benefits

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

At the local level, male and female smallholder producers will have the ability to benefit not only through reduced waste, improved product, access to additional finance mechanisms, better market prices, improved access to markets and enhanced resiliency, but ultimately ? in the long term - through access to finance and tradeable credit schemes. This will collectively serve to incentivize the uptake of adaptation practices, thus incurring associated adaptation benefits. A major benefit of the project will be stabilized and/or increased income for smallholder producers involved in the project, due to increased resiliency and diversified livelihoods. Income from crop harvests is becoming increasingly uncertain due to the effects of climate change. The project will give farmers access to funding (and capacity building) to implement climate-smart adaptive practices, which will help to make their agricultural production more resilient, and in some cases increase their crop yields (e.g., by implementing intercropping/agroforestry to increase the output of their land). As an example, the farming families of the indigenous Queqchi population in the buffer and multipurpose areas in the project areas in Guatemala that produce cardamom are farmers with an average of 4-5 hectares and produce 1 ha in natural systems. On average, a family has an annual income of $2,232 per year and an estimated income to cover basic needs or a living income benchmark of $4,688 per year, generating a gap to be covered of $2,456. This gap is estimated to be closed with the production of combined agroforestry systems with an average of one ha.

This stabilization/increase of income will also serve to alleviate certain poverty-associated degradation pressures, such as clearance for subsistence farming and unsustainable resource extraction. The direct connection from adaptive and climate-smart practices to increased income sources will further incentivize lessened habitat degradation. Lessening habitat degradation in and of itself is an adaptation

benefit, as degradation exacerbates other insecurities associated with climate change (e.g., lack of ecosystem services and protection from extreme weather).

Beyond direct economic benefits, there will also be social benefits accrued as a result of the project. One of the aims of the project is to increase gender equity and representation throughout the associated value chains, as well as increasing women?s participation in decision-making processes and enhancing their leadership skills. As women traditionally interact more directly with the environment, their increased knowledge of and participation in adaptation practices is essential in achieving adaptation aims. Another social benefit will be increased knowledge-sharing, which will help lead to further uptake of adaptation practices, potentially beyond the smallholder producers initially involved in the project.

At the regional and national levels, the project will help to secure supply chains by making them more resilient to the effects of climate change, which will help to ensure more stable business proceedings within the associated value chains. Initially these benefits will be accrued for the four value chains associated with the project (cardamom, coffee, cocoa, and allspice). However, the AEI is being developed with the intended purpose of further expansion across geographies and products/supply chains. Thus, the socioeconomic benefits will also be potentially multiplied across the region, and potentially globally.

The current lack of adaptation measures in both Guatemala and Honduras have already led to increased internal migration, with some rural populaces migrating to cities for work because of instability in cultivation-based livelihoods. This insecurity is placing increased strain on social safety nets. By funding (and thus facilitating) the implementation of adaptation practices, the AEI will also help to mitigate the socioeconomic insecurities associated with climate change. This will become especially relevant if the AEI is eventually adopted at a larger scale regionally and across additional value chains.

11. Environmental and Social Safeguard (ESS) Risks

Provide information on the identified environmental and social risks and potential impacts associated with the project/program based on your organization's ESS systems and procedures

Overall Project/Program Risk Classification*

PIF	CEO Endorsement/Approval	MTR	TE
	Low		

Measures to address identified risks and impacts

Elaborate on the types and risk classifications/ratings of any identified environmental and social risks and impacts (considering the GEF ESS

Minimum Standards) and any measures undertaken as well as planned management measures to address these risks during implementation.

In Guatemala, the project will take place in the Transversal Stripe of the North and Polochic Basin while in Honduras, the project will be carried out in the department of Olancho.

For the project area in Guatemala, there are three protected areas in this territory: Reserva Biosfera Sierra de las Minas, Refugio de Vida Silvestre Bocas del Polochic and ?rea protegida de Laguna Lachua, and seven important bird areas including GT006, GT007, GT008, GT009, GTO10, GT011 and GT012 (Birdlife International, 2019). These bird areas house an array of near threatened, vulnerable, and endangered species of bird. In total, the IUCN red list indicates 12 critically endangered, 45 endangered, and 52 vulnerable species are in the project area of Guatemala.

In Honduras, there are nine protected areas in the department of Olancho. This area also includes six important bird areas (HN007, HN008, HN011, HN012, HN013, and HN016. The vast array of species found in Olancho include additional endangered or threatened species including amphibians such as Craugastor olanchano, fauna such as the endangered Juglans olancha. Honduras has a classification for species that need special attention (?Especies de Preocupaci?n Especial? or the EPE list) while somewhat dated, the list was revised in 2002 and comprised 298 species (37 mammals, 133 birds, 53 reptiles, 72 amphibians, and 3 fish); it was based upon scientific monographs and expert opinions.

In Guatemala, the population that live in the buffer and multiple purposes area is indigenous Queqchi population. The farming families that produce cardamom are farmers with an average of 4-5 hectares and produce 1 ha in natural systems. On average, a family has an annual income of $2,232 per year and an estimated income to cover basic needs or a living income benchmark of $4,688 per year. Communities have been growing cardamom for the last 106 years (it was introduced to the country in 1914), and in the case of allspice for the last 25 years. There are entire communities that base their economy on these crops. Production is characterized by inadequate crop management and limited technical capacity, resulting in low yields, combined with the effects of climate change and conditions such as Thrips and others. Most spices are sold dehydrated. It is estimated that there are more than 4,500 drying facilities for cardamom and for black pepper and allspice (throughout the Northern Transversal Strip). People struggle to find adequate income to support their families, suffer low literacy rates, poor housing conditions and have limited access to all kinds of basic needs and services (29% of households have no access to water, 85% have no access to sanitation and 65% have no access to electricity). Children in Alta Verapaz suffer seriously high rates of malnutrition (ranging from 42%-70% in some areas) and half of the children under 5 suffer from stunting. According to the Public Ministry of Guatemala, there were 50,000 complaints of violence against women (GBV) per year and 40,000 complaints per year of crimes committed against children and adolescents, including sexual violence, child abuse, human trafficking, or kidnapping in 2016. The Guatemalan justice authorities reported nearly 98-% impunity in GBV cases and similar numbers in cases involving child victims of violence and trafficking in persons.

In Honduras, thousands of smallholder farmers rely on coffee and cocoa production for survival. Women remain under-represented in both value chains. Despite being organized, farmers in the region have little collective bargaining power. Low quality, poor yields, and serious crop diseases are major issues facing these small-scale farmers. For example, while production of cocoa reached 1-1.5 MT in 2015, over 930 MT of cocoa beans did not meet standards required by the fermented cacao industry representing an astounding 84% failure rate. The project aims to work with 600 producers of which 108 are women and 492 men from the coffee and cocoa chains. Due to the nature of the crops, the vulnerability of the crops to rains and drought, as well as the lack of resiliency in community members, investment funds for adaptation to climate change are essential in the region. Income in the department of Olancho is about $187 per month. While some of the farmers and producers have diversified incomes including income from other crops within their farms such as fruit trees, corn, and livestock, community members are still not able to obtain a living wage. Labeled ?one of the most dangerous places on Earth to be a woman?, Honduras is home to rampant gender violence. In Honduras, 6.2 out of 100,000 women were murdered as a result of femicide in 2019?the highest figure in Latin America and the Caribbean. Gender-based violence is the second leading cause of death for women of reproductive age in Honduras. In early 2021, femicide in Honduras occurred every thirty-six hours. Similar to Guatemala, impunity for men is the norm and perpetrators of violent gender crimes, often associated with protective agencies, face no punishment for their crimes. In fact, 95% of all murders against women remain unsolved.

This project, at a minimum, will provide adaption solutions and ensure uptake of climate smart agriculture production techniques with an estimated 2,425 smallholder farmers in the two countries focused on the cardamom, allspice, cocoa, and coffee supply chains.

F. Executing Agency (EA)?s Institutional Capacity for Safeguard Policies:
Heifer Guatemala and Honduras both have experience implementing environmental and social safeguards in various supply chains including cocoa, coffee, and spices among others. Heifer?s portfolio of projects utilizes environmental management plans with measures of adaptation, compensation and mitigation of environmental impact of its activities. In addition to gender and inclusion strategies and generational replacement with operational plans for their execution, which has allowed to empower producers in this process and make producers and organizations involved in these processes and make them their own. The care of the environment and the inclusion of gender are fundamental pillars in the theory of change of the organization.

There is a Social Capital Officer, 1 full-time social capital advisor in the department of Olancho for the issues of gender, inclusion and generational replacement. As for the environmental component, there is an Environmental Engineer. In Guatemala there are two gender experts who serve as consultants to the implementation teams and six Social Capital Technicians charged with stakeholder engagement. There are also agroforestry technicians with experience in environmental strategies and safeguards. Qualified consultants will also be hired as needed to ensure robust implementation of safeguards.

All Social Capital Technicians are trained extensively on gender and other community safeguards. Additionally, Social Capital Technicians are members of the indigenous communities.

Supporting Documents

Upload available ESS supporting documents.

Title	Module	Submitted
Annex I ESS Second Screening	**CEO Endorsement ESS**	

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

ANNEX A: FULL PROJECT RESULTS FRAMEWORK

Objective:	Develop and launch the Adaptation Equivalency Index (AEI) in Guatemala and Honduras to ensure decreased loss of habitat, improved ecological resiliency, sustainable living income for smallholder producers (men and women) and an increase in adaptation investment from the private sector through the use of a standardized, quantifiable approach
Indicator(s):	**Indicator A:** Area of land managed for climate resilience **Target A:** 2,054 hectares managed for climate resilience **Indicator B:** Livelihoods and sources of income strengthened/introduced (agriculture, agro-processing, reduced supply chain) **Target B:** 12,125 producers have strengthened/new livelihoods and sources of income

Expected Outcomes and Indicators	Project Baseline	End of Project Target	Expected Outputs and Indicators
Component 1: Pilot improved climate smart agriculture practices that increase resiliency throughout the value chains			
Outcome 1.1 Improved climate smart production practices in ecologically vulnerable areas of Guatemala and Honduras ***Indicator 1.1:*** *Total # of hectares of production land under improved management*	0 ha	**Target 1.1:** *Total: 2,054 hectares* *Guatemala: 1,212 hectares* *Honduras: 842 hectares*	**Output 1.1.1:** Producers identified for participation in climate smart practices ***Indicator 1.1.1:*** *# of male and female producers identified* ***Target 1.1.1:*** *480 male and 120 female producers* **Output 1.1.2:** Technologies, tools, and skills needed to implement climate smart practices are obtained and utilized by producers ***Indicator 1.1.2:*** *# of male and female producers with knowledge about new technologies, tools and skills for climate smart agriculture* ***Target 1.1.2:*** *360 male and 90 female producers* **Output 1.1.3:** Demonstration projects of climate smart interventions implemented in rural communities in both countries ***Indicator 1.1.3:*** *# of demonstration projects implemented in rural communities* ***Target 1.1.3****: 20 demonstration projects*

Outcome 1.2: Increased resiliency and ability of male and female small holder producers to adapt to climate change and shocks related to economic and environmental volatility - ***Indicator 1.2.a.:*** *# of male and female producers that are better equipped to effectively adapt to climate change by using adapted farming practices* ***Indicator 1.2.b.:*** *# of producers that have higher incomes as a result of their participation in the project (considering actual income compared to the baseline)*	0 Producers	**Target 1.2.a.:** *12,125 producers (7,275 males, 4850 females)* **Target 1.2.b.:** *6,042 producers(3,626 men and 2,416 women)*	**Output 1.2.1**: Information on climate change adaptation disseminated in both countries across target areas ***Indicator 1.2.1:*** *# of communities that have received information about climate change and adaptation strategies* ***Target 1.2.1:*** *14 communities* **Output 1.2.2:** Strengthened capacity of producers in rural communities to implement climate smart measures ***Indicator 1.2.2:*** *# number of male and female producers trained on climate adaptation practices such as climate smart agriculture, drip irrigation, solar dryers, etc.* ***Target 1.2.2:*** *Total: 1,075 producers* *Guatemala: 475 producers* *Honduras: 600 producers*
Component 2: Develop Adaptation Equivalency Index by identifying, cataloguing, and quantifying measures of climate smart production practices			
Outcome 2.1: There is one functional Adaptation Equivalency Index that is flexible, scalable, and capable of catalyzing increased investment in adaptation and resiliency measures across value chains ***Indicator 2.1****: # of indices developed to catalyze investment in adaptation and resiliency measures across value chains*	0 Indices	**Target 2.1:** 1 index is ready for piloting by companies	**Output 2.1.1:** Climate smart production practices identified for inclusion in the AEI ***Indicator 2.1.1:*** *# of climate smart production practices identified for inclusion in the AEI* ***Target 2.1.1:*** *4 distinct categories of climate smart production practices identified* **Output 2.1.2:** The AEI is created ***Indicator 2.1.2:*** *# of indices developed to catalyze investment in adaptation and resiliency measures across value chains* ***Target 2.1.2:*** *1 Index developed*
Component 3: Pilot AEI ? integrate AEI into three premium value chains			
Outcome 3.1: The AEI is adopted as a valuable tool by companies to achieve key adaptation outcomes aligned with GEF adaptation strategy ***Indicator 3.1:*** # of companies signing agreements with Heifer to launch pilot projects to use the AEI	0 Companies	**Target 3.1:** 6 Companies	**Output 3.1.1**: AEI companies define KPIs and measure progress on their targets and metrics ***Indicator 3.1.1:*** *# of companies that report metrics on AEI use* ***Target 3.1.1:*** *6 companies measuring progress on AEI pilots*

Outcome 3.2: Increased knowledge of linkages between climate change adaptation and the target value chains ***Indicator 3.2:*** % of key industry leaders and members of the general public surveyed during the project showing increased knowledge about the linkages between climate change adaptation and the target value chains	0% (survey not conducted yet)	**Target 3.2:** 75% of survey respondents	**Output 3.2.1:** Companies develop communication plans about the AEI and its relevance targeting consumers, key industry leaders, and public sector authorities ***Indicator 3.2.1****: # of communications plans on the AEI developed by companies to target key industry leaders and the general public* ***Target 3.2.1:*** *6 communications plans*

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

N/A

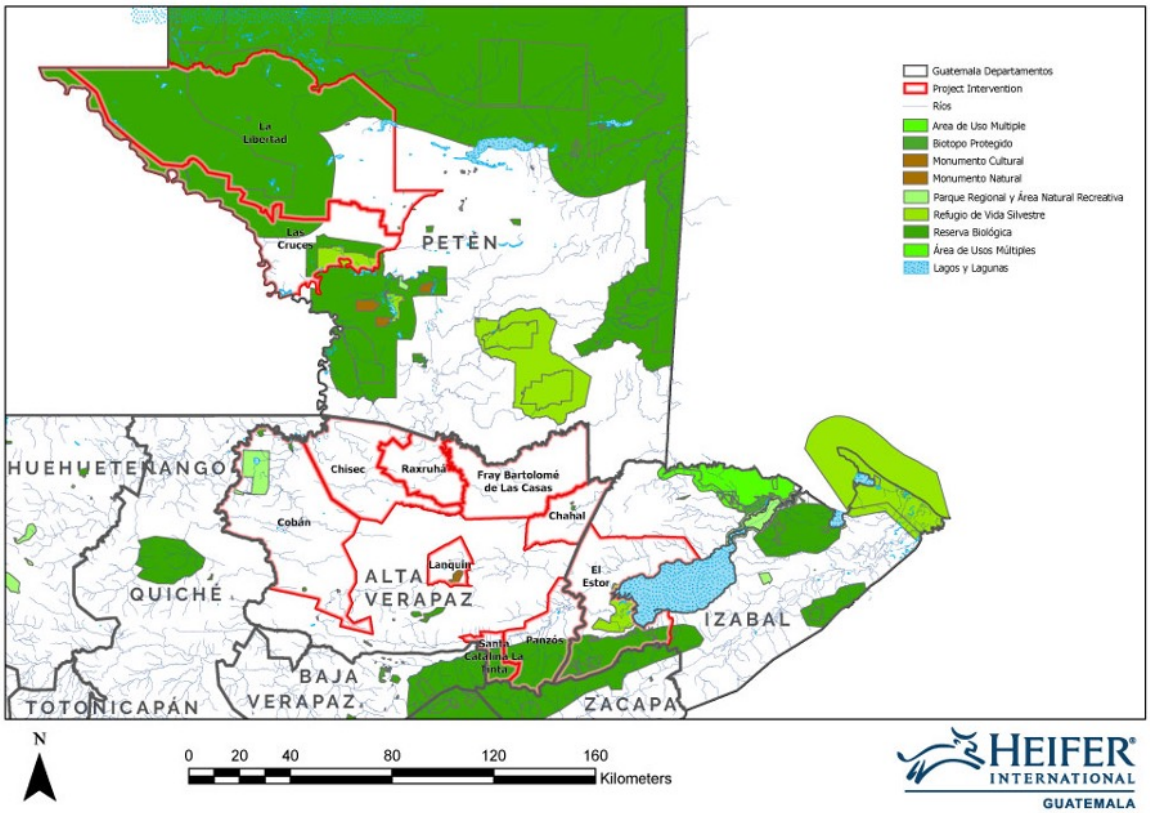
ANNEX C: Status of Utilization of Project Preparation Grant (PPG). (Provide detailed funding amount of the PPG activities financing status in the table below:

N/A

ANNEX D: Project Map(s) and Coordinates

Please attach the geographical location of the project area, if possible.

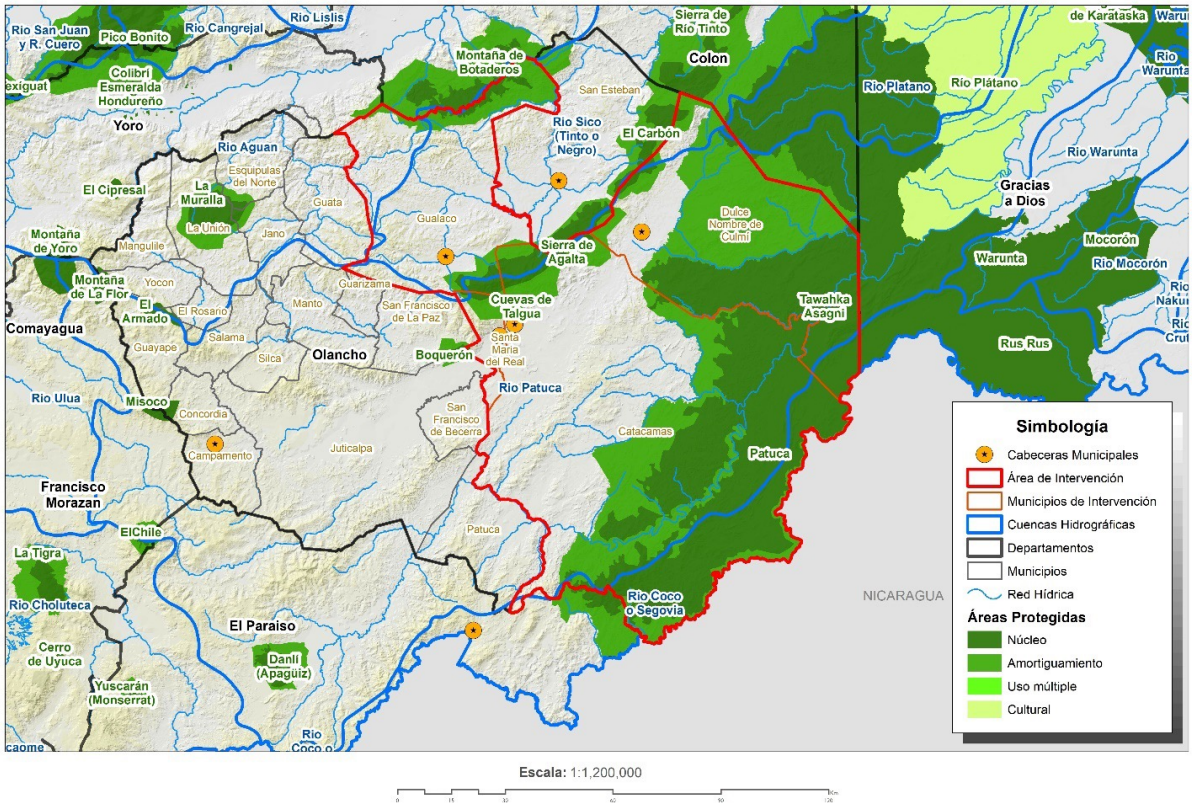
GUATEMALA PROJECT INTERVENTION MAP



GUATEMALA Coordinates (10 project sites)	Latitude	Longitude
Cob?n	15.841073357580171	-90.74835903552768
Chisec	15.813849640756505	-90.29096607486422
Raxruh?	15.866344632472586	-90.04418122571548
Fray Bartolom? de Las Casas	15.80545710438589	-89.86119039021011
Chahal	15.792294453255158	-89.6020245971044
La Tinta	15.31167618935276	-89.88500834511544
Sierra de Las Minas, San Antonio	15.26063863406945	-89.8413024206138
Sierra de Las Minas, San Vicente I	15.23770645200451	-89.77575031231189
Panz?s	15.39843509143048	-89.64359191218428
Bocas del Polochic, Selempim	15.324293364938923	-89.38666479271797

Honduras

Project Intervention Map



Honduras Coordinates (4 project sites)	Latitude	Longitude
Dulce nombre de culm?	15.0418782	-85.324444
Gualaco	15.2242208	-86.1296722
Santa maria del real	14.7817475	-85.960863
Catacamas	14.8445355	-85.8960213

ANNEX E: Project Budget Table

Please attach a project budget table.

Expenditure Category	Detailed Description	Component (USDeq.)								Total (USDeq.)[1]
		Component 1		Component 2	Component 3		Sub-Total	M&E	PMC	
		Outcome 1.1	Outcome 1.2	Outcome 2.1	Outcome 3.1	Outcome 3.2				
Personnel and Professional Services	Personnel - Program Director	7,317	7,317	5,853	4,390	4,390	29,267	-	-	29,267
	Personnel - Project Lead	24,760	24,760	19,808	9,904	9,904	89,135	-	9,904	99,039
	Personnel- Guatemala MELS Officer	8,513	7,567	7,567	7,567	7,567	38,781	8,513		47,294
	Personnel- Guatemala Field Technician	11,198	11,198	6,399	1,600	1,600	31,993	-	-	31,993
	Personnel- Contracts and Policy Officer	6,685	6,685	6,685	6,685	8,913	35,653	-	8,913	44,566
	Personnel- Coordinator	20,425	20,425	8,170	6,808	6,808	62,637	-	5,447	68,084
	Personnel- Finance Officer						-	-	43,246	43,246
	Personnel- Honduras Field Technician	7,130	7,130	3,565	3,565	2,378	23,769	-	-	23,769
	Personnel- Honduras MELS Officer	7,984	7,984	5,589	3,593	3,593	28,742	11,177	-	39,919
	Local Consultant (2)- Baseline Studies	10,700					10,700			10,700
	Contractual Services- Annual Project Audit						-		15,515	15,515
	Local Consultant- Report to capture case studies		26,199				26,199			26,199
	Local Consultant- Communications Consultancy		7,865	7,865	10,486		26,215			26,215
	Local Consultant- Data Analysis and Statistics			15,622			15,622			15,622
	Local Consultant- Gender and Safeguards	15,622					15,622			15,622
	Local Consultant- Adaptation Practices		6,420				6,420			6,420
	Local Consultant (2)- Completing surveys						-	3,544		3,544
	Local Consultant- Develop communications plan				5,350		5,350			5,350
	International Consultancy- Terminal Evaluation						-	25,000		25,000
Travel, Meetings and Workshops	Workshop- Implementation Design	4,922					4,922			4,922
	Workshop- Benefits of Climate Smart Agriculture		11,208				11,208			11,208
	Local/International Travel- Program Director	2,692	2,692	2,692	2,692	2,692	13,461			13,461
	Local/International Travel- Project Lead	4,271	4,271	4,271	4,271	4,271	21,357			21,357
	Local Travel- Guatemala MELS Officer	7,897	-	-	-	-	7,897			7,897
	Local Travel- Guatemala Field Technician	4,237	4,237	4,237	4,237	4,237	21,186			21,186
	Local Travel- Contracts and Policy Officer	1,387	1,387	1,387	1,387	1,387	6,934			6,934
	Local Travel- Social Capital Officer	1,387	1,387	1,387	1,387	1,387	6,934			6,934
	Local Travel- Project Coordinator	1,383	1,880	512	512	341	4,628			4,628
	Local Travel- Honduras MELS Officer	2,241	2,241	1,379	1,379	1,379	8,619			8,619
	Local Travel- Honduras Field Technician	4,607	4,607	2,304	2,304	1,535	15,356			15,356
	Workshops to show climate smart tools, trainings in AEI topics, explanation of objectives and scope of projects	29,941		8,555	6,416		44,911			44,911
Grants and Agreements	Guatemala- Kits to implement adaptation plan, 10 communities		53,500				53,500			53,500
	Honduras- Kits to implement adaptation plan, 10 communities	53,500					53,500			53,500
Equipment	Staff Computers	1,947	1,947	1,947	1,947	1,947	9,737			9,737
Other Direct Cost	Guatemala Office Rent, Cleaning, and Supplies	2,178	2,178	2,178	2,178	2,178	10,888			10,888
	Guatemala Utilities	514	514	514	514	514	2,568			2,568
	Honduras Office Rent and Supplies	5,096					5,096			5,096
	Honduras Utilities	2,293					2,293			2,293
	Phone and Internet	4,907	1,618	1,618	1,618	1,618	11,378			11,378
	Vehicle/Motorcycle Maintenance and Insurance Costs	14,218	2,369	2,369	2,369	2,369	23,694			23,694
Grand Total		269,951	229,584	122,471	93,158	71,008	786,172	48,234	83,025	917,431

ANNEX F: (For NGI only) Termsheet

Instructions. Please submit an finalized termsheet in this section. The NGI Program Call for Proposals provided a template in Annex A of the Call for Proposals that can be used by the Agency. Agencies can use their own termsheets but must add sections on Currency Risk, Co-financing Ratio and

Financial Additionality as defined in the template provided in Annex A of the Call for proposals. Termsheets submitted at CEO endorsement stage should include final terms and conditions of the financing.

N/A

ANNEX G: (For NGI only) Reflows

Instructions. Please submit a reflows table as provided in Annex B of the NGI Program Call for Proposals and the Trustee excel sheet for reflows (as provided by the Secretariat or the Trustee) in the Document Section of the CEO endorsement. The Agencys is required to quantify any expected financial return/gains/interests earned on non-grant instruments that will be transferred to the GEF Trust Fund as noted in the Guidelines on the Project and Program Cycle Policy. Partner Agencies will be required to comply with the reflows procedures established in their respective Financial Procedures Agreement with the GEF Trustee. Agencies are welcomed to provide assumptions that explain expected financial reflow schedules.

N/A

ANNEX H: (For NGI only) Agency Capacity to generate reflows

Instructions. The GEF Agency submitting the CEO endorsement request is required to respond to any questions raised as part of the PIF review process that required clarifications on the Agency Capacity to manage reflows. This Annex seeks to demonstrate Agencies? capacity and eligibility to administer NGI resources as established in the Guidelines on the Project and Program Cycle Policy, GEF/C.52/Inf.06/Rev.01, June 9, 2017 (Annex 5).

N/A