AFB/PPRC.20/22
4 March 2017

Adaptation Fund Board
Project and Programme Review Committee
Twentieth Meeting
Bonn, Germany, 14-15 March 2017

Agenda Item 9 a)

PROPOSAL FOR COSTA RICA, DOMINICAN REPUBLIC, EL SALVADOR, GUATEMALA, HONDURAS, NICARAGUA AND PANAMA

Background

1. The strategic priorities, policies and guidelines of the Adaptation Fund (the Fund), as well as its operational policies and guidelines include provisions for funding projects and programmes at the regional, i.e. transnational level. However, the Fund has thus far not funded such projects and programmes.

2. The Adaptation Fund Board (the Board), as well as its Project and Programme Review Committee (PPRC) and Ethics and Finance Committee (EFC) considered issues related to regional projects and programmes on a number of occasions between the Board's fourteenth and twenty-first meetings but the Board did not make decisions for the purpose of inviting proposals for such projects. Indeed, in its fourteenth meeting, the Board decided to:

> *(c) Request the secretariat to send a letter to any accredited regional implementing entities informing them that they could present a country project/programme but not a regional project/programme until a decision had been taken by the Board, and that they would be provided with further information pursuant to that decision*
>
> *(Decision B.14/25 (c))*

3. In its eighth meeting in March 2012, the PPRC came up with recommendations on certain definitions related to regional projects and programmes. However, as the subsequent seventeenth Board meeting took a different strategic approach to the overall question of regional projects and programmes, these PPRC recommendations were not included in a Board decision.

4. In its twenty-fourth meeting, the Board heard a presentation from the coordinator of the working group set up by decision B.17/20 and tasked with following up on the issue of regional projects and programmes. She circulated a recommendation prepared by the working group, for the consideration by the Board, and the Board decided:

> *(a) To initiate steps to launch a pilot programme on regional projects and programmes, not to exceed US$ 30 million;*
>
> *(b) That the pilot programme on regional projects and programmes will be outside of the consideration of the 50 per cent cap on multilateral implementing entities (MIEs) and the country cap;*
>
> *(c) That regional implementing entities (RIEs) and MIEs that partner with national implementing entities (NIEs) or other national institutions would be eligible for this pilot programme, and*
>
> *(d) To request the secretariat to prepare for the consideration of the Board, before the twenty-fifth meeting of the Board or intersessionally, under the guidance of the working group set up under decision B.17/20, a proposal for such a pilot programme based on consultations with contributors, MIEs, RIEs, the Adaptation Committee, the Climate Technology Centre and Network (CTCN), the Least Developed Countries Expert Group (LEG), and other relevant bodies, as appropriate, and in that proposal make a recommendation on possible options on approaches, procedures and priority areas for the implementation of the pilot programme.*
>
> *(Decision B.24/30)*

5. The proposal requested under (d) of the decision above was prepared by the secretariat and submitted to the Board in its twenty-fifth meeting, and the Board decided to:

> *(a) Approve the pilot programme on regional projects and programmes, as contained in document AFB/B.25/6/Rev.2;*
>
> *(b) Set a cap of US$ 30 million for the programme;*
>
> *(c) Request the secretariat to issue a call for regional project and programme proposals for consideration by the Board in its twenty-sixth meeting; and*
>
> *(d) Request the secretariat to continue discussions with the Climate Technology Center and Network (CTCN) towards operationalizing, during the implementation of the pilot programme on regional projects and programmes, the Synergy Option 2 on knowledge management proposed by CTCN and included in Annex III of the document AFB/B.25/6/Rev.2.*
>
> *(Decision B.25/28)*

6. Based on the Board Decision B.25/28, the first call for regional project and programme proposals was issued and an invitation letter to eligible Parties to submit project and programme proposals to the Fund was sent out on 5 May 2015.

7. In its twenty-sixth meeting the Board decided *to request the secretariat to inform the Multilateral Implementing Entities and Regional Implementing Entities that the call for proposals under the Pilot Programme for Regional Projects and Programmes is still open and to encourage them to submit proposals to the Board at its 27th meeting, bearing in mind the cap established by Decision B.25/26.*

(Decision B.26/3)

8. In its twenty-seventh meeting the Board Board decided to:

> *(a) Continue consideration of regional project and programme proposals under the pilot programme, while reminding the implementing entities that the amount set aside for the pilot programme is US$ 30 million;*
>
> *(b) Request the secretariat to prepare for consideration by the Project and Programme Review Committee at its nineteenth meeting, a proposal for prioritization among regional project/programme proposals, including for awarding project formulation grants, and for establishment of a pipeline; and*
>
> *(c) Consider the matter of the pilot programme for regional projects and programmes at its twenty-eighth meeting.*
>
> *(Decision B.27/5)*

9. The proposal requested in (b) above was presented to the nineteenth meeting of the PPRC as document AFB/PPRC.19/5. The Board subsequently decided:

a) With regard to the pilot programme approved by decision B.25/28:

(i) To prioritize the four projects and 10 project formulation grants as follows:

1. If the proposals recommended to be funded in a given meeting of the PPRC do not exceed the available slots under the pilot programme, all those proposals would be submitted to the Board for funding;

2. If the proposals recommended to be funded in a given meeting of the PPRC do exceed the available slots under the pilot programme, the proposals to be funded under the pilot programme would be prioritized so that the total number of projects and project formulation grants (PFGs) under the programme maximizes the total diversity of projects/PFGs. This would be done using a three-tier prioritization system: so that the proposals in relatively less funded sectors would be prioritized as the first level of prioritization. If there are more than one proposal in the same sector: the proposals in relatively less funded regions are prioritized as the second level of prioritization. If there are more than one proposal in the same region, the proposals submitted by relatively less represented implementing entity would be prioritized as the third level of prioritization;

(ii) To request the secretariat to report on the progress and experiences of the pilot programme to the PPRC at its twenty-third meeting; and

b) With regard to financing regional proposals beyond the pilot programme referred to above:

(i) To continue considering regional proposals for funding, within the two categories originally described in document AFB/B.25/6/Rev.2: ones requesting up to US$ 14 million, and others requesting up to US$ 5 million, subject to review of the regional programme;

(ii) To establish two pipelines for technically cleared regional proposals: one for proposals up to US$ 14 million and the other for proposals up to US$ 5 million, and place any technically cleared regional proposals, in those pipelines, in the order described in decision B.17/19 (their date of recommendation by the PPRC, their submission date, their lower "net" cost); and

(iii) To fund projects from the two pipelines, using funds available for the respective types of implementing entities, so that the maximum number of or maximum total funding for projects and project formulation grants to be approved each fiscal year will be outlined at the time of approving the annual work plan of the Board.

(Decision B.28/1)

10. According to the Board Decision B.12/10, a project or programme proposal needs to be received by the secretariat no less than nine weeks before a Board meeting, in order to be considered by the Board in that meeting.

11. The following project concept document titled “Productive Investment Initiative for Adaptation to Climate Change” was submitted by the Central American Bank for Economic Integration (CABEI), which is a Regional Implementing Entity of the Adaptation Fund.

12. This is the second submission of the regional project concept. It was first submitted as a project concept for the twenty-eighth Board meeting and the Board decided to:

> *(a) Not endorse the project concept, as supplemented by the clarification response provided by Central American Bank for Economic Integration (CABEI) to the request made by the technical review;*
>
> *(b) Suggest that CABEI reformulate the proposal taking into account the observations in the review sheet annexed to the notification of the Board's decision, as well as the following issues:*
>
> *(i) The proposal should describe the criteria that would be used to select both the Intermediary Financial Institutions (IFIs) and Micro, Small and Medium Enterprises (MSMEs) that would benefit from the project;*
>
> *(ii) The proposal should address the question of potential conflict of interest due to the fact that CABEI will be implementing, executing, monitoring and evaluating its own work;*
>
> *(iii) The proposal should address the criteria of full cost of adaptation reasoning;*
>
> *(iv) The proposal should identify any relevant technical standards that would apply to the project, and demonstrate compliance of the proposal with such standards;*
>
> *(v) The proposal should provide further evidence of consultations with key stakeholders;*
>
> *(vi) The proposal should demonstrate further the sustainability of the programme; and*
>
> *(c) Request CABEI to transmit the observations under item (b) to the Governments of Costa Rica, Dominican Republic, El Salvador, Guatemala, Honduras, Nicaragua and Panama.*
>
> *(Decision B.28/22)*

13. The current submission of the project concept was received by the secretariat in time to be considered in the twenty-ninth Board meeting. The secretariat carried out a technical review of the project proposal, assigned it the diary number LAC/RIE/Inno/2016/1, and completed a review sheet.

14. In accordance with a request to the secretariat made by the Board in its 10th meeting, the secretariat shared this review sheet with CABEI, and offered it the opportunity of providing responses before the review sheet was sent to the PPRC.

15. The secretariat is submitting to the PPRC the summary and, pursuant to decision B.17/15, the final technical review of the project, both prepared by the secretariat, along with the final submission of the proposal in the following section. In accordance with decision B.25/15, the proposal is submitted with changes between the initial submission and the revised version highlighted.

16. Lastly, CABEI has submitted a Project Formulation Grant Request, which is also available as an addendum to this document.

Project Summary

Costa Rica, Dominican Republic, El Salvador, Guatemala, Honduras, Nicaragua and Panama - Productive Investment Initiative for Adaptation to Climate Change

Implementing Entity: CABEI
Project/Programme Execution Cost: US$ 437,788
Total Project/Programme Cost: US$ 4,608,295
Implementing Fee: US$ 391,705
Financing Requested: US$ 5,000,000

Project Background and Context:

The project goal is to enhance capacity of Micro, Small and Medium agricultural Enterprises (MSMEs) from Guatemala, El Salvador, Honduras, Nicaragua, Costa Rica, Panama and Dominican Republic to implement adaptation measures in order to increase their resilience to climate change, ensuring the provision of financial and non-financial services to support ecosystems and agricultural production, as well as providing technical assistance in the adaptation planning processes and incentives to define specific alternatives of resilience and investment management. The initiative will promote innovation and provide solutions of adaptation to climate change through the following components:

Component 1: Innovative financial mechanisms for Ecosystem based Adaptation measures (US$ 25,000,000, CABEI-funded)

Under this CABEI-funded component, loans will be provided to MSMEs through a network of Intermediate Financial Institutions (IFIs) accredited to CABEI. Such credits will be granted for the implementation of a wide range of natural resource management activities aiming at tackling threats arising out of climate change impacts. Loans will be granted based on business plans established by the MSMEs and evaluated by CABEI.

Component 2: Capacity Building for the Development of Production Models Resilient to Climate Change (US$ 1,668,203, AF-funded)

This component, that will be executed prior to component 1 described above, will provide support through non-refundable resources to the MSMEs that benefit from the credits described above. Such technical assistance activities plan to improve MSMEs' technical and entrepreneurial capacities to enhance their efficiency and competitiveness through the adoption of adaptation measures. This output will substantially contribute to raise the awareness level of the MSMEs on the needs to adapt to climate change and to improve their capacity to do business and access new markets. Similarly, capacity building and trainings activities will be provided to IFIs to support their capacity to create credit lines of adaptation to climate change.

Component 3: Incentive schemes to promote Ecosystem-Based Adaptation measures (Adapt-Awards) (US$ 2,502,304, AF-funded)

The measure proposed under this component consists in a refund of 20% of the loan principal granted by the regulated or non-regulated IFIs under component 1. This incentive will be

distributed between MSMEs and IFIs in a percentage of 60% of the refund for the MSME and 40% for the IFI (12% and 8% of the credit amount, respectively). This incentive will be awarded only after the adaptation measures have been achieved and monitored. The refund of 12% of total loan will allow the MSME to repay the sum granted to the balance of capital of the credit held with the IFI. By paying a sum to the balance on the capital total loan, the proportion that each MSME contributes to the capital balance is increased, and the interest deriving from the credit is reduced. Therefore, the MSME pays the credit acquired in less time. The incentive of 8% of total loan will allow the IFI to repay a sum to the capital total credit to CABEI.

ADAPTATION FUND BOARD SECRETARIAT TECHNICAL REVIEW OF PROJECT/PROGRAMME PROPOSAL

PROJECT/PROGRAMME CATEGORY: REGIONAL PROJECT CONCEPT

Countries/Region: **Guatemala, El Salvador, Honduras, Nicaragua, Costa Rica, Panama and Dominican Republic**
Project Title: **Productive Investment Initiative for Adaptation to Climate Change**
Thematic Focal Area: **Innovation in adaptation finance**
Implementing Entity: **Central American Bank for Economic Integration (CABEI)**
Executing Entities: **Central American Bank for Economic Integration (CABEI) – Project Coordination Unit**
AF Project ID: **LAC/RIE/Inno/2016/1**
IE Project ID:
Requested Financing from Adaptation Fund (US Dollars): **USD 5,000,000**
Reviewer and contact person: **Daouda Ndiaye**
Co-reviewer(s): **Mikko Ollikainen**
IE Contact Person: **Mr. Randall Hooker**

Review Criteria	Questions	Comments on 29 January 2017	Comments on 12 February 2017
Country Eligibility	1. Are all of the participating countries party to the Kyoto Protocol?	Yes.	
	2. Are all of the participating countries developing countries particularly vulnerable to the adverse effects of climate change?	Yes. The agricultural sector is the sector that has suffered from the greatest losses as a result of extreme weather events in recent decades in the region. It accounts for 9 per cent of the sub regional GDP but employs 30 per cent of the working population of the region.	
Project Eligibility	1. Has the designated government authority for the Adaptation Fund	No.	

	endorsed the project/programme?	**CAR:** Please provide endorsement letters from all participating countries' designated authorities.	**CAR:** Addressed.
	2. Does the regional project / programme support concrete adaptation actions to assist the participating countries in addressing the adverse effects of climate change and build in climate resilience, and do so providing added value through the regional approach, compared to implementing similar activities in each country individually?	The project goal is to "*enhance capacity of target countries to implement adaptation measures for micro, small and medium agricultural enterprises through the provision of financial and non-financial services to support ecosystems and agricultural production*". The AF project would co-finance a larger (USD 25 million) CABEI-funded component ("Component 1") aiming at providing loans to agricultural Micro, Small and Medium Size Enterprises (MSMEs) through Intermediate Financial Institutions (IFIs) for the implementation of "*best practices for production and conservation of natural resources and consolidation of production systems adapted to climate change*". It is proposed that the Adaptation Fund would distribute a cash refund of 20% of the loan contracted under component 1 to both MSMEs and IFIs for activities that will "*be oriented toward good environmental practices*" (Component 2). In addition, it is proposed that the Fund provides grant funding for technical assistance for the implementation of the measures described under Component 1, development of sectorial initiatives and credit-related technical assistance (Component 3). **CR 1:** Please explain the rationale for the 8 percent loan principal cash refund to the IFI. If the aim of the 12 percent refund to MSMEs is (i) to reduce the obstacles to credit access on the part of producers and (ii) to support IFIs in reducing the risks in the loans they provide to MSMEs, it is not clear why an additional refund has to be	**CR1:** Addressed. However, the fully-developed

		provided to financial institutions which are lending to those MSMEs with interests. If the adapt award is implemented by IFIs instead of CABEI, those IFIs could integrate the incentive program into their risk management system. Providing the reward directly to vulnerable MSMEs would be more in line with the mandate of the AF to fund concrete adaptation actions. **CR 2:** Please clarify how the most vulnerable MSMEs (instead of vulnerable sectors) will be targeted as beneficiaries of the project, through specific eligibility criteria. What will be the proportion of micro-enterprises that will be targeted? In addition to ensuring that women are involved in the training programs, at the fully-developed proposal stage, clear indicators of representation of women-led MSMEs should be provided.	project document should further explain the rationale for providing an 8 percent loan principal cash refund to the IFIs using Adaptation Fund resources. **CR2:** Addressed.
	3. Does the project / programme provide economic, social and environmental benefits, particularly to vulnerable communities, including gender considerations, while avoiding or mitigating negative impacts, in compliance with the Environmental and Social Policy of the Fund?	Yes.	
	4. Is the project / programme cost-effective and does the	Yes.	

	regional approach support cost-effectiveness?		
	5. Is the project / programme consistent with national or sub-national sustainable development strategies, national or sub-national development plans, poverty reduction strategies, national communications and adaptation programs of action and other relevant instruments? If applicable, it is also possible to refer to regional plans and strategies where they exist.	Yes.	
	6. Does the project / programme meet the relevant national technical standards, where applicable, in compliance with the Environmental and Social Policy of the Fund?	To be demonstrated.	
	7. Is there duplication of project / programme with other funding sources?	Not likely.	
	8. Does the project / programme have a learning and knowledge management component to capture and feedback lessons?	Yes.	

	9. Has a consultative process taken place, and has it involved all key stakeholders, and vulnerable groups, including gender considerations?	Yes.	
	10. Is the requested financing justified on the basis of full cost of adaptation reasoning?	As this proposal is innovative and includes cofinancing that is linked with the concept of full cost of adaptation, which will be discussed by the Board at its 29th meeting, the outcomes of such discussions will help better assess this particular criterion.	
	11. Is the project / program aligned with AF's results framework?	Yes.	
	12. Has the sustainability of the project/programme outcomes been taken into account when designing the project?	Yes.	
	13. Does the project / programme provide an overview of environmental and social impacts / risks identified?	Yes.	
	14. Does the project promote new and innovative solutions to climate change adaptation, such as new approaches, technologies and mechanisms?	Yes. The project would reduce obstacles to credit access to MSMEs for the implementation of adaptation activities, which consist the main innovation of the project. Currently, loans based on adoption of Ecosystem Based Adaptation measures do not exist in the region.	

Resource Availability	1. Is the requested project / programme funding within the funding windows of the pilot programme for regional projects/programmes?	Yes.	
	2. Are the administrative costs (Implementing Entity Management Fee and Project/ Programme Execution Costs) at or below 20 per cent of the total project/programme budget?	Yes. However, the role of CABEI as implementing entity and at the same time executing entity may result in the reduction of the execution costs.	
Eligibility of IE	3. Is the project/programme submitted through an eligible Multilateral or Regional Implementing Entity that has been accredited by the Board?	Yes.	
Implementation Arrangements	1. Is there adequate arrangement for project / programme management at the regional and national level, including coordination arrangements within countries and among them? Has the potential to partner with national institutions, and when possible, national implementing entities (NIEs), been considered, and included in the management arrangements?	Not applicable / Not required at concept stage	

	2. Are there measures for financial and project/programme risk management?	Not applicable / Not required at concept stage	
	3. Are there measures in place for the management of for environmental and social risks, in line with the Environmental and Social Policy of the Fund? Proponents are encouraged to refer to the Guidance document for Implementing Entities on compliance with the Adaptation Fund Environmental and Social Policy, for details.	Not applicable / Not required at concept stage	
	4. Is a budget on the Implementing Entity Management Fee use included?	Not applicable / Not required at concept stage	
	5. Is an explanation and a breakdown of the execution costs included?	Not applicable / Not required at concept stage	
	6. Is a detailed budget including budget notes included?	Not applicable / Not required at concept stage	
	7. Are arrangements for monitoring and evaluation clearly defined, including budgeted M&E plans and sex-disaggregated data, targets and indicators?	Not applicable / Not required at concept stage	
	8. Does the M&E Framework include a break-down of	Not applicable / Not required at concept stage	

	how implementing entity IE fees will be utilized in the supervision of the M&E function?		
	9. Does the project/programme's results framework align with the AF's results framework? Does it include at least one core outcome indicator from the Fund's results framework?	Not applicable / Not required at concept stage	
	10. Is a disbursement schedule with time-bound milestones included?	Not applicable / Not required at concept stage	

Technical Summary	The project goal is to enhance capacity to implement adaptation measures for micro, small and medium agricultural enterprises from Guatemala, El Salvador, Honduras, Nicaragua, Costa Rica, Panama and Dominican Republic, in order to increase their resilience to climate change, ensuring the provision of financial and non-financial services to support ecosystems and agricultural production, as well as providing technical assistance in the adaptation planning processes and incentives to define specific alternatives of resilience and investment management. The Adaptation Fund project would support the implementation of financial incentive schemes promoting ecosystem based adaptation measures (Adapt-Awards). The initial technical review found that the proposed project was innovative in nature. A few issues were raised including the need for an explanation of the rationale for the 8 percent loan principal cash refund to the IFIs, and clarification on how the most vulnerable MSMEs (instead of vulnerable sectors) will be targeted as beneficiaries of the project. The final technical review finds that the requests have been addressed satisfactorily. The following observations are made, to be taken into account when developing the fully-developed project document:

	a) The fully-developed project document should ensure that background information on the agricultural sector and changes in the political framework, reforms in the field of bank supervision and legalization is provided for all countries covered by the project; b) The fully-developed project document should further explain the rationale for providing an 8 percent loan principal cash refund to the Intermediate Financial Institutions (IFIs) using Adaptation Fund resources; c) The fully-developed project document should further demonstrate how the project will meet the relevant national technical standards, where applicable, in compliance with the Environmental and Social Policy of the Fund; and d) The fully-developed proposal stage should provide clear indicators of representation of women-led MSMEs.
Date:	1 March 2017

RESPONSE FROM CABEI TO THE OBSERVATIONS MADE BY THE BOARD AT ITS 28TH MEETING

ADAPTATION FUND BOARD SECRETARIAT TECHNICAL REVIEW OF PROJECT/PROGRAMME PROPOSAL

PROJECT/PROGRAMME CATEGORY: REGIONAL PROJECT CONCEPT

Countries/Region: **Guatemala, El Salvador, Honduras, Nicaragua, Costa Rica, Panama and Dominican Republic**
Project Title: **Productive Investment Initiative for Adaptation to Climate Change**
Thematic Focal Area: **Innovation in adaptation finance**
Implementing Entity: **Central American Bank for Economic Integration (CABEI)**
Executing Entities: **Central American Bank for Economic Integration (CABEI) – Project Coordination Unit**
AF Project ID: **LAC/RIE/Inno/2016/1**
IE Project ID:
Requested Financing from Adaptation Fund (US Dollars): **USD 5,000,000**
Reviewer and contact person: **Mr. Hugo Remaury**
Co-reviewer(s): **Ms. Fareeha Iqbal, Mr. Mikko Ollikainen**
IE Contact Person: **Mr. Randall Hooker**

Review Criteria	Questions	Comments initial review	Comments final review	CABEI's response to final review comments
Country Eligibility	3. Are all of the participating countries party to the Kyoto Protocol?	Yes.		
	4. Are all of the participating countries developing countries particularly vulnerable to the adverse effects of climate change?	Yes. The agricultural sector is the sector that has suffered from the greatest losses as a result of extreme weather events in		

		recent decades in the region. It accounts for 9 per cent of the sub regional GDP but employs 30 per cent of the working population of the region.		
Project Eligibility	15. Has the designated government authority for the Adaptation Fund endorsed the project/programme?	No. CAR 1: Please provide endorsement letters from all participating countries' designated authorities.	CAR 1: Addressed.	
	16. Does the regional project / programme support concrete adaptation actions to assist the participating countries in addressing the adverse effects of climate change and build in climate resilience, and do so providing added value through the regional approach, compared to implementing similar activities in each country individually?	The project goal is to "*enhance capacity of target countries to implement adaptation measures for micro, small and medium agricultural enterprises through the provision of financial and non-financial services to support ecosystems and agricultural production*". The AF project would co-finance a larger (USD 25 million) CABEI-funded component ("Component 1") aiming at providing loans to agricultural Micro, Small and Medium Size Enterprises (MSMEs) through Intermediate Financial Institutions (IFIs) for the implementation of "*best*	CR 1: Partly addressed. A list of eligible adaptation activities is provided in the proposal. A table highlighting what climate change-related risks each of these activities are addressing is also included. However, since component 2 still represents a significant amount of the funding requested (one third), with no expected concrete results on the ground apart from training and building capacity activities of IFIs and MSMEs, it appears	CR1: CABEI has clarified in the description of Component 2 - starting on p. 87- that this component will bring the possibility to MSMEs of accessing technical assistance for pre-investment (previous to the adaptation projects' final design), as well as more intensive training for improving their knowledge about concrete adaptation measures to face climate change, and complementary training on technical and entrepreneurial related to credit management. Thus, training will be provided both on adaptation measures and on building capacities for managing

		practices for production and conservation of natural resources and consolidation of production systems adapted to climate change". It is proposed that the Adaptation Fund would distribute a cash refund of 20% of the loan contracted under component 1 to both MSMEs and IFIs for activities that will "*be oriented toward good environmental practices*" ("Component 2", USD 2 million). In addition, it is proposed that the Fund provides grant funding for technical assistance for the implementation of the measures described under Component 1, development of sectorial initiatives and credit-related technical assistance ("Component 3", USD 3 million). The proposal should clarify outstanding issues related to the appropriateness of the activities with respect to the expected climate change threats, their concreteness (delivering visible and tangible results on the ground), the	important to clarify the scope of the activities planned under this component. Indeed, according to the proposal, this component would support activities that seem more related to the business aspects of the MSMEs (organizational, administrative and competitiveness, design of business plans and support to access loans of component 1) rather than supporting their capacity to implement adaptation activities. For instance, technical assistance would be granted to perform financial and markets studies, and to finalize MSMEs' business plans for them to access the loans provided by CABEI under component 1. Similarly, capacity-building activities would be organized to support the internal capacity of MSMEs in terms of "*organizational*	credits as a complementary training: this aspect is key for the success of the project on reducing barriers to credit for adaptation measures. With regards to Business Plans, it is important to note that these include as a first step the so called "credit form" or "adaptation plan", which includes the documented adaptation needs of the MSME with their vulnerability reasoning. Therefore, adaptation issues and credit issues are part of the same project's strategy to achieve the expected results. CABEI has provided further details on the steps of the forms and reports that the MSMEs need to submit to the IFI in order to access the credits (see p. 81). CABEI confirms that a draft of the manual including instructions on the conditions under which technical and/or business assistance to MSMEs will be provided at the full stage proposal.

		selection of MSMEs and IFIs beneficiaries, and on the value added of the project through the regional approach, among others. CR 1: As an overall comment, the concreteness (expected visible and tangible results on the ground) of the AF-funded project and its appropriateness in responding to the identified climate threats is still to be demonstrated. CR 2: The proposal mentions that the "*Ecosystem-based Adaptation*" component 1 will implement loans supporting the implementation of "*best practices for production and conservation of natural resources and consolidation of production systems adapted to climate change"*. According to its description, component 1 rather seem to promote the implementation of "business-as-usual" environmental measures, and not necessarily activities addressing the	*capacities, entrepreneurial, marketing, accounting, IT*". In addition, activities will be organized with IFIs to support their capacity for "*credit analysis, incorporating environmental and social risks issues, financial evaluation of projects, business plans, management of protected areas, certification seals, biodiversity and diversification of the loan portfolio*". For these reasons, it appears important that the proposal explains more specifically how the provisions of each of the technical assistance and capacity building's activity listed will directly help MSMEs and IFIs to deliver ground-level adaptation results. Finally, since "*a manual including instructions on the conditions under which technical and/or business*	This affirmation has been included on p. 91. CR2: CABEI has described on p. 82 the kind of adaptation-related criteria that will be included in the forms. CABEI has also clarified that these criteria will not only apply to the F1 form that is submitted to CABEI by the IFIs, but they will be taken into account as well in the eligibility assessment that IFIs perform on the MSMEs at the first step of accessing credits. CABEI confirms that the loans provided under component 1 would entirely go towards the implementation of the possible adaptation measures listed under Table 14.

		adverse impacts of and risks posed by climate change through appropriate measures. Please clarify what types of activities will be supported through the loans planned under component 1. If they are indeed adaptation activities, please demonstrate that they respond to the threats posed by climate change and not merely addressing gaps in good agricultural or conservation practice that are needed whether or not climate change impacts occur. CR 3: The proposal should further demonstrate that the activities that would be funded by the Adaptation Fund (i.e. components 2 and 3) will be addressing the adverse impacts of and risks posed by climate change, and would not be "business-as-usual" environmental measures. To this respect, the systems (and associated indicators/criteria) through which IFIs will be selected and through which MSMEs will be granted support from the IFIs for both	*assistance to MSMEs will be provided*", it appears important to provide a draft of such manual at fully-developed proposal stage. CR 2: Partly addressed. The proposal confirms that loans granted under component 1 (CABEI-funded) would be provided "*based on the MSMEs' vulnerability to climate change and appropriateness of the measures proposed in responding to climate change threats*", in addition to their financial capacities. The proposal also says that "*an adaptation specialist will develop a guidance manual with adaptation parameters that will be systematized by CABEI and incorporated into the F1*" (i.e. a "Resource Justification Form" that MSMEs must fill to receive resources from IFIs). Given the importance of the alignment of activities supported through the loans with the Fund's mandate, the proposal should	CR 3: As explained in CR 1 and CR 2, CABEI has provided further detail on MSME selection criteria. Regarding IFIs, CABEI has provided further arguments based on which all kind of IFIs should be considered for this initiative, since different types of IFIs have different capacities for reaching different types of MSMEs. For instance, Private Banks have demonstrated to be a key for reaching all micro enterprises at CABEI's intermediary schemes since 1996. Arguments and statistics have been provided on p. 83-87. The concept of non-legalized enterprise has been explained at a footnote on p. 2. Please refer to the background/ context section for details on the standards and criteria used by CABEI to accredit the IFIs (p. 54-55).

		components should be clearly explained. While doing so, the proposal should demonstrate that the vulnerabilities of the beneficiaries (IFIs, MSMEs and communities), the concreteness of the activities, and their appropriateness in responding to the climate change threats are criteria that will be taken into account during these processes. CR 4: The expected concrete (visible and tangible) results on the ground resulting from the implementation of the components 2 and 3 are currently unclear. The proposal should clarify what are the expected visible and tangible results expected from the implementation of component 2 and 3, and clearly demonstrate that they are aligned with the Fund's mandate to support the most vulnerable communities in implementing concrete (visible and tangible) adaptation activities on the ground in	describe the adaptation-related criteria that will be used into the F1 form. In addition, the proposal should clarify what would be the proportion of the adaptation activities in the MSMEs' business plans designed to access loans under component 1. In other words, the concept proposal should clarify whether loans provided under component 1 would entirely go towards the implementation of the possible adaptation measures listed under Table 13. CR 3: Partly addressed. As outlined in CR1 and CR2, the proposal should provide additional information at concept stage regarding the selection of the MSMEs (including the "*selection criteria used by the*	CR 4: Please see responses on CRs above. CR 5: Addressed.

		response to the identified climate threats. CR 5: The proposal should further explain how the sectors listed in the proposal have been prioritized, and demonstrate that this prioritization is aligned with the Fund's mandate. CR 6: Given the mandate of the Fund of supporting concrete activities with visible and tangible results on the ground, and the significant portion (60%) of the AF budget dedicated to the capacity building activities of component 3, please demonstrate further the concrete visible and tangible results expected on the ground from the implementation of its activities. If necessary, please consider a different balance between "hard" (i.e. concrete) and "soft" (e.g. capacity-building, technical assistance) measures.	*programme*" mentioned p70, criteria to be used into the F1 form-see CR2- and draft manual-see CR1). Moreover, the proposal does not clarify which institutions, among the CABEI-accredited IFIs, will be able to access the loans planned under component 1 and will benefit from the AF-funded activities (components 2 and 3), although some sections of the proposal suggest that all 98 IFIs currently accredited to CABEI could benefit from these components. Such institutions include 9 public banks, 36 private banks, 14 finances companies, 27 non-banking financial institutions and 12 cooperatives. In addition, the proposal states that MSMEs could potentially include "*not legalized enterprises*". The	CR 6: Please see responses on previous CRs above. CR 7: the added value of the regional approach has been reinforced in Section II-A (see p. 97-98).

		CR 7: The proposal should further demonstrate how this project builds added-value through the regional approach, compared to implementing similar activities in each country individually. CR 8: The selection of beneficiaries (MSMEs and IFIs) is currently unclear and should be clarified. According to the proposal, the selection of beneficiaries will be made "*through mechanisms that will take into account geography, and the implementation within communities and organizations*". In parallel, the range of MSMEs as described by CABEI looks quite wide (*"those legalize or not legalized enterprises that count from 1 to 100 employees and have financial needs up to USD 1 million"*). Moreover, the proposal says that "*the MSMEs that will be considered will be those interested in developing friendly investments incorporating*	proposal should clarify what this exactly means. Finally, given the strong role that they will play in the implementation of the programme, it appears useful to provide at concept stage a brief description of the standards and criteria used by CABEI to accredit its IFIs. CR 4: Addressed, although some questions remain with respect to the activities conducted under components 2 and 3 (see CRs above). CR 5: Addressed. A vulnerability assessment of agricultural sectors will be provided at the fully-developed proposal stage.	CR 8: These considerations have been clarified (please refer to CRs above on eligibility of IFIs and MSMEs).

		production practices with an adaptation approach". Finally, lessons learned from the CAMBio project include that "*FIs do not target micro and small farmers and this sector continues to face severe barriers to financial inclusion*"; "*a new initiative must clearly define a typology of farmers and productive systems as target groups. A clear target group will allow lending to be effectively integrated with technical assistance and anchor market chains*"; "*A new initiative must be firmly anchored among small-scale farmers*". As such, the characteristics of the expected MSMEs and IFIs beneficiaries of the bio-bonus (component 2) and technical assistance (component 3) remain unclear. Please describe more precisely the characteristics of expected MSMEs (proportion of micro and small producers) and IFIs beneficiaries, explain the mechanisms through which they will be selected (and on which basis/criteria), and clarify the extent to which their level of vulnerability will	CR 6: Partly addressed. Soft measures now represent around 33% of the total budget, while hard measures represent around 50 %. Some questions remain with respect to the capacity building/technical assistance activities, as highlighted in previous CRs. CR 7: Partly addressed. This section could look at other aspects, such as gains in terms of transaction costs, to reinforce the added-value of the regional approach. CR 8: Partly addressed. As commented above, the proposal should clarify which IFIs will be eligible to benefit from the project, and on which basis. In addition, even though the proposal states that "*organizations and cooperatives of small-scale farmers will be prioritized over medium-sized enterprises that*	CR 9: Considerations about IFIs' eligibility have been included in Section II-A. All types of IFIs need to be included based on their different capacities of reaching different types/ sizes of MSMEs (i.e. private banks are key for reaching micro-sized enterprises). IFIs' vulnerability to climate change is not relevant at this point: the

		be taken into account during the selection process. CR 9: Since the MSMEs and the IFIs will be the beneficiaries of the project, the background/context section should clearly describe their respective vulnerability in light of climate change, and the expected impacts of climate change on their business systems. It seems especially important for IFIs, since they apparently include a variety of different institutions such as "*public/state banking entities, private banks, micro-financial institutions, non-bank financial institutions, and savings and credit cooperatives*" that are probably differently impacted by climate change. CR 10: Given the complexity of the sector that the project is seeking to support, the proposal should explain how the project will take into account the non-climatic barriers of the agricultural	*concentrate the power of ownership in a single individual or a small group of partners*", there is no evidence that this criteria is taken into account into the selection of MSMEs. To this respect, and as requested above, please provide the selection criteria established by the programme for both MSMEs (mentioned in p.70). CR 9: Partly addressed. The proposal clearly states that it would only consider MSMEs' vulnerabilities, and not IFIs'. The project's support to IFIs will aim at "*developing a culture of adaptation financing"* and to *"reduce their perception of small-scale farmers as a risky target and builds their capacities for understanding climate change-related investments and undertaking a process of designing adaptation lines themselves.*"	objective of having IFIs as beneficiaries is mainly to raise their awareness about climate change, get them understand MSMEs' vulnerabilities and lower their perception of high risk of the sector, engaging them to create credit lines for adaptation investments. CR 10: This section has been strengthened by adding other potential non-climatic barriers. Please see p.96.

		sectors in the different countries targeted by the project. CR 11: Since one of the lessons learned from the CAMBio project is that "*a profound assessment is required to understand sector niches and opportunities*", please explain whether such analysis has been performed, or if the project plans to conduct such study. CR 12: Please describe further the network of Intermediate Financial Institutions (including but not limited to membership types and criteria, meaning of "non-regulated" ones etc.) and the exact role they would play in delivering the components 1, 2 and 3. CR 13: As an overall comment, the proposal lacks of relevant references to existing literature/studies/analysis. The	Different institutions such as "*public/state banking entities, private banks, micro-financial institutions, non-bank financial institutions, and savings and credit cooperatives*" that are probably differently impacted by climate change. CR 10: Mostly addressed. This section could be strengthened by adding potential non-climatic barriers that could be encountered in the target agricultural sectors, if applicable. Such potential non-climatic barriers may relate to market access, inputs availability, pests, agricultural policies, land rights, among others. CR 11: Addressed.	CR 11: Addressed. CR 12: "non regulated IFIs" definition has been included in the report (see footnote on p. 2). Standards that are assessed during accreditation of the IFIs are described on p. 54-55.

		proposal should include additional references, to the extent possible, particularly to support the background/context, cost-effectiveness and expected benefits sections. CR 14: Please make sure that the context and background section covers all countries targeted by the project. For instance, Dominican Republic is currently missing from the "cultural characteristics" section. CR 15: Please discuss whether there is scope for the project to have broader impact, e.g., to trigger the establishment of an incentive or ranking system that IFIs can use for borrowers who can demonstrate that they are taking measures to reduce risk to climate change and increased variability. CR 16: Please elaborate further or how the 20 percent	CR 12: Mostly addressed. The proposal should clarify what "non-regulated" IFIs means. As requested in previous CR, it should also provide an overview of CABEI's accreditation process of such IFIs, and the standards that are assessed during accreditation. CR 13: Mostly addressed, although the expected benefits section (Part II section C) would be strengthened by referring more to the existing literature. CR 14: Addressed. CR 15: Mostly addressed. However, the proposal should clarify whether the resources generated through the revolving credits	CR 13: The expected benefits section (II-C) has been strengthened by referring more to the existing literature, and by developing further on the different benefits, also related to gender equity and Indigenous Peoples, among other considerations. Please see pages 99 to107. CR 14: Addressed. CR 15: CABEI confirms that the resources generated through the revolving credits will be re-invested in adaptation activities. This has been clarified in the Component 1 section II-A (p. 79) and the Sustainability section II-K on p. 147. CR 16: Addressed.

		loan principal cash refund will be shared by the MSMEs and the IFI. Will it only cover the entire interest payment for the MSME, or also a sizeable portion of the principal? For the IFI, what is the precise nature of the financial benefit that these proceeds would provide? Will it cover the interest payment, or more?	will be re-invested in adaptation activities. CR 16: Addressed. The Adapt-awards consist in the refund of 20% of the loan principal granted by the IFIs (up to USD 10,000). This incentive will be distributed between MSME and IFIs who would benefit from 12% and 8% of the credit amount, respectively.	
	17. Does the project / programme provide economic, social and environmental benefits, particularly to vulnerable communities, including gender considerations, while avoiding or mitigating negative impacts, in compliance with the Environmental and Social Policy of the Fund?	CR 17: In addition to clarifying the expected beneficiaries of the project and the criteria used to select them (see CR above), the proposal should include clear references to the equitable distribution of benefits to vulnerable communities, IFIs and MSMEs. CR 18: Given the presence of indigenous populations in all target countries, please outline the particular benefits provided by the project to those groups.	CR 17: Partly addressed. As requested in previous CRs, the proposal should describe further the criteria for selecting the IFIs participating into the programme, and those for selecting MSMEs. The proposal should explain how the programme will ensure an equitable distribution of the loans within target countries themselves, and across the different countries. CR 18: Not addressed. The proposal does not outline	CR 17: eligibility of IFIs and MSMEs has been further described in section II-A. With regards to the equitable distribution of the project's resources, a minimum target for technical assistance and Adapt-award per country has been set. Minimum targets have been included therefore in the description of Components 2 and 3, pages 87 and 92. CR 18: Please refer to the expected benefits section (Section II-C) which has included a description of the expected

		CR 19: Please provide an overview of gender considerations vis-à-vis MSMEs in the participating countries (e.g. Are there several female-headed MSMEs? Do they face barriers or constraints that the project can help try to overcome?) and describe the benefits the project will provide in terms of gender considerations.	the particular benefits that will be provided by the programme to indigenous communities that have been identified. CR 19: Mostly addressed. Although it states that there is no statistics related to gender considerations in Central American's MSMEs, the proposal would probably benefit from having a look at the existing extensive literature, notably from United Nations agencies about gender inequality in the region. Given the draft gender strategy provided and the relatively low participation of women into the similar CABEI-funded "CAMBIO" programme (33% of beneficiaries for 13% of the amount of loans granted), it appears necessary for the proposal to include additional references to potential socio-economic benefits of the programme in terms of gender equality.	benefits that will be provided by the program to indigenous communities. CR 19: Statistics have been included in the background / context section (see p. 49 to 52).New statistics on gender in CABEI's intermediation programs have been provided (p. 62-64), broadening the scope: previous statistics corresponded to only one program: now, the section has been complemented with further information about the whole history of intermediation within CABEI's programs, which show a different distribution. The proposal has included additional references to socio-economic benefits of the program in terms of gender equality in Section II-C (p. 106-107).

	18. Is the project / programme cost-effective and does the regional approach support cost-effectiveness?	Likely. As requested above, this preliminary cost-effectiveness analysis should, to the extent possible, be supported by existing literature/studies/analyses performed in the region and/or in the target countries. CR 20: The proposal should clarify how will grant size be determined for the MSMEs, and how will it be determined whether the measures the MSMEs will implement (from Component 1) are being done in a cost-effective manner relative to the grant being received. CR 21: Please explain how it will be ensured that the AF grant size per MSMEs will depend on the adaptation actions that are undertaken,	CR 20: Not addressed. The proposal does not describe how the sizes of the loans provided under component 1 will be fixed. However, it states that the Adapt-awards that will be provided by IFIs will be “up to USD 10,000”, which suggest that for loans that are beyond USD 50,000, the MSMEs will be granted a maximum amount of USD 10,000. The proposal should clarify that aspect. Since the current list of criteria for awarding loans (and adapt-awards) to MSMEs does not include cost-effectiveness considerations, it is not possible to confirm that the activities implemented by	CR 20: The cap of USD 10,000 has been confirmed and clarified in the proposal (see Section II-A, subsection c. Component 3, on p. 92). With regards to cost-effectiveness considerations of the activities to be implemented by the MSMEs, CABEI confirms that cost-effectiveness will be assessed by CABEI, which is the entity that has the final word for the disbursements as well as for the awarding of incentives and technical assistance. The cost-effectiveness analysis will be performed by the two specialists that will be hired for the project: adaptation specialist and agribusiness specialist. This has been confirmed in Section II-A, in the three components' subsections.

		and not on the volume of the baseline loan.	the MSMEs will be cost-effective. CR 21: Addressed.	CR 21: Addressed.
	19. Is the project / programme consistent with national or sub-national sustainable development strategies, national or sub-national development plans, poverty reduction strategies, national communications and adaptation programs of action and other relevant instruments? If applicable, it is also possible to refer to regional plans and strategies where they exist.	Likely. The proposal provides a preliminary list of national and regional plans that the project aligns with. However, some key national plans and strategies seem to be missing from the analysis, including the ones related to the national agricultural sectors, and NAPA and NDC processes, for instance. CR 22: Please identify any national relevant plans and strategies (e.g. national development plans, poverty reduction strategies) that are relevant to the proposed project, including the ones related to the agricultural sectors of the target countries, and the NAPA and NDC processes. CR 23: Please clarify the following sentence: "*It is also*	CR 22: Addressed.	CR 22: Addressed

		important to note that on June 9th, 2016 changes to CABEI's constitutive agreement came into effect with changes to the Bank's nature and objective, the characterization of its members and conditions for contracting guarantees or loans, as well as provisions for the adhesion of new members in order to offer them options that are adapted to their particular conditions" (page 37).	CR 23: Addressed.	CR 23: Addressed
	20. Does the project / programme meet the relevant national technical standards, where applicable, in compliance with the Environmental and Social Policy of the Fund?	To be demonstrated. CR 24: Should a more complete description of activities be provided as per the CR made under section 2 above, please update this section accordingly with any additional impacts or risks that may have been identified. CR 25: For each ESP principle where further assessment and management is required for compliance with the ESP, please explain briefly how	CR 24: Not addressed. The concept proposal should identify any relevant technical standards that would apply to the project, and demonstrate compliance of the proposal with such standards. These standards include Environmental Impacts Assessments, building codes, water quality regulations, and sector-specific regulations (e.g. agricultural standards). In addition, the proposal should demonstrate whether or not EIAs will be needed	CR 24: A screening of relevant technical standards that would apply to the project, as well as the reasoning about the need of EIAs have been has been introduced in Section F (see p. 124). The results of the screening of technical standards per country have been included in Annex B (starting on p. 200). CABEI confirms that the Environmental and Social Management Plan (ESMP) will be commensurate with the risks identified and in accordance with the project ESP categorization will be requested at the full proposal stage.

		those risks will be further assessed and managed. CR 26: Despite the wide range of activities that could be supported through the project (i.e. integrated waste management, diversification of agricultural production, pest integrated management plan, reforestation etc.) and that the checklist of environmental and social principles shows that further assessments are required to comply with some principles of the ESP, the proposal classifies inconsistently the project as category C. According to the project description, the project would likely fall under a category B project (please refer to para 8 of the Fund's ESP for additional information: http://www.adaptation-fund.org/wp-content/uploads/2015/09/Environmental-Social-Policy-approved-Nov2013.pdf). Please amend the proposal accordingly.	to comply with such standards. CR 25: Addressed. CR 26: Addressed. CR 27: Not addressed – see comment made under CR 24 above.	CR 25: Addressed. CR 26: Addressed. CR 27: Please see response to CR 24. CABEI confirms that the Environmental and Social Management Plan (ESMP) will be commensurate with the risks identified and in accordance with the project ESP categorization will be requested at the full proposal stage.

		CR 27: the proposal states that Environmental Impact Assessments and water regulations will not be applicable to the project. This is inconsistent with the type of activities that the project could support. The proposal should identify any national standards, including the ones related to EIAs and water/agricultural specific regulations that the project will comply with. As some Environmental Impact Assessments are likely to be prepared during the project implementation, due to the nature of activities, an Environmental and Social Management Plan (ESMP) commensurate with the risks identified and in accordance with the project ESP categorization will be requested at the full proposal stage.		
	21. Is there duplication of project / programme	Not likely.		

	with other funding sources?	CR 28: Please demonstrate that the project does not overlap with the initiatives listed in that section. Similarly, please explain the complementarity with the initiatives listed in that section, when applicable. CR 29: Currently, only CABEI-funded initiatives are included in the analysis. However, other funding stakeholders are likely to support already relevant initiatives in the region or in the target countries. As a result, please identify any relevant regional or national-level projects/programmes and demonstrate the lack of overlap or complementarity with the proposed project.	CR 28: Addressed. CR 29: Addressed.	CR 28: Addressed. CR 29: Addressed
	22. Does the project / programme have a learning and knowledge management component to capture and feedback lessons?	Yes, but some elements are unclear. CR 30: Please be more specific regarding the activities and products that the project will deliver to capture the	CR 30: Partly addressed. The proposal should elaborate more on the specific activities and outputs the project will use	CR 30: Specific activities and outputs the project will use to capture and disseminate lessons learned across both the IFIs and

		experience and lessons learned on the ground across the different countries, and from both the IFI's and the MSMEs' experience. Please briefly explain ways for MSMEs to share the vulnerabilities they face, how they decided which course of (adaptive) action was needed to overcome these, the role and relevance of technical assistance received, and their experience and success with implementing the adaptation measures. Please also consider critically evaluating experience with this innovative approach to engaging MSMEs in adaptation activities. CR 31: Please explain how the knowledge management outcomes and lessons learned will be disseminated to relevant stakeholders, and how they will be sustained overtime (i.e., after the project completion).	to capture and disseminate lessons learned across both the IFIs and MSMEs. CR 31: Mostly addressed. The proposal should elaborate more on how the knowledge products will be sustained after the project completion, both at the level of the IFIs and MSMEs.	MSMEs have been elaborated. Please see Section H, p. 133-186. CR 31: The proposal has elaborated, on one side, on the concrete actions for capturing and disseminating lessons learned (see Section H) and, on another side, on the sustainability strategy (see Section K), in which a matrix of stakeholder participation per project stage has been included, and actions have been further described.

	23. Has a consultative process taken place, and has it involved all key stakeholders, and vulnerable groups, including gender considerations?	There is currently no evidence that an initial consultation process took place. CR 32: Please note that, according to "*Instructions for preparing a request for project or programme funding from the Adaptation Fund*" (see annex 5 of the Operational Policies and Guidelines of the Adaptation Fund): "*At the concept stage, an initial consultative process has to take place, with key stakeholders of the project/programme. Depending on the level of involvement of local communities or governments, private sector, CSOs or universities/research centres in the execution of the project/programme, those stakeholders may or may not be consulted at the concept stage. In project/programme target areas where minority groups and indigenous peoples have been identified, they should be consulted at the concept stage and their interests or concerns taken*	CR 32: Partly addressed. 8 MSMEs, 1 IFI and 2 technical assistance providers have been consulted (between the initial and final review of the concept proposal), mainly on their current productions methods and their experience with the previous CABEI-funded "CAMBIO" project. However, given the dates at which these consultations took place, there is no evidence that the outcomes have informed the design of the proposal. It appears important that the concept proposal include outcomes of further consultations with key stakeholders, and to demonstrate that the outcomes of such consultations inform the design of the proposal. In addition, there is no evidence that minority groups and indigenous people (acknowledged as	CR 32: The proposal has included outcomes of further consultations with key stakeholders. These have been taken into account for the design of the project. Evidence of consultation to indigenous communities in Guatemala has been included in II-I and Annex A. Please refer to section II-I, on p. 138, as well as to Annex A (p. 170) which has been complemented with evidence of further consultation instances.

		into account when designing the proposal". As there is no currently no evidence in the proposal that such process took place please confirm whether or not such initial consultation process has taken place and provide. If it did, please provide the outcomes of such consultations and explain on how they have informed the design of the project concept.	being largely present in many target countries) have been consulted at this stage and that their interest or concerns are taken into account in the proposal.	
	24. Is the requested financing justified on the basis of full cost of adaptation reasoning?	Still to be demonstrated. Indeed, the achievements of components 2 and 3 are entirely dependent on the delivery of the CABEI-funded component 1. CR 33: The activities planned under components 2 (incentive schemes over the loans provided under component 1) and 3 (including technical assistance for the implementation of loans provided under component 1) are directly linked to the implementation of component 1. The "*Instructions for preparing a request for project*	CR 33: Not addressed. At stated in the proposal, the three components are fully linked to each other's. In fact, no credits (i.e. component 1, CABEI-funded) would be granted without the existence of the Adapt-Awards (component 2, AF-funded) and capacity-building activities (component 3, AF-funded). In terms of timeline, the capacity building activities will be first delivered (component 3, AF-funded) before the loans are granted (CABEI-funded component 1). Once such loans granted and adaptation activities	CR 33: Components 1, 2 and 3 have been further described in order to provide the Adaptation Fund more certainty about the activities proposed and about the eligibility considerations. It is certain that Adapt-awards are dependent on the granting of loans, since they are awarded to the projects that have successfully implemented adaptation measures; however, training activities are not dependent at the same level: activities related to raising MSMEs and IFIs' awareness on climate change, events, lessons learned and dissemination, are not linked in the described timeline and can be delivered independently of the granting of loans.

		or programme funding from the Adaptation Fund" (see annex 5 of the Operational Policies and Guidelines of the Adaptation Fund) stipulates that "*the Adaptation Fund project should be able to deliver its outcomes and outputs regardless of the success of the other project(s)*". Since the achievements of components 2 and 3 depend entirely on the delivery of component 1, please explain how the project will ensure that the activities of components 2 and 3 (i.e. activities supported by the Adaptation Fund) will be delivered regardless of the progress/achievement of outcome 1.	completed, the adapt-awards will be awarded (AF-funded component 2). It seems worth underlining that the proposal presents some issues related to the mandate of the Fund, and to the necessary arrangements for this type of projects. Indeed, the current OPG stipulates that the full cost of adaptation reasoning criteria implies that "*the Adaptation Fund project should be able to deliver its outcomes and outputs regardless of the success of the other project(s)*", which seems impossible in that case, as explained in the para above. The PPRC may want to discuss whether it would be useful to explore ways to address this issue.	CABEI will await the PPRC decision on the way to address the issues related to the mandate of the Fund. CABEI invites the Adaptation Fund to consider the benefits and the impact of this proposal: how this initiative allows engaging with the private sector and leveraging important financial resources for adaptation to climate change in a region where agricultural producers are most vulnerable to climate threats.

	25. Is the project / program aligned with AF's results framework?	Likely. However, the alignment table has not been filled by the proponent. CAR 2: Please provide a results framework alignment table (available at: https://www.adaptation-fund.org/apply-funding/project-funding/project-proposal-materials/)	CAR 2: Addressed.	CAR 2: Addressed.
	26. Has the sustainability of the project/programme outcomes been taken into account when designing the project?	To be demonstrated. CR 34: Please elaborate on how the long-term financial and economic sustainability of the incentives schemes and activities planned under component 3 will be ensured. CR 35: Similarly, please describe further how the institution, policy and governance sustainability of the components 2 and 3 will be ensured over time (i.e. after the project completion) from an institutional, policies and governance standpoints.	CR 34: Addressed. CR 35: Partly addressed. The proposal states that such aspects will "*not apply to this project since it is not governmental project. Non-refundable funds can only come from external sources. Efforts will be made in order to obtain new resources for non-refundable activities*". However, and even though this would indeed not constitutes a governmental project, issues of institutional continuity, supportive policies and management are relevant aspects of sustainability that	CR 34: Addressed. CR 35: Sections H (lessons learned) and K (sustainability) have incorporated both strategies. These include how knowledge will be shared and promoted, and who and at which stage of the project will participate. Participation of National governments have been particularly addressed, for the initiative to promote adoption of evidence-based policies and to promote the institutionalization of adaptation practices at a government level.

		CR 36: Please clarify what is the expected level of involvements of governments' agencies in the project's execution?	the proposal should look at. In addition, since the proposal says that funds for activities can only come from external resources, the proposal should elaborate on how AF-funded activities, especially the capacity-building and technical assistance ones, would be continued after project completion. CR 36: Partly addressed. The proponent states that "*Governments' agencies will not be included in the project as partners; however, CABEI is eager to collaborate by exchanging information, results, best practices and lessons learned with governmental agencies*." The proposal should explain further how other organizations, especially governments' agencies, will benefit from the experience generated by the project.	CR 36: please see response to CR 35.
	27. Does the project / programme provide	Yes.		

	an overview of environmental and social impacts / risks identified?	All potential environmental and social impacts and risks will need to be thoroughly and precisely assessed at full proposal stage. Moreover, since the activities funded through the incentives schemes under component 2 are likely to not be identified at the full proposal stage (unidentified sub-projects or USP), the proposal should include environmental and social management plan (ESMP) that includes a framework for the risk identification and any subsequent environmental and social safeguarding activities for such sub-projects as and when these are identified to a stage where risk identification is possible. Such ESMP: i) must show linkage with the Environmental and Social Management System (ESMS) of the Implementing Entity; ii) includes and is built on any ESMP elements that have been identified for the activities for which risk identification was possible before submission of		

		the project proposal to AF: iii) includes a comprehensive process for environmental and social safeguarding for the USP. The process is identical to that of determining risks and impacts for project activities that are fully known before the application, including a clear description of the risk identification process, with allocated roles and responsibilities, all under close IE supervision. Such system should take into account the role of the in this project and the one of the MSMEs. CR 37: Please describe the system through which the project will ensure that the IFIs and MSMEs comply with the AF ESP.	CR 37: Mostly addressed. The ESMP requested at full proposal (see comment on the left-hand side column) will need to include compliance of both IFIs and MSMEs with respect to the AF ESP.	CR 37: CABEI confirms that the ESMP requested at full proposal will include compliance of both IFIs and MSMEs with respect to the AF ESP. Nevertheless, considerations about compliance have been reinforced in Section II-L, based on the new version of the SIEMAS manual, which has been sanctioned in November 2016 and will be effective as from May 2017. Please see updated section on p. 150.
	28. Does the project promote new and innovative solutions	Yes.		

	to climate change adaptation, such as new approaches, technologies and mechanisms?	Should the activities financed through component 2 be indeed adaptation activities (see previous CRs), the project would reduce obstacles to credit access to MSMEs for the implementation of adaptation activities, which consist the main innovation of the project. Currently, loans based on adoption of Ecosystem Based Adaptation measures do not exist in the region.		
Resource Availability	4. Is the requested project / programme funding within the funding windows of the pilot programme for regional projects/programmes ?	Yes.		
	5. Are the administrative costs (Implementing Entity Management Fee and Project/ Programme Execution Costs) at or below 20 per cent of the total project/programme budget?	The administrative costs have not been provided by the proponent. CAR 3: Please provide the administrative costs of the project.	CAR 3: Mostly addressed. Given the fact that CABEI will be both implementing and executing the project, the full proposal would be strengthened by demonstrating the cost-effectiveness of the amount	CAR 3: cost-effectiveness of the amount of funding requested for administrative costs has been explained in Section III-A (p. 159). The total amount of financing requested has been revised in order to fit the window of up to 5 USD million. Budget on p. 67 and

			of funding requested for administrative costs. In addition, the total amount of financing requested is announced at USD 5 million on the first page, whereas the budget detailed on page 59 suggests that it will actually be USD 5,994,625. Please note that if the total amount of financing requested excess USD 5 million, the proposal would fall under the pilot regional programme's windows of up to USD 14 million.	figures on the alignment with the AF results framework on p. 165 have been modified.
Eligibility of IE	6. Is the project/programme submitted through an eligible Multilateral or Regional Implementing Entity that has been accredited by the Board?	Yes.		
Implementation Arrangements	11. Is there adequate arrangement for project / programme management at the regional and national	Not applicable / Not required at concept stage	The endorsement letters confirm that the PMU (located in CABEI) will be the executing entity.	

	level, including coordination arrangements within countries and among them? Has the potential to partner with national institutions, and when possible, national implementing entities (NIEs), been considered, and included in the management arrangements?	CR 38: Please explain if participation of the National Implementing Entities accredited for the proposed participating countries (namely Fundecooperacion in Costa-Rica, Fundacion Natura in Panama and the Instituto Dominicano de Desarrollo Integral (IDDI) in Dominican Republic) has been considered, and if they have been consulted for their interest in partnering in the project. CR 39: Please clarify who will be the executing entities of the project, as the proposal gives contradictory information, first by designating CABEI (and its "Project Coordination Unit") and then explaining that IFIs will be in charge of the execution of components 2 and 3.	CR 38: Partly addressed. The proposal does not include AF NIEs in the implementation arrangements. However, the proposal states that "*CABEI is eager to collaborate by exchanging information, results, best practices and lessons learned with the NIEs; CABEI will as well seek to identify synergies with the adaptation projects being implemented by these NIEs*". The concept proposal should briefly describe how the programme will engage with NIEs and will benefit from experiences as they emerge in the course of the programme's implementation. The fully-developed proposal should elaborate on such aspects. CR 39: Addressed. A Project Administration Unit (PAU) located within CABEI, hired for the sole purpose of executing this project, will	CR 38: This issue has been addressed in the response to CR 35.

			be in charge of the day-to-day management of the project. The fact that CABEI will be both in charge of the programme oversight (through its role of implementing entity) and day-to-day execution (through its role of executing entity) and will be monitoring and evaluation its own role, may create a risk of conflict of interest.	CR 39: The reasons why implementation and execution roles should both be within CABEI and why there would not be any conflict of interest, have been explained in Section III-A, p 159.
	12. Are there measures for financial and project/programme risk management?	Not applicable / Not required at concept stage		
	13. Are there measures in place for the management of for environmental and social risks, in line with the Environmental and Social Policy of the Fund? Proponents are encouraged to refer to the Guidance document for Implementing	Not applicable / Not required at concept stage		

	Entities on compliance with the Adaptation Fund Environmental and Social Policy, for details.			
	14. Is a budget on the Implementing Entity Management Fee use included?	Not applicable / Not required at concept stage		
	15. Is an explanation and a breakdown of the execution costs included?	Not applicable / Not required at concept stage		
	16. Is a detailed budget including budget notes included?	Not applicable / Not required at concept stage		
	17. Are arrangements for monitoring and evaluation clearly defined, including budgeted M&E plans and sex-disaggregated data, targets and indicators?	Not applicable / Not required at concept stage		
	18. Does the M&E Framework include a break-down of how implementing entity IE fees will be utilized in the supervision of the M&E function?	Not applicable / Not required at concept stage		

	19. Does the project/programme's results framework align with the AF's results framework? Does it include at least one core outcome indicator from the Fund's results framework?	Not applicable / Not required at concept stage		
	20. Is a disbursement schedule with time-bound milestones included?	Not applicable / Not required at concept stage		

Technical Summary	The project goal is to enhance capacity to implement adaptation measures for micro, small and medium agricultural enterprises from Guatemala, El Salvador, Honduras, Nicaragua, Costa Rica, Panama and Dominican Republic, in order to increase their resilience to climate change, ensuring the provision of financial and non-financial services to support ecosystems and agricultural production, as well as providing technical assistance in the adaptation planning processes and incentives to define specific alternatives of resilience and investment management. The Adaptation Fund project would support the implementation of financial incentive schemes promoting ecosystem based adaptation measures (Bio-bonus). The current concept should demonstrate clearly that the activities that will benefits from the incentive schemes are indeed ecosystem abase adaptation measures, and not business as usual environmental measures. the underlying adaptation reasoning of the proposal, especially for the components 2, 3 and 4 and should highlight the cohesion and coherence between the different components. In addition, several sections of the proposal needs to be strengthen with reference to relevant literature, studies and/or analysis supporting the description made in the document. The proposal should also highlight the expected visible and tangible results of the activities of the project supported by the Fund and should justify the concreteness of component 3 and its current budget allocation. The proposal should demonstrate that an initial consultation process involving all key

	stakeholders (e.g., communities, states institutions' representatives, protected areas and fishery sectors) took place. It should also demonstrate that the benefits from the incentive schemes will be sustained overtime.
Date:	January 9th, 2017

MINISTERIO DE AMBIENTE Y RECURSOS NATURALES
GUATEMALA, C.A.

Ministro

Guatemala, 2 de febrero de 2017
Oficio No. MI-094-2017/SASM-ve

To: The Adaptation Fund Board
c/o Adaptation Fund Board Secretariat
Email: Secretariat@Adaptation-Fund.org
Fax: 202 522 3240/5

Subject: Endorsement for ***Productive Investment Initiative for Adaptation to Climate Change***

In my capacity as designated authority for the Adaptation Fund in Guatemala, I confirm that the above regional project proposal is in accordance with the government's regional priorities in implementing adaptation activities to reduce adverse impacts of, and risks, posed by climate change in the Central American region.

Accordingly, I am pleased to endorse the above project proposal with support from the Adaptation Fund. If approved, the project will be implemented by the Central American Bank for Economic Integration (CABEI) and executed by a Project Coordination Unit within CABEI.

Sincerely,

MINISTERIO DE AMBIENTE Y RECURSOS NATURALES
MINISTRO

Dr. Sydney Alexander Samuels Milson
Ministro
Ministerio de Ambiente y Recursos Naturales

20 Calle 28-58 Zona 10 Edificio MARN
PBX: 2423-0500
http://www.marn.gob.gt

Se escaneo y envió a Sr. Vargas

ADAPTATION FUND

MINISTERIO DE MEDIO AMBIENTE Y RECURSOS NATURALES
UNÁMONOS PARA CRECER

Letter of Endorsement by Government

San Salvador, February 1st, 2017

To: The Adaptation Fund Board
c/o Adaptation Fund Board Secretariat
Email: Secretariat@Adaptation-Fund.org
Fax: 202 522 3240/5

Subject: Endorsement for ***Productive Investment Initiative for Adaptation to Climate Change***

In my capacity as designated authority for the Adaptation Fund in El Salvador, I confirm that the above regional project proposal is in accordance with the government's regional priorities in implementing adaptation activities to reduce adverse impacts of, and risks, posed by climate change in the Central American region.

Accordingly, I am pleased to endorse the above project proposal with support from the Adaptation Fund. If approved, the project will be implemented by the Central American Bank for Economic Integration (CABEI) and executed by a Project Coordination Unit within CABEI.

Sincerely,

Lina Dolores Pohl
Minister of Environment and Natural Resources

MINISTERIO DE MEDIO AMBIENTE Y RECURSOS NATURALES

ADAPTATION FUND

Dominican Republic

February 02, 2017

To: The Adaptation Fund Board
C/o Adaptation Fund Board Secretariat
Email: Secretariat@Adaptation-Fund.org
Fax: 202 522 3240/5

Subject: Endorsement for ***Productive Investment Initiative for Adaptation to Climate Change***

In my capacity as designated authority for the Adaptation Fund in Dominican Republic, I confirm that the above regional project proposal is in accordance with the government's regional priorities in implementing adaptation activities to reduce adverse impacts of, and risks, posed by climate change in the Central American region.

Accordingly, I am pleased to endorse the above project proposal with support from the Adaptation Fund. If approved, the project will be implemented by the Central American Bank for Economic Integration (CABEI) and executed by a national finance institution in coordination with the Project Coordination Unit of CABEI.

Sincerely,

Pedro García Brito
Director of Climate Change and CDM

Ave. Cayetano Germosén, Esq. Ave. Gregorio Luperón, El Pedregal, Santo Domingo, República Dominicana; Código postal: 02487 •Tels.: 809-567-4300 / 809-807-1116 • www.ambiente.gob.do

ADAPTATION FUND

Letter of Endorsement by Government

Secretary of Energy, Natural Resources, Environment and Mining

February 03, 2017

To: The Adaptation Fund Board
c/o Adaptation Fund Board Secretariat
Email: Secretariat@Adaptation-Fund.org
Fax: 202 522 3240/5

Subject: Endorsement for ***Productive Investment Initiative for Adaptation to Climate Change***

In my capacity as designated authority for the Adaptation Fund in Honduras, I confirm that the above regional project proposal is in accordance with the government's regional priorities in implementing adaptation activities to reduce adverse impacts of, and risks, posed by climate change in the Central American region.

Accordingly, I am pleased to endorse the above project proposal with support from the Adaptation Fund. If approved, the project will be implemented by the Central American Bank for Economic Integration (CABEI) and executed by a Project Coordination Unit within CABEI.

Sincerely,

José Antonio Galdames
Minister of Energy, Natural Resources, Environment and Mines

Gobierno de Reconciliación y Unidad Nacional

El Pueblo, Presidente!

2017 TIEMPOS DE VICTORIAS! Por Gracia de Dios!

Minister Office
6th of February 2017
Ref.: DM-JAS/0050.02.17

To: *The Adaptation Fund Board*
c/o Adaptation Fund Board Secretariat
Email: Secretariat@Adaptation-Fund.org
Fax: 202 522 3240/5

Subject: Endorsement for ***Productive Investment Initiative for Adaptation to Climate Change***

In my capacity as designated authority for the Adaptation Fund in Nicaragua, I confirm that the above regional project proposal is in accordance with the government's regional priorities in implementing adaptation activities to reduce adverse impacts of, and risks, posed by climate change in the Central American region.

Accordingly, I am pleased to endorse the above project proposal with support from the Adaptation Fund. If approved, the project will be implemented by the Central American Bank for Economic Integration (CABEI) and executed by a Project Coordination Unit within CABEI.

Sincerely,

Juana Argeñal
Minister of Environment and Natural Resources

FE, FAMILIA Y COMUNIDAD!

CRISTIANA, SOCIALISTA, SOLIDARIA!

MINISTERIO DEL AMBIENTE Y LOS RECURSOS NATURALES
Km.12½ Carretera Norte, frente a Corporación de Zonas Francas
Teléfono 22331112 - 22631994 - 22331916
www.marena.gob.ni

DCC
DIRECCION DE CAMBIO CLIMATICO

minae

Letter of approval from the Government of Costa Rica

Climate Change Director
Ministry of Environment and Energy

San José, 06 de february, 2017
DCC-23-2017

To: The Adaptation Fund Board
c/o Adaptation Fund Board Secretariat
Email: Secretariat@Adaptation-Fund.org
Fax: 202 522 3240/5

Subject: Endorsement for ***Productive Investment Initiative for Adaptation to Climate Change***

In my capacity, as designated authority for the Adaptation Fund in Costa Rica, I confirm that the above regional project proposal is in accordance with the government's regional priorities in implementing adaptation activities to reduce adverse impacts of, and risks, posed by climate change in the Central American region.

Accordingly, I am pleased to endorse the above project proposal with support from the Adaptation Fund. If approved, the project will be implemented by the Central American Bank for Economic Integration (CABEI) and executed by a Project Coordination Unit within CABEI.

Sincerely,

Andrea Meza Murillo
Climate Change Director
Ministry of Environment and Energy

MINISTERIO DE AMBIENTE Y ENERGIA
minae
DIRECCION DE CAMBIO CLIMÁTICO
COSTA RICA

Archivo/Consecutivos
CC: Sr. Dr. Nick Rischbieth, Presidente Ejecutivo del BCIE
Sr. Edgar E. Gutiérrez Espeleta, ministro de Ambiente y Energía

COSTA RICA
Tel: (506) 2253-42-95/ (506) 2253-42-98 Correo electrónico: cambioclimatico@minaet.go.cr
Apdo Postal 10104-1000 San José-Costa Rica

MiAMBIENTE

Letter of Endorsement by the Government of Panama

February 8th, 2017
DM-0315-2017

To: **The Adaptation Fund Board**
c/o Adaptation Fund Board Secretariat
Email: Secretariat@Adaptation-Fund.org
Fax: 202 522 3240/5

Subject: Endorsement for ***Productive Investment Initiative for Adaptation to Climate Change.***

In my capacity as designated authority for the Adaptation Fund in Panama, I confirm that the above regional project proposal is in accordance with the government's regional priorities in implementing adaptation activities to reduce adverse impacts of, and risks, posed by climate change in the Central American region.

Accordingly, I am pleased to endorse the above project proposal with support from the Adaptation Fund. If approved, the project will be implemented by the Central American Bank for Economic Integration (CABEI) and executed by a Project Coordination Unit within CABEI.

Sincerely,

EMILIO SEMPRIS
Minister of Environment in Charge

REPÚBLICA DE PANAMA
Ministro(a) de Ambiente, Encargado(a)
MINISTERIO DE AMBIENTE

ES/EC/mélica.j

REGIONAL PROJECT/PROGRAMME PROPOSAL

PART I: PROJECT/PROGRAMME INFORMATION

Title of Project/Programme:	Productive Investment Initiative for Adaptation to Climate Change
Countries:	Guatemala, El Salvador, Honduras, Nicaragua, Costa Rica, Panama and Dominican Republic
Thematic Focal Area[1]:	Innovation in adaptation finance
Type of Implementing Entity:	Regional
Implementing Entity:	Central American Bank for Economic Integration (CABEI)
Executing Entities:	Project Administration Unit
Amount of Financing Requested:	5.0 million (in U.S Dollars Equivalent)

Project / Programme Background and Context:

Provide brief information on the problem the proposed project/programme is aiming to solve, including both the regional and the country perspective. Outline the economic social, development and environmental context in which the project would operate in those countries.

I. Introduction

Central America and the Caribbean is one of the regions most affected by climate change. Droughts, hurricanes and El Niño-Southern Oscillation phenomenon are intensifying their impact in the region and will continue to strengthen their intensity and regularity. Agriculture as climate-dependent activity and one of the main sources of income for regional economies, will be gravely affected due to effects of climate change.

Furthermore, Central America is a region with biodiverse ecosystems that are already being overexploited due to the current unsustainable development model which will be further aggravated by climate change. The most acute rural poverty in Central America occurs precisely in the~~se~~ agricultural frontier areas, where the proportion of micro, small and medium scale farmers is highly relevant. In addition, these areas are characterized by little presence of public and financial institutions, minimal social infrastructure and lack of governance.

[1] Thematic areas are: Food security; Disaster risk reduction and early warning systems; Transboundary water management; Innovation in adaptation finance.

The Central American countries have approximately 2.1 million small family agricultural production units or Micro, Small and Medium Enterprises (MSMEs) with 5 hectares or less of land. The majority of these production units are considered vulnerable in the face of climate change, pests, diseases and market price fluctuations.

One of the main constraints that limit the growth of any of these small agricultural production units is the limited access to credit. Conservative banking practices and high risks associated with operations in rural areas have left the agricultural sector with limited financial options for business development. In the majority of Central American countries, credit to the agricultural sector accounts for roughly 3% of total credit offered by regulated financial systems, and the largest fraction of this percentage is granted to the most dynamic sector of agricultural production. In order to achieve an environment that promotes resilient investments in micro, small and medium sized enterprises, barriers in banking and business need to be removed and incentives put in place.

CABEI is the multilateral organization with the largest network of strategic intermediaries to channel resources in the Central American region. The proposed financial intermediation scheme offers the possibility of fostering access to credit for vulnerable rural MSME with a regional reach.

This project's **main objective** is to ~~build capacities that~~enhance capacity to implement adaptation measures for micro, small and medium agricultural enterprises in Guatemala, El Salvador, Honduras, Nicaragua, Costa Rica, Panama and the Dominican Republic, in order to increase their resilience to climate change, ensuring the provision of financial and non-financial services to support ecosystems and agricultural production by providing technical assistance in the adaptation planning processes and incentives for specific alternatives of resilience and investment management options.

The project has the following three components:

a) **Component 1: Innovative financial mechanisms for ecosystem based adaptation measures**: Loans will be provided through regulated and non-regulated[2] intermediary financial institutions (IFIs) that are accredited by CABEI. These loans will be directed to ~~T~~the adoption of adaptation measures ~~in the face of~~ that ~~have resulted from~~that will increase the resilience of rural producers to ~~the impact of~~ climate change ~~impacts~~ through the~~, based on~~ sustainable management of resources with an ecosystem-based approach in ~~their~~ productive systems. The implementation of ecosystem based adaptation measures expects to have

[2] Non-regulated or non-legalized financial institutions are those non-bank financial institutions whose purpose is to capture savings and grant loans, but which are not regulated by the Superintendence of Banking and Insurance or similar organizations.

an impact on the ~~In the project areas,~~ ecosystem services ~~that will be enhanced which can include~~such as freshwater distribution and regulation, protection against extreme weather events, flood regulation, prevention of the spread of alien species, nutrient cycling, ~~and~~ soil formation, amongst others.

b) **Component 2: Capacity building for the development of production models resilient to climate change.** ~~Its purpose is to S~~support will be provided to MSMEs through grants directed at~~,~~ improving their technical and business skills which can enhance the efficiency and competitiveness of their business through the adoption of adaptation measures. These grants can be used for: 1) Sectorial D~~d~~evelopment Initiatives, 2) Pre-investment and 3) Capacity Building related to credit management. These are further developed in Section II-A.

c) **Component 3: Incentive scheme to promote ecosystem-based adaptation measures (Adapt-Award).** Adaptation incentives will be provided to ~~support~~ promote and award changes in attitudes towards conservation and the sustainable use of natural resources (land, water, forest, biodiversity) through the implementation of adaptation measures on MSMEs productive systems. In addition, the incentives will support IFIs adoption of green credit mechanisms that enhance adaptation measures. ~~could thus afford to service the loan and will be induced to plan adaptation investments~~. Incentives consist in a 20% cash refund on the loan principal granted by the regulated or non-regulated IFIs (up to USD 10,000). This incentive will be distributed between MSMEs and IFIs.

II. Project Context

a) Socio-economic context.

i. Physical characteristics

Central America and the Dominican Republic have a surface area of 498,910 km^2, the largest portion of which pertains to Nicaragua, Honduras and Guatemala. Its coastal line means 6,229 km and its average highest altitude reaches 3,256 m above sea level, Nicaragua having the lowest altitude and Guatemala, the highest.

Table No.1 Beneficiaries countries physical characteristics.

Countries	Surface area (km^2)	Coastal line (km)	Highest altitude (m above sea level)
Panama	75,420	2,490	3,475
Costa Rica	51,100	1,290	3,810
El Salvador	21,041	307	2,730
Guatemala	108,889	400	4,211
Honduras	112,090	832	2,870
Nicaragua	130,370	910	2,438
Dominican Rep.	48,670	1,288	3,175
Total/Average	**498,910**	**6,229**	**3,244**

Source: CIA World Factbook

ii. Demographic characteristics

The Central American population in year 2015 is 46.1 million and the Dominican Republic population reaches 10.5 million. Guatemala is the most populated country (16.1 million) and Panama, the least populated (almost 4 million). 64.1% of the regional population lives in urban areas although Guatemala has the lowest rate (50.7%) and the Dominican Republic, the highest rate (79%). Population's average age is 25.3 years old, and Guatemala is the country with the youngest population, with an average age of 19.7 years. Lastly, Central American's population is growing at an average annual rate of 1.5%, with Guatemala being the country with the highest rate (2.5%) and El Salvador, the lowest (0.7%).

Table No.2 Beneficiaries countries demographic characteristics.

Countries	**Total population** Thousands of persons (2015) (a)	**Urban population** (%) (b)	**Average age** (years) (b)	**Annual average growth rate** (%)
Panama	3,989	76.5	28.5	1.6
Costa Rica	4,978	65.6	30.6	1.4
El Salvador	6,405	65.8	24.7	0.7
Guatemala	16,158	50.7	19.7	2.5
Honduras	8,378	53.3	22.5	2.0
Nicaragua	6,236	58.1	23.8	1.4
Dominican Rep.	10,479 (c)	79 (c)	27.4 (c)	1.23 (c)
Total/Average	**56,623**	**64.1**	**25.3**	**1.5**

Source: (a) Cepredenac, Informe Regional del Estado de la Vulnerabilidad y Riesgos de Desastre en Centroamérica [Regional report on vulnerability and risks of disasters in Central America]; (b) UNDP, Informe sobre Desarrollo Humano 2014 [2014 Human development report]; (c) CIA World Factbook.

iii. Cultural characteristics.

The Central American region features a wide variety of ethnic groups across its territory, including white population (22%), mestizo population (59.1%), indigenous population (9.9%) and Afro-descendant population (6.9%). Costa Rica is the country with the greatest proportion of white population (65%), El Salvador has the greatest mestizo population (86.2%), Guatemala hast the greatest indigenous population (39.3%), and Panama, the greatest Afro-descendant population (14%) The Dominican Republic has 16% white population, 11% Afro-descendant population and 73% mestizo population (CIA World Factbook).

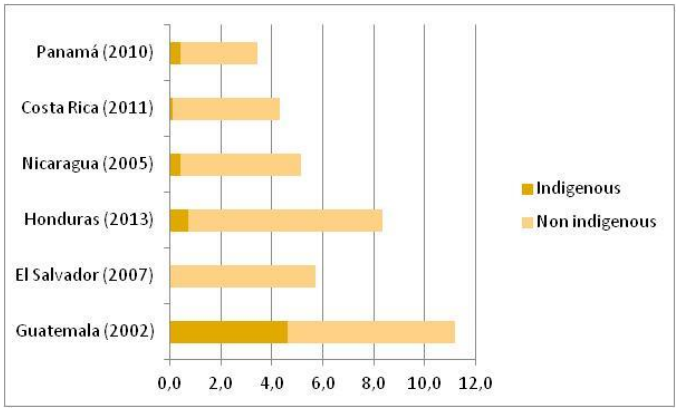
Table No.3 Beneficiaries countries ethnic characteristics (%)

Countries	White population	Mestizo population	Indigenous population	Afro-descendant population	Asian population	Immigrants
Panama	10.0	65.3	5.0	14.0	3.0	2.7
Costa Rica	65.0	13.0	2.0	10.0	1.0	9.0
El Salvador	12.0	86.2	1.0	0.0	0.0	0.8
Guatemala	18.5	40.0	39.3	1.0	0.2	1.0
Honduras	13.0	81.7	7.0	8.0	0.0	0.3
Nicaragua	17.0	68.4	5.0	8.5	0.5	0.6
Average	**22.6**	**59.1**	**9.9**	**6.9**	**0.3**	**2.4**

Source: (a) Cepredenac, *Informe Regional del Estado de la Vulnerabilidad y Riesgos de Desastre en Centroamérica* [Regional report on vulnerability and risks of disasters in Central America]; (b) UNDP, *Informe sobre Desarrollo Humano 2014* [2014 Human development report]. For the Dominican Republic, no information could be found because their census does not provide for such variable.

The following chart shows compiled information on indigenous and non-indigenous population of Central American countries.

Chart No.1 Indigenous and non-indigenous population in Central American countries (millions).



Source: Prepared by the author based on National Censuses. For the Dominican Republic, no information could be found because their census does not provide for such variable.

iv. Poverty situation

During 2011, approximately 41% of regional population was under the poverty line, with Honduras (67.6%) and Guatemala (53.7%) featuring the highest percentages. Thus, 16.8 percent of the population lives in conditions of extreme poverty, with Honduras (43.9%) featuring the highest percentage.

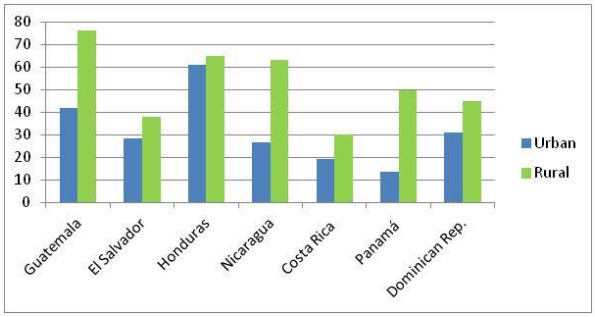
Table No.4 Beneficiaries countries poverty situation.

Countries	Population under poverty line (%)	Population under extreme poverty line (%)
Panama	25.3	12.4
Costa Rica	24.8	7.3
El Salvador	47.5	15.5
Guatemala	53.7	13.3
Honduras	67.6	43.9
Nicaragua	44.1	8.2
Dominican Rep.	25.99	7.5
Average	**41.3**	**15.4**

Source: For Central America: ERCA, 2014 Central America Statistics; for Dominican Republic, 2014 Poverty Map of the Dominican Republic, prepared with micro-scale data of the 2011 National Labor Survey [Encuesta Nacional de Fuerza de Trabajo 2011].

Studying the poverty statistics broken down per rural and urban poverty, we can observe that in each one of the 7 countries, the highest percentage poverty is located by far in rural areas. Some of the biggest contrasts are found in Nicaragua, with 63.3% more poverty in the rural medium, as compared with 26.8% in cities; in Guatemala, there is 76.1% in rural medium as opposed to 42.1% in cities; or in Panama, where the poverty index is among the region's lowest but a considerable variation occurs between rural poverty and urban poverty (almost 50% vs. 13.8%).

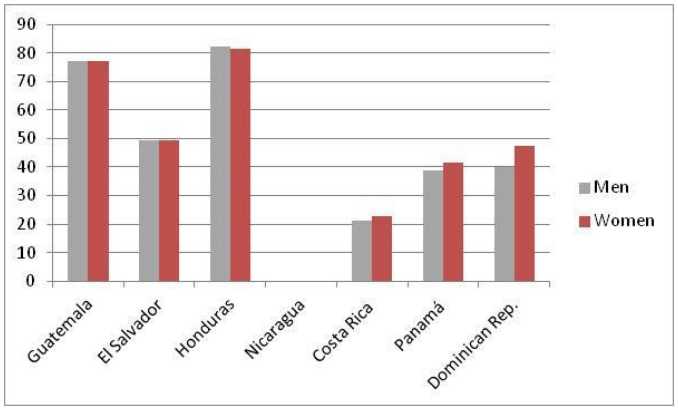
Chart No.2 Poverty incidence per national poverty line, in urban and rural media (%).



Source: Prepared by the author based on CEPALSTAT data. Information from the Multi-purpose Household Survey for El Salvador, from the National Survey on Living Conditions for Guatemala, and database from the World Bank for Honduras. 2014 Information for all except for El Salvador (2009).

According to statistics, this rural poverty would be relatively balanced between men and women in Guatemala, El Salvador, and Honduras. There would be a higher percentage of rural women than men in poverty conditions for Costa Rica (19.3% women vs 17.8% men) and in Panama (21.7% women vs. 20.7% men). This is significantly more so in Dominican Republic where 40.1% of rural women are poor as opposed to 34.3% rural men.

Chart No.3 Population in poverty situation broken down per sex (total percentage of the population in rural medium).



Source: Prepared by the author based on data of the CEPAL: Economic Commission for Latin America and the Caribbean - Statistics Division. Social Statistics Unit, based on the special tabulations of the household surveys for the relevant countries. Nicaragua: without information

v. Healthcare Characteristics.

According to the UNDP Human Development Report (2014), the mortality rates for the newborn and infants of less than 5 years are highest for Guatemala (27 and 32 every 1,000 born alive, respectively). Growth restriction is the highest in Guatemala (48%). As far as adults are concerned, the highest mortality rates (138 for women and 294 for men) pertain to El Salvador.

vi. Education Characteristics.

Costa Rica has the highest rates of literacy in Central America both for adults (96.3%) and for young population (98.3%). The highest gross rate for preschool enrollment belongs to Costa Rica (73%), primary school, to Guatemala and El Salvador (114%) and secondary school and tertiary education to Costa Rica (101% and 47%, respectively). The highest dropout rate goes to Nicaragua (51.6%) followed by Honduras (30.4%) and by Guatemala (29%).

vii. Labor sector and Economically Active Population Characteristics

The region's highest employment rate belongs to Guatemala (69.1%) and highest youth unemployment occurs in Costa Rica (18.4%). Adult unemployment is greatest in Costa Rica and Nicaragua (7.8%), child labor is highest in Guatemala (25.8%), and the participation of poor workers is highest in Honduras (29.6 % of total employment). Paid maternity leave has the longest duration in Costa Rica, with 120 days.

Table No.5 Labor and Vulnerability in Central America

Countries	Employment Rate	Precarious work	Youth unemployment	Unemployment Rate	Child Labor	Poor worker share	Duration of maternity leave
	(% of 25 years and older)	(% of total employment)	(% between 15 and 24 years)	(% of population of 15 years or older)	(% of 5 to 24 years)	(% of total employment)	(days)
	2012	2003-2012	2008-2012	2004-2013	2005-2012	2003-2010	2013
Panama	68.8	29.2	10.3	6.5	5.6	6.8	98
Costa Rica	64.0	20.2	18.4	7.8	4.7	4.2	120
El Salvador	64.5	---	12.4	6.4	10.4	12.1	84

Guatemala	69.1	---	7.5	2.9	25.8	---	84
Honduras	66.6	---	8.0	4.3	15.6	29.6	84
Nicaragua	65.5	---	11.9	7.8	14.5	27.4	84

Source: PNUD, *Informe sobre Desarrollo Humano* 2014. [UNDP 2014 Human development report]

In Central America and the Dominican Republic, more than 6 and a half million people, approximately 25% of the population, are dependent on the primary sector, which is highly dependent on climate and quality of ecosystems. The table below shows the proportion of the Economically Active Population in each sector.

Table No. 6 Beneficiaries countries Structure of Economically Active Population per production sector

Countries	EAP (a) (b) (thousands of people)	Tertiary (b) (services)	Secondary (c) (industries)	Primary (d) (agriculture)
Panama	1,743	64.4%	18.6%	17.0%
Costa Rica	2,211	64.0%	22.0%	14.0%
El Salvador	2,795	58.0%	20.0%	21.0%
Guatemala	5,909	48.0%	14.0%	38.0%
Honduras	3,628	39.8%	20.9%	39.2%
Nicaragua	3,209	50.0%	18.0%	31.0%
Dominican Rep.	4,930	64.7%	20.8%	14.4%
Summation/Average	**24,425**	**55.6%**	**19.2%**	**31.0%**

Source: (a) ERCA, *Estadísticas de Centroamérica 2014*, information of 2013; (b) The World Factbook https://www.cia.gov/library/publications/the-world-factbook/geos/nu.html.

viii. Food security and nutrition

The prevalence of underfeeding means the likelihood of any one person, randomly selected, of consuming a quantity of calories insufficient to cover his or her energy requirements for a healthy, active life. In Central America, the highest likelihood of underfeeding is found in Nicaragua (16.8%), followed by Guatemala (14.3%) and El Salvador (13.5%).

b) *Major recent climate changes, projections, impacts and vulnerability in Central America and Dominican Republic*[3]

Central America is one of the areas in the world that is most exposed to the consequences of climate change, even though the region accounts for no more than a tiny fraction of the greenhouse gases. ~~Due to the region is that fuel climate change.~~ As a narrow isthmus between two continents, between the Pacific and Atlantic Oceans, it is frequently hit by droughts, hurricanes and the effects of the El Niño Southern Oscillation.

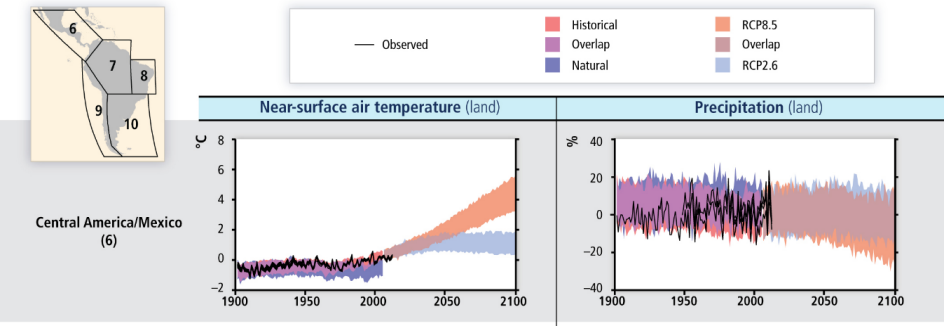
Climate change is heightening its social and economic vulnerability and it will have an increasingly strong influence on its economic growth, since weather-related factors have a decisive impact on many of its production activities, such as agriculture and hydropower generation.

The region has valuable stocks of natural and cultural assets that must be preserved and appreciated for the contribution that they make to the development of current and future generations. Its ecosystems and abundance of biodiversity provide a wide range of products and services, including pollination, pest control, and the regulation of humidity, river flows and local climatic conditions, nevertheless they are being undermined by the current unsustainable style of development. It is estimated that Central America produces no more than a tiny fraction of global greenhouse gasses (less than 0.3% of emissions, without factoring in changes in land use, and under 0.8% of total (gross) emissions).

Significant trends in precipitation and temperature have been observed in Central America with high confidence of the estimations. In addition, changes in climate variability and in extreme events have severely affected the region. Decreasing trends of precipitations in the region have registered, –1 mm a day in 50 years during 1950–2008.Warming has been detected near 0.7°C to 1°C in 40 years since the mid-1970s. Increases in temperature have been identified with medium confidence of the estimations, while more frequent extreme rainfall has favored the occurrence of landslides and flash floods.

Figure No.1: Temperature and precipitation trends~~.~~

[3] Based on: Magrin, G.O., J.A. Marengo, J.-P. Boulanger, M.S. Buckeridge, E. Castellanos, G. Poveda, F.R. Scarano, and S. Vicuña, 2014: Central and South America. In: Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part B: Regional Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Barros, V.R., C.B. Field, D.J. Dokken, M.D. Mastrandrea, K.J. Mach, T.E. Bilir, M. Chatterjee, K.L. Ebi, Y.O. Estrada, R.C. Genova, B. Girma, E.S. Kissel, A.N. Levy, S. MacCracken, P.R. Mastrandrea, and L.L.White (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, pp. 1499-1566.

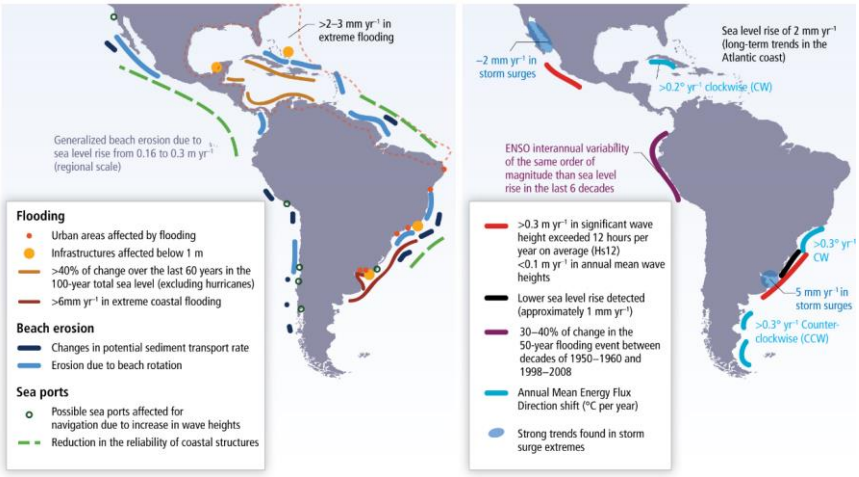


Source: IPCC Fifth Assessment Report, 2014

Climate projections suggest increases in temperature, and variations in precipitation for Central America by 2100. In post-Fourth Assessment Report (AR4) climate projections, derived from dynamic downscaling forced by Coupled Model Intercomparison Project Phase 3 (CMIP3) models for various Special Report on Emission Scenarios (SRES) scenarios, and from different global climate models from the CMIP5 for various Representative Concentration Pathways (RCPs) (4.5 and 8.5), warming varies from +1.6°C to +4.0°C with medium confidence. Rainfall changes for CA range between –22 and +7% by 2100.

Changes in streamflow and water availability have been observed and projected to continue in the future, affecting already vulnerable regions. The second half of the 20th century was associated with changes in precipitation. Risk of water supply shortages will increase due to precipitation reductions and evapotranspiration increases in semi-arid regions, thus affecting water supply for cities, hydropower generation, and agriculture. Current practices to reduce the mismatch between water supply and demand could be used to reduce future vulnerability.

Figure No.2: Coastal impacts and coastal dynamics



Source: IPCC Fifth Assessment Report, 2014

Sea level rise (SLR) and human activities on coastal and marine ecosystems pose threats to fish stocks, corals, mangroves, recreation and tourism, and control of diseases. SLR varied from 2 to 7 mm per year between 1950 and 2008. Frequent coral bleaching events associated with ocean warming and acidification occur in the Mesoamerican Coral Reef. In Central America, the main drivers of mangrove loss are deforestation and land conversion to agriculture and shrimp ponds.

Renewable energy based on biomass has a potential impact on land use change and deforestation and could be affected by climate change. Sugarcane and oil palm are likely to respond positively to CO2 and temperature changes, even with a decrease in water availability, with an increase in productivity and production. The expansion of sugarcane, and oil palm may have some effect on land use, leading to deforestation in parts of the region. Advances in second-generation bioethanol from sugarcane and other feedstock will be important as a measure of mitigation.

Changes in weather and climatic patterns are negatively affecting human health in Central America, by increasing morbidity, mortality, and disabilities, and through the emergence of diseases in previously non-endemic areas. With very high confidence, climate-related drivers are associated with respiratory and cardiovascular diseases, vector- and water-borne diseases (malaria, dengue, yellow fever, leishmaniosis, cholera, and other diarrheal diseases), hantaviruses and rotaviruses, chronic kidney diseases, and psychological trauma. Air pollution is associated with pregnancy-related outcomes and diabetes, among others.

Vulnerabilities vary with geography, age, gender, race, ethnicity, and socioeconomic status, and are rising in large cities. Climate change will exacerbate current and future risks to health, given the region's population growth rates and vulnerabilities in existing health, water, sanitation and waste collection systems, nutrition, pollution, and food production in poor regions.

The Latin American and Caribbean region is also affected by various climate phenomena including the Intertropical Convergence Zone, the North and South American monsoon system, El Niño Southern Oscillation, Atlantic Ocean oscillations and tropical cyclones. These phenomena affect the regional climate and changes in their patterns have major implications for climate projections. The El Niño Southern Oscillation will continue to be the dominant form of interannual variability in the tropical Pacific, and rising humidity levels will likely intensify El Niño precipitation variability.

The evidence suggests that climate change is already having significant impacts in Latin America and the Caribbean and that, in all probability, its impacts will be even greater in the future. The effects in the region are unevenly distributed, non-linear and are actually positive in some cases and for some periods, although the long-term effects are primarily negative. For example, there is evidence of major impacts on agricultural activities, water resources, biodiversity, sea levels, forests, tourism, the population's health and the region's cities.

This evidence is, however, still fragmented in many cases and surrounded by a great deal of uncertainty, which makes it difficult to aggregate or to use as a basis for comparison. Nonetheless, there are a number of studies that estimate some of the major economic costs of climate change for Latin America and the Caribbean. Aggregate estimates put the economic cost of a 2.5°C rise in temperature (most probably around 2050) for the region at between 1.5% and 5% of the region's present GDP. These are conservative estimates entailing a high degree of uncertainty. In addition, they are limited to certain sectors and regions and are subject to a variety of methodological limitations that make it difficult to factor in adaptation processes and the potential effects of extreme weather events.

i. Climate changes, projections, impacts and vulnerability in the Participant Countries

In this section, future climate parameters in the Participant Countries, their potential impacts and vulnerability assessments are described.

This information has been extracted from the National Climate Change Communications to UNFCCC and/or Climate Change/ Adaptation Policies. It is important to note that each

country has different levels of development of vulnerability assessments and identification of adaptation needs.

Guatemala[4]

The analysis of the behavior of climate variables between 1971 and 2000 (base period) and between 2001 and 2014 (current period) shows increases in both annual average temperature as well as in total annual rainfall in the current period when compared with the base period.

The largest increments in annual average temperature were observed in the coldest regions (Western Highlands) with increases between 9.4 and 10.3%; in the warmer regions Pacific and Caribbean, increases observed were lower, between 0.8 and 1.5%.

Temperature projections show an upward trend, with expected increments for the decade of 2050 of between 2.5 and 4.1°C, and between 3.3 and 5.4°C for the decade of 2070.

Regarding total annual rainfall, all regions show changes: in the North region (Flores station), a 48% increase is reported, while the Caribbean and the Transversal regions show smaller relative increments, between 2.3% and 9.6%. An 18% increase (with a variation between 13.2 and 27.6%) was reported in the rest of the climate regions. Total rainfall projections starting in the decade of 2030 show a downward trend. It is expected that, by the decade of 2050, reductions in rainfall will be of 9.5% to 12.4%, and 18.4% to 28.9% for the decade of 2070.

Figure No.3: Hydric stress 2011-2050- source: Biota and TNC 2014

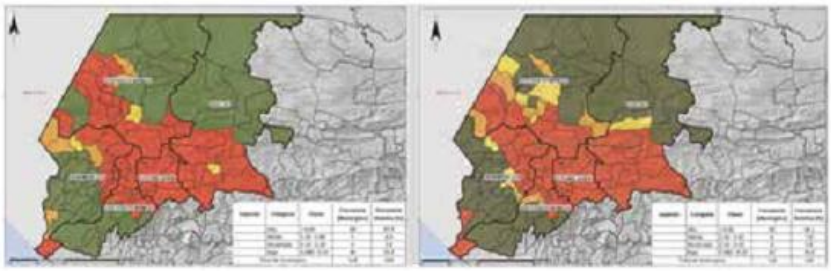
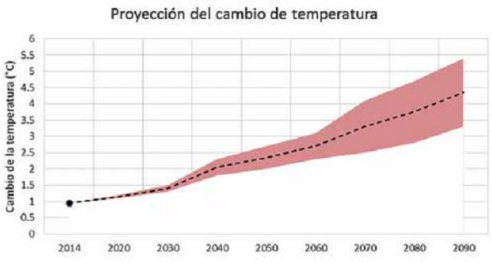
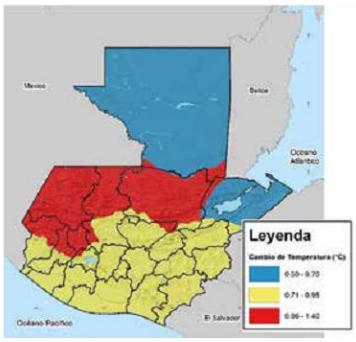


Figure No. 4: Temperature forecast and changes by region. Source INSIVUMEH 2015

[4] Second National Climate Change Communication by Guatemala, 2015, by the Ministry of Environment and Natural Resources (MARN).





Assessment of Vulnerability to Climate Change

A reduction in the availability of water resources is expected due to the reduction of annual rainfall and higher temperatures in the medium and long terms. **Projections on water availability indicate a reduction from 5% to 30% by 2050 over the current period (2010)**.

Areas located in the dry corridor (from the border of El Salvador and Honduras to the border of Mexico) and the Petén area will present less water availability by 2050.

The variability in the hydrologic cycle has made the vulnerability of the energy sector evident. Years with strong droughts associated to El Niño (for example July 2009 to April 2010) caused a 34% reduction in hydroelectric generation compared with the generation from the previous year. **Small farmers are seriously impacted by droughts associated to climate change**. Assessments show that farmers lose, on average, 55% of their basic grain production during drought periods. The response capacity of these farmers is very low, since **only 16% of the farmers interviewed take specific actions to adapt**.

El Salvador[5]

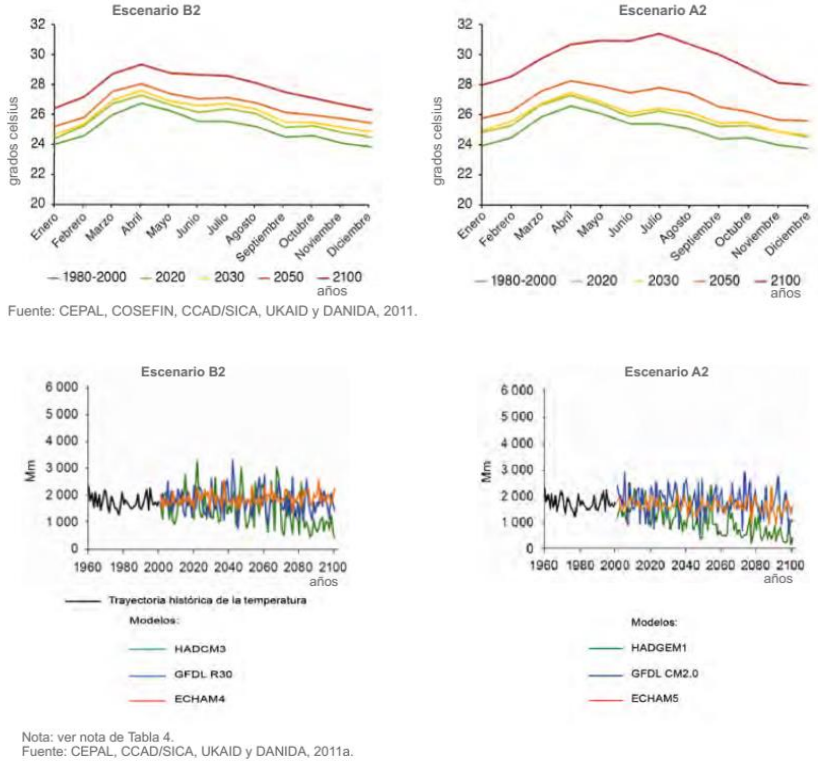
Historical trends show that annual cumulative rainfall recorded in El Salvador has been highly variable, ranging from a minimum of 1,274 mm and a maximum of 2,310 mm between 1950 and 2006. While the average temperature in the country increased by 1.3°C when compared with the 1950s, it is remarkable that the greatest increase started in the 1990s. As far as sea level, the average increased approximately 7.8 cm, at an average rate of 1.3 mm per year. With respect to waves, changes were detected in the

[5] Second National Climate Change Communication by El Salvador, spearheaded by the Ministry of Environment and Natural Resources (MARN).

average wave height of 28 cm (4.7 mm per year) with hangs in the environment 0.12°N/year in the average direction of wave energy and above 20 cm of extreme wave heights in the last three decades (about 2 cm per year).

From the information provided by El Salvador climate change scenarios - results shown in the following figures - it is evident that there is a tendency for the temperature to increase and that there are significant changes in rainfall patterns and availability of water resources. For all the above and in a context of a highly degraded territory, it becomes urgent to implement adaptation measures, strategies and policies at all levels.

Figure No. 5 El Salvador temperature and precipitation scenarios



Fuente: CEPAL, COSEFIN, CCAD/SICA, UKAID y DANIDA, 2011.

Nota: ver nota de Tabla 4.
Fuente: CEPAL, CCAD/SICA, UKAID y DANIDA, 2011a.

Strategically addressing those vulnerabilities with high potential for irreversible damage or adverse impacts that extend across several key sectors of the economy is a central focus of the El Salvador's Strategy.

Three priority action lines have been identified:

- Sectoral adaptation strategies, with emphasis on agriculture, water resources, infrastructure and health. Water resources, agriculture, road infrastructure and health are being increasingly affected by climate change so it is critical to implement priority actions under a holistic approach that integrate the needs of the sectors and the transformation of any actions that adversely impact these sectors. In that sense, Biodiversity, Environmental Sanitation and Water Resource are synergized with the other strategies of the National Environmental Policy.

- Restoration of critical ecosystems and rural landscapes. The rural areas of El Salvador are extremely vulnerable to climate change due to their levels of environmental degradation and it is necessary to advance in an ambitious restoration program, as proposed in the National Ecosystem and Landscapes Restoration program (PREP, in Spanish), the adaptation flagship program in the country.

- Urban and coastal zoning. It is essential to work in the zoning of urban growth in order to reduce risk and advance in climate change adaptation, given the uncontrolled expansion of urban areas over water infiltration areas sensitive to landslides or unsuitable for that use. This not only increases the risk of flooding and other impacts of climate phenomena but also reduces local water supply, increasing the risk of water stress. A similar problem arises in the coastal area where the expansion of various activities on fragile ecosystems such as mangroves and excessive extraction of water from shallow aquifers threatens irreversible loss of these resources, already threatened by saline intrusion, extreme weather events, the sea level rise and other effects of climate change.

Honduras[6]

The country has hot tropical climate in low lands, which gradually turns into temperate climate in higher ground. Average temperature is 26°C up to elevation 600 (low lands of the Caribbean ocean), 16 to 24°C between elevations 600 and 2100, and less than 16°C above the latter. The southern area (Choluteca) features dry climate with annual average temperature of about 28°C. The precipitation regime is highly variable across the country, ranging between 900 and 3300 mm depending on the specific region.

Based on the scenarios of greenhouse gas emissions and the models selected, we could expect changes in precipitation and temperature for year 2020 consisting in a 6% reduction of the annual precipitation in the departments of Cortes, Santa Bárbara, Copán, Ocotepeque, Lempira, Intibucá, Comayagua , La Paz, Francisco Morazán, El Paraíso, Valle and Choluteca; and a 0.8°C increase in annual mean temperature, especially in

[6] Second national communication to the United Nations Framework Convention on Climate Change. Project Number 00048973

the western and southern departments of the country, including the south of departments Comayagua, Francisco Morazán and El Paraíso.

The eastern portion of department of Colon and Olancho, together with the entire department of Gracias a Dios, is the region with the lesser precipitation decrease and temperature increase.

By year 2050, a decrease in precipitation is estimated with values that go from 20% to 25% in most part of the national territory between June and August. However, such decrease is more pronounced during July and August when the deficit exceeds 30% for the most part of the territory, specially for the departments included in the western half of Honduras.

This leads us to believe that the "Indian summer", which is an unseasonably decrease in rain in the middle of the rainy season for the most part of the national territory will be longer, hotter and drier than as we know it to be today. Scenarios for year 2090 are worrisome due to the anticipated changes specially for the months of July and August, where only 40% or 30% of the rain would fall as opposed to the current rainfall, where temperature would increase by more than 4°C in most part of Honduras, and where the atmospheric pressure would rise by almost one hPa. With these conditions, we may assume that during such months, the wind flow from the North-East would be strengthened, and a block mechanism would settle in, preventing tropical phenomena that cause rainfall from developing.

Such conditions of rainfall deficit and high temperatures during July and August are similar to the conditions occurring under the influence of El Niño-Southern Oscillation phenomena. We think this could be a sign of such phenomena becoming more frequent and intense due to global warming. Under such scenarios, staple crops grown in the south and west of Honduras would virtually disappear if no adaptation measures are taken in the face of such changes.[7]

Nicaragua[8]

Projections indicate a much warmer climate, in which the range of temperature variations in the Pacific Region could decrease, while the pattern of precipitations indicates, with relatively less uncertainty, a reduction of precipitations over the Atlantic Region. In Southern Nicaragua, projections indicate a possible increase of rains, which is related to the permanent increase in precipitations observed in a broad area over Costa Rica and Panama.

[7] *Variabilidad Climática y Cambio Climático en Honduras*-Francisco J. Argeña-
[8] Second national communication to the United Nations Framework Convention on Climate Change

The results of emission scenarios show that the average air temperature in Nicaragua will increase significantly. For the period from 2071 to 2099, there could be an increase of temperature of 3,0°C to 4,0°C. The annual anomalies or variations will be greater in the Pacific Region than in the Atlantic Region, and increases will be higher in the months of July to October.

Estimates of future average air temperatures show significant increases, from 3.0°C to 5.0°C in particular for scenario A2, the highest values in the Northern border regions of Nueva Segovia, Bosawas and RAAN. According to the model, the warmest region is the Pacific region. Models coincide in that the highest average temperature values are expected during the rainy season.

In the case of precipitation, projections are more divergent among the models. One model shows the potential increase of climatic variability with periods in which precipitation increases from 40% to 60%. However, towards the end of the century, precipitation will mostly decrease, which is more significant for the options produced by other models, with 50-60% reductions for the 2071-2099 period.

According to the results of the models, precipitation will increase from 0% to 50% west of 85° meridian, as opposed to a reduction of rains in the Atlantic region, especially in the dry season. This bipolar pattern becomes evident in the rainy and yearly periods; however, in periods of little rainfall, rain values will probably increase 10% or decrease 10-30%.

Vulnerability in Nicaragua

The Pacific region is the most vulnerable region in terms of drinking water problems, as to its quality as well as quantity, due to a convergence of several factors: high population growth, high population density, low rainfalls. The Atlantic region's vulnerability lies in the high number of persons without access to drinking water services and with low human development indexes, which, consequently results in the population's low capacity of adaptation.

The majority of forests important for the drinking water sector are located in an area of high vulnerability and high population density in the Nicaraguan Pacific region.

The national soils are the most important forests for the generation of ecosystem-services for the drinking water sector.

A vulnerability assessment was performed by the Socio-Environmental and Forestry Development Plan (POSAF[9], Spanish acronym).

[9] POSAF: Socio-Environmental and Forestry Development Plan.

POSAF was aimed to improve the productive use of natural resources, mainly by small and medium farmers, through the promotion of sustainable productive systems.
One of its objectives was the implementation of its Poverty Reduction Strategy in rural areas and the response to reconstruction priorities after Hurricane Mitch in 1998. The conceptual basis of the Program was aimed to disseminate new sustainable farming practices, in order to ensure higher incomes and profitability in the long-term, to reduce population's vulnerability towards extreme natural phenomena and to improve the living conditions of the most vulnerable rural communities.

The Program included environmental education, technical assistance and training for the population to increase knowledge levels and improve technology adoption.
The Program component Management of Natural Resources introduced forestry and agroforestry systems on private farms through the execution of 88 projects aimed to establish 87,951 hectares of economically profitable and environmentally sustainable agroforestry and forestry systems. 14,349 rural families in homogeneous groups of about 900 communities benefited, and forest coverage increased 30% in 9 water sub-basins in seven departments and 25 municipalities.

Adaptation and mitigation measures implemented by POSAF included:

- Prevention structures for water harvesting.
- Improved Firewood stoves
- Hydraulic works to prevent disasters in vulnerable municipalities
- Environmental Education: key in the process of adopting clean technologies

Costa Rica[10]

Costa Rica's territory is located within the tropical region and it typically has a wide variety of climates, giving rise to 12 different ecological or bio-climate sub-regions.
Overall, climate is tropical humid, with abundant rainfall on the Caribbean shoreline and low lands. Due to its geographical, atmospheric and oceanic factors, the country has been divided into seven big climatic regions: North Pacific, Central Pacific, South Pacific, Central Region, Northern Region, North Caribbean Region and South Caribbean Region. Overall, two climate regimes are observed, one from the Pacific, the other from the Caribbean. The Pacific regime typically has a dry season, from December to March, with April being the transition month and March, the warmest and driest of them all. The rainy season begins in May and ends in October, with November as the transition month. Between July and August, rainfall decreases ("Indian summer"), and the trade winds become more intense. The months with the most rain are September and October due

[10]Costa Rica. Ministry of Environment and Energy. National Meteorological Institute. Third national communication to the United Nations Framework Convention on Climate Change /MINAE IMN.

to the influence of the cyclone systems, the Monsoons and the Inter-Tropical Convergence Zone (ITCZ).

The Caribbean regime does not feature a defined dry season. In the coastal areas, two relatively dry periods are observed. The first occurring between February and March, and the second, between September and October. Two rainy periods alternate with the dry periods. The first occurs between November to January, being the period with maximum rainfall, and the second, occurring between May and August. The month registering the most rain is December, influenced by the effects of the cold fronts coming from the Northern Hemisphere (IMN, 2008).

According to studies by the National Meteorological Institute (IMN), the most frequent and extreme weather events include: tropical depressions, tropical storms, hurricanes, tropical waves, low-pressure systems, troughs, and cold fronts. Any of these phenomena of intense nature may cause flooding.

Costa Rica's climate variability is related to the ENOS phenomenon, El Niño-Southern Oscillation. Normally, the evidence of El Niño is clearer than the signs of La Niña. During El Niño, the entire Pacific slope and the Central Region are more likely to sustain dry to extreme dry conditions, whereas in the Caribbean, extreme rain scenarios are more likely. During La Niña, extreme rain scenarios are more likely to occur in the Pacific slope, the Central and the Northern regions, whereas the Caribbean features most likely deficit scenarios (INM, 2008).

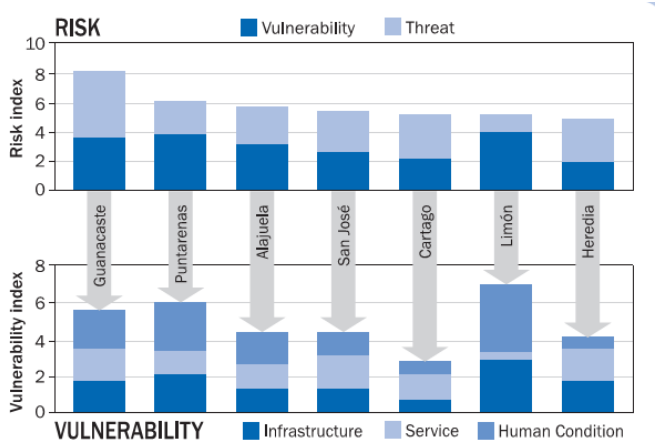
Vulnerability in Costa Rica[11]

As regards water availability, Costa Rica's water system risk was analyzed in order to assess the impact of extreme weather events related to global warming.

The case of extreme dry scenarios is shown in the Figure below. The provinces of Guanacaste and Puntarenas would be at higher risk, while Heredia would be at a lower risk because of its low vulnerability.

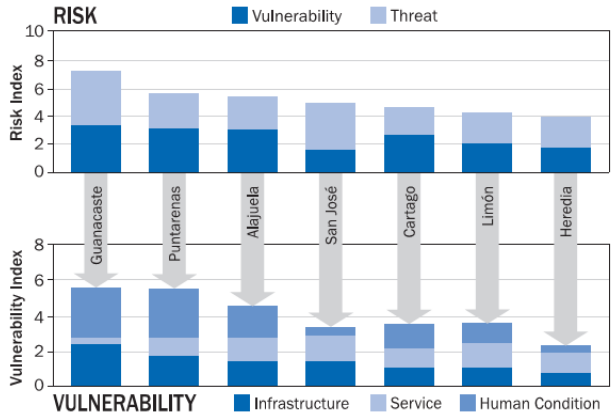
Figure No. 6: Vulnerability to extreme dry events

[11] Costa Rica. Ministry of Environment and Energy. National Meteorological Institute. Third national communication to the United Nations Framework Convention on Climate Change /MINAE IMN.



In the case of extremely rainy scenarios, at the province level, Limón and Puntarenas have a higher risk, while Cartago would be the least vulnerable.

Figure No. 7 Vulnerability to rainy extreme events



The risk of extreme rainy events is closely related to the vulnerability of the provinces, increased vulnerability means increased risk and vice versa.

Food security is analyzed mainly from agro-climatic perspective, focusing on the production of basic grains (corn, rice and beans) and without reference to nutritional component as proposed by Food Security policy (MOH, 2011). Therefore, it does not

focus on the population group - which is the breeding ground for food insecurity and malnutrition - but on the agricultural and climatic situation of the production of those foods considered staples in the traditional diet of Costa Rica.

Current climate threat is based on climate variability mainly referred to the two phases of ENSO (El Niño and La Niña). Records held about the effect of ENSO on the climate of the country are averaged into a coherent scenario with future climate projections. Thus, El Niño and La Niña have proven an exceptional chance to implement plans acting like pilot experiences.

The rationale is that if the agricultural sector has achieved adaptation to current climate variability, it means that they are taking the first steps to organize adaptation to future climate change, which in some areas of the country could be translated into the constant presence of an ENSO condition.

During El Niño there is a high probability that weather conditions tend to dry scenarios, mostly in the Pacific slope and the Central region, while in the Caribbean there will be a tendency to rain. During these types of extreme events, rice and corn production decrease while bean production increases when, compared to historical averages, the Caribbean region reported losses. More than a dozen cities are at high risk of being harmed by the impact of drought in relation to agricultural and economic loss.

During the years in which La Niña is present there is a high probability that rainy scenarios are generated mainly in the North Pacific of the country, while conditions in the Caribbean may be drier. During these events, the low production of rice and corn tend to increase in all regions except in the Caribbean where it diminishes.

In the case of bean production, it tends to decrease, with the exception of the Northern Region. The towns which are more affected are the bean producing towns, located mainly in the Pacific coast and north of the country.

With regard to energy security, increases in temperature caused by climate change affect both consumption and production of electricity.

Nine rivers with possible use for hydropower generation were analyzed according to the scenarios of future climate change: Reventazón, Pacuare, Parrita, Naranjo, Térraba, Savegre, San Carlos, Sixaola and Matina.

In all rivers, the susceptibility to erosion, landslides and avalanches was assessed, which had increased because of increased rainfall due to climate change.

The Reventazón, Pacuare, Parrita, San Carlos, Sixaola and Matina rivers are unsafe due to erosion and landslides, while the Terraba, Savegre and Naranjo rivers will be less affected by these events. It is essential to establish a land use plan for rivers, with particular emphasis in its upper and middle sections in order to prioritize the restoration of forests in areas suitable for forestry, the protection of existing forest areas and the stabilization of the various sites where active landslides occur.

In the case of wind energy it was found that when El Niño phenomenon was present, there was an increase in wind generation in the months of January, July, August, September and October.

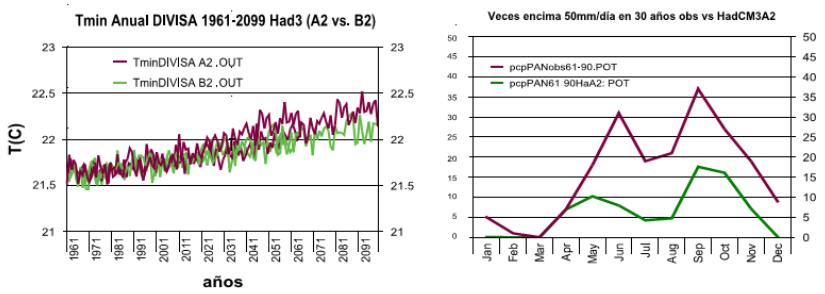
On an annual basis when El Niño was present, 6% more power generation was obtained. Therefore, one measure to consider is the proper design of dams and sediment removal systems, since otherwise the availability of hydroelectric plants may be affected due to increased runoff, which could reduce the reliability of the generation system.

Panama[12]

Climate change scenarios have been generated focusing on the provinces of Veraguas, Coclé and Herrera, in the central region of the country. Based on modeling we can infer that climate in the regions studied has undergone changes with respect to temperature and rainfall regimes. In the future, temperature is expected to be 1°C to 4°C warmer, with greater tendency toward 2°C to 3°C. Precipitation will also present changes ranging from a 10% increase to a 10% decrease.

Figure No. 8: Temperature and rainfall scenarios for Panama

[12] ANAM (National Environment Authority) (2011), Panama. Second national communication to the United Nations Framework Convention on Climate Change, Panama, Panama.



Fuente: Autoridad Nacional del Ambiente (ANAM), *Informe final integrado de vulnerabilidad actual: Proyecto Fomento de las Capacidades para la Etapa II de Adaptación al Cambio Climático en Centroamérica, México y Cuba*, Panamá 2006.

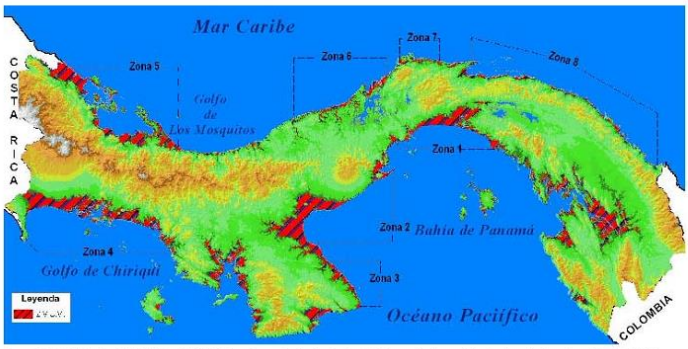
The PCN [13] identified that the occurrence of climate phenomena such as El Niño and La Niña pose a threat for national agriculture, particularly, in provinces of the central region, including Coclé and Los Santos, where 85% of the national rice production takes place. These provinces are deemed to be sensitive and vulnerable as they are exposed to greater variations in the face of intense rainfall, dry spells and floods. In the 2006-2007 period, a long-lasting drought affected 4,900 rice-growing hectares, in the provinces of Herrera, Los Santos, Coclé and Panamá, causing millions in losses.

The PCN produced a physical map of the Panama Republic which allowed to identify eight big priority areas on account of their vulnerability. The elevation reference value from the sea level to identify coastal vulnerability is of 20 m above sea level or less. This elevation value indicates high vulnerability in projections of sea level variations. Under an emission scenario of high climate sensitivity, sea level is estimated to rise at about 0.95 cm/year. At this rate and considering a rise subject to a linear trend, sea level is estimated to rise by about 9.5 cm in 2010, by 40.4 cm in 2050, and by 93.5 cm in 2100. Uncertainty levels throw rise variations from 0.15 cm/year to 0.95 cm/year, in minimum emission scenarios with low climate sensitivity and in maximum emission scenarios with high climate sensitivity, respectively.

Overall, adult population of towns located in the studied coastal sites perceive a threat on account of an increasing sea transgression onto the coast. This condition, together with intense rain events and high tides, cause more flooding (ANAM 2007b).

[13] First National Communication.

PANAMÁ: ZONAS DE VULNERABILIDAD COSTERA DEFINIDAS PRINCIPALMENTE POR LA ELEVACIÓN DEL SUELO RESPECTO DEL NIVEL DEL MAR



Fuente: Autoridad Nacional del Ambiente (ANAM), *Primera Comunicación Nacional ante la Convención Marco de las Naciones Unidas sobre el Cambio Climático (CMNUCC)*, Panamá, 2000.

Based on the above, and to enhance Panama's resilience and incorporate adaptation to climate change in the integrated management of natural resources, the strategic lines of action to be followed in the face of climate change entail the following, among other things:

- Strengthen the individual and institutional capacities on the environment issue and their relation with climate change, adaptation and mitigation. Mainly, for all decision-makers at all levels of the governmental structure.
- Strengthen institution-building capacity, enhance public and private interest and political goodwill. Across national and local government levels, cope with the problem in a coordinated manner together with local associations, unions, universities and private initiatives, among others, by fixing efficient communication channels and re-defining roles and responsibilities regarding the environment.
- Overcome the lack of coordination among institutions by the actors involved, including the national governmental levels, for better executing and monitoring sustainable development oriented national policy and regulatory and strategic instruments.
- Provide more monitoring and support to the efforts and initiatives previously established to attain sustainable actions oriented towards sustainable development.
- Exert greater leadership, communication and coordination efforts with the civil society and other actors such as cooperation agencies and nongovernmental organizations, with the purpose of organizing actions and initiatives in an integrated and inclusive manner to efficiently address the problem.
- Strengthen the different national management tools such as the National Environment Strategy (ENA), through national plans involving climate change and sustainable management of the environment, executed in a coordinated manner to ensure investment and resources for its sustainability.

- Promote programs with an integrated agenda, which is consistent with the national development policy, with the purpose of better positioning Panama in the international community, promoting sustainable management, conservation and use of natural resources, goods and services.
- Promote the development of technological and scientific research at national level, providing innovating supplies for their incorporation.

Lastly, it is worth stressing that the above represents tasks and responsibilities in benefit of the national development and in favor of the environment. Emphasis on the consideration of climate change as a guiding principle must be taken into account in potentially strategic sectors for national growth, given its relevance for the current economy, such as: energy, sustainable agriculture and food security, environmental education, territorial planning and management, maritime resources, sustainable tourism, water resources integrated management, health and transport.

Dominican Republic

The Dominican Republic has the characteristics of a tropical climate, influenced by various geographical factors, such as: trade winds from the North, Northwest and Northeast, and the winds from the Caribbean Sea; in the East, South and Southeast parts of the country, equatorial currents from the North and South, due to their high temperatures and humidity; the temperature of the seas that surround it; the large contrasts between slopes; and the migratory phenomena that affect it during the year.
Also, its relative closeness to North America places it within reach of the cold masses of air that descend in winter on the central parts of the United States which, when reaching the country, determine the occurrence of low temperatures and rain, a phenomenon known as “Northerly”.

This influence of the trade winds course, the complex mountain system, the steep climate variations combines to produce great variations or microclimates, from dry-steppe to warm-humid, the most common being humid-tropical from the grasslands; humid-tropical from the forests; and warm-humid. Also, latitude and the prevalent pressure systems, influenced by the mid-Atlantic system which contains high pressure, make the climate similar to that of other Greater Antilles (Cuba, Jamaica, and Puerto Rico).

Average temperature during the year is 25.5 degrees Centigrade; but the large variations of the mountain system mark the differences, between 28 and 26 degrees Centigrade in the lowest areas, and up to 22 to 18 degrees Centigrade in the higher locations of the country.
Within the distribution of rainfall there are, normally, three rainy seasons: frontal season (November-April), convective season (May-July) and hurricane season (August-October). Spatial distribution, within the regime of rains, is very complex depending on

the orography (relief). The average annual rainfall for the entire country is 1,500 mm, with variations that go from 350 mm in the Hoya de Enriquillo up to 2,743 mm a year in the eastern mountain range.

The natural risks that the country encounters are basically linked to extreme climatic events, such as hurricanes, tropical storms, floods, droughts, forest fires, tornadoes and hail.

In vulnerability studies, the possible effects of climate change on the coastal tourist area in the Eastern region~~,~~ are concentrated on the Rio Haina basin, which contributes 25% of water to the capital city of Santo Domingo; on health, due to the impact of dengue and malaria; on the city of Santo Domingo and other towns; on biodiversity, if one takes into account the protected areas; on agriculture and food security; and the impacts from the use of the soil and forests within Los Haitises National Park, they are all taken into account. In each one of those studies adaptation measures are required, and those measures demand economic resources in the short term, which the country is not able to contribute, thereby requiring international technical and financial assistance in order to reduce vulnerability and the effects of climate change.

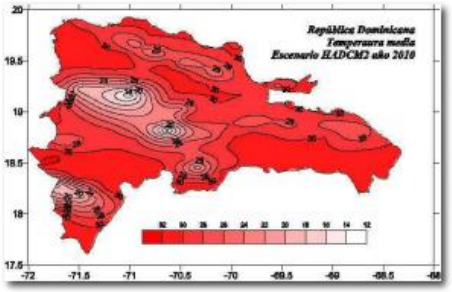
According to the first National Climate Change Strategy[14], three emission scenarios are considered in order to analyze the future climate parameters: one weak IS92c, one moderate IS92a and one strong IS92f, to cover a wide range of uncertainties relating to emissions of greenhouse gases into the atmosphere and by combining these three scenarios with three models of general circulation (MCG) collecting the conditions of extreme and average precipitation with high temperature values.

Several models have shown strong evidence of decreases in precipitation. Precipitation is expected to decrease to 1,137 mm by 2030 (11% decrease from 2010), to 976 mm (23% decrease from 2010) and to 543 mm (57% decrease from 2100).

There are no clear trends available for extreme events. The climate scenarios, basin and nationwide, projected a warming of 1°C continuous between now and 2050, and projected a likely decrease in precipitation. Nationally, temperatures could increase up to 4.2°C. End-of-century precipitation trends are less clear, but tend to be negative and extreme events, although they are still difficult to project. Meteorological and climatic data continue to be irregular and difficult to access, which makes the information and projections of the climate, as well as risk studies, less reliable.

[14] National Adaptation Strategy and Action Plan (NASAP) to Climate Change in the Agricultural sector, Dominican Republic 2014-2020

Figure No. 9: Predicted changes in temperature and rainfall in Dominican Republic



Año	2010	2030	2050	2100
Temperatura °C	26.2	26.9	27.7	29.6
Precipitación mm	1277.0	1137.0	976.0	543.0

Temperature is likely to rise to 26.2°C by the year 2010, 26.9°C by 2030, to 27.7°C by 2050 and 29.6°C by 2100.

According to the scenarios, sea level is expected to increase 1.47-13.55 cm in 2010, 3.77-26.73 cm in 2030, 6.53-47.27 cm in 2050 and 12.71-105.67 cm in 2100, depending on the scenarios (from the optimistic to the pessimistic).

The rise of the sea level may have as consequence the intrusion of salt water, either through the estuaries of the rivers during the high tide, or directly affecting groundwater basins, which can impact water quality in aquifers that have hydrological continuity with the sea, affecting the quality of water for human use and agriculture. Source: National hydrogeological study (INDRHI -Aquater, 2000).

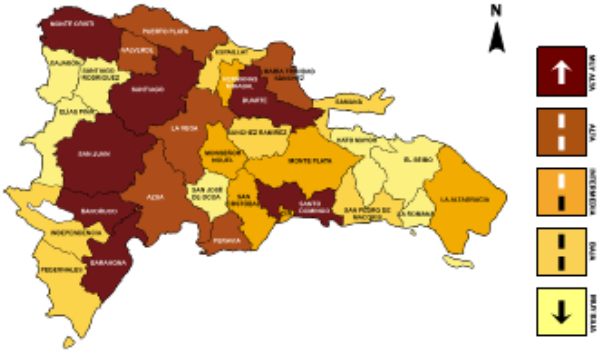
The ~~increase of the~~ sea level rise has several negative impacts ranging from submersion of the low coasts, increase in coastal erosion with major impact on beaches, saline intrusion and increased risk of flooding, changes in the characteristics of the waves, the storm waves increase, change in the transportation and deposition of sediments and change on coastal and marine ecosystems.

The provinces that present high levels of vulnerability of agriculture to drought are located in the West, South-West and East of the country, with Elías Piña, Independencia, Pedernales and El Seibo provinces being shown by all models as highly vulnerable. Followed by Barahona and Bahoruco.

The report on Investment and Financial Flows for adaptation to climate change, with regard to the water sector in the Dominican Republic, recommended the following adaptation measures : adoption of water resource integrated management as a State policy, under a radical paradigm shift, from the model of supply management on which the baseline scenario rests, towards a model of integrated demand management. In this sense, the stage of adaptation is articulated around three main focuses, namely:

- Focus 1: integrated management of water resources, under the paradigm of multiple-use demand management;
- Focus 2: protection and conservation of the environmental services of forests and aquatic ecosystems (ecosystem approach) and
- Focus 3: reverse the loss of quality of Dominican water bodies, raising the coverage of domestic, industrial and agricultural wastewater treatment.

Figure No. 10 Agriculture and floods in Dominican Republic



c) Agricultural sector and climate change

Agriculture in Central America is especially sensitive to weather- and climate-related factors because of these countries' geographical location and their socioeconomic and technological characteristics. It is the production sector that has sustained the greatest losses as a result of extreme weather events in recent decades. This is particularly

serious as the agricultural sector accounts for just 9% of the sub region's GDP, but employs 30% of the working population and produces key inputs for the agro industrial.

Initial estimates based on climate change scenarios suggest that grain production could drop significantly during this century (decreases in yields of up to about 35%, 43% and 50% for maize, beans and rice, respectively, by the end of the century under the A2 scenario and of 17%, 19% and 30% under the B2 scenario relative to the yields of the last decade, assuming the absence of adaptive measures). These potential losses would have a direct impact on producers, most of whom operate as family businesses at subsistence levels, but they would also impact food security, poverty and the degree of dependence on grain imports, which has already been rising over the past three decades (ECLAC, 2013d).

The available evidence for Central America indicates that environmental degradation and the destruction of biodiversity are processes that are already in full sway and that will very probably become more marked as climate change progresses. For example, the potential biodiversity index (PBI) for Central America points to a reduction of approximately 13% during this century as a result of changes in land use (without climate change). Climate change is projected to boost this loss to something between 33% and 58% (respectively, for scenarios B2 and A2) by the end of the century (see map III.1) (ECLAC, 2011b).

Other processes that generate large impacts on the agricultural sector are those related to plagues: epidemic diseases provoked by the pine beetle ("gorgojo") or the coffee rust ("roya"), have already caused irreparable damage to woods and plantations. These plagues are having greater impact with climate change, since they are related to longer drought periods (in the case of pine beetle) and with excessive humidity due to intense rainfall (coffe rust).

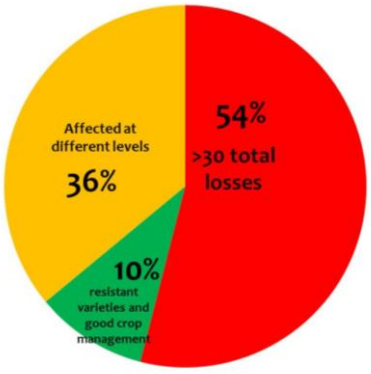
Coffee rust

Since 1990, coffee rust has become endemic in all major coffee-producing countries[15]. In 2012, there was a major increase in coffee rust across ten Latin American and Caribbean countries. The disease became an epidemic and the resulting crop losses pushed coffee prices to an all-time high amid concerns for supply. One of the most affected countries has been Guatemala, where coffee crops were ruined by coffee rust, and a state of emergency was declared in February 2013[16]. The average incidence of rust in El Salvador, until May 2015, reached 50%, and has affected 75% of coffee plantations[17].

[15] Waller, J.M.; Bigger, M.; Hillocks, R.J. (2007). Coffee Pests, Dieases & Their Management. CABI
[16] News, B. B. C. "Guatemala's coffee rust 'emergency' devastates crops". Retrieved 30 August 2016.
[17] La Prensa Gráfica. "El Salvador is the most affected by rust at the regional level". Retrieved 30 August, 2016.

15% of world coffee is produced in the OIRSA[18] Region (México, Guatemala, El Salvador, Honduras, Nicaragua, Costa Rica, Panamá and Dominican Republic). Loss estimates of the 2012 epidemic are shown in Figure below.

Figure No. 11. Impact of coffee rust in the OIRSA Region, in 2012



Source: www.oirsa.org

Drought makes that coffee plants let fall the fruits when they are still green and the leaves have a faded appearance. In addition, drought prevents the coffee plants absorb fertilizer and agricultural chemicals (such as fungicides against rust) and they have less effect.

PROMECAFE has warned that if no adaptation measures to climate change are taken, 80% of coffee plantations in Central America are compromised.

In late June, the Indigenous and Peasant Coordination Association for Community Agroforestry in Central America said that climate change will force in a few years, to sow good quality coffee about 300 meters higher than now.

Pine beetle

Central American pine forests are threatened periodically by a variety of natural and human-induced depredations: hurricanes, wildfires, shifting agriculture, and forest pest outbreaks.

[18] Regional International Agency for Agricultural Health: http://www.oirsa.org/

~~In 2000 and 2001, a region-wide outbreak of native pine bark beetles of the genus *Dendroctonus* occurred in Central America, with major impacts in Belize, Nicaragua, Honduras, and Guatemala.~~

In Honduras from 1962-1965, *D. frontalis* destroyed more than 2 million ha. of mature pine forests. Due to the magnitude of the outbreak, coupled with the lack of roads, trained personnel, and financing, little direct control was carried out. The outbreak eventually collapsed of natural causes, but not before devastating nearly two-thirds of this country's old-growth pine forests.

Between 1999 and 2002, more than 75,000 ha were destroyed by pine bark beetle, with major losses in Belize, Nicaragua, Honduras and Guatemala[19].

Impacts of pine bark beetle in Honduras
Source: www.lanoticia.hn

Cold tolerance for these insects is greatest during winter months, and lowest during periods of glycerol synthesis an catabolism in autumn and spring respectively, suggesting a direct correlation between increasing minimum temperatures associated with climate change and a reduction in cold-induces beetle mortality.

There are also indirect effects of climate change on dark beetles population associated with host trees vigor and host abundance.

~~e~~)d) Agricultural sector and food production overview

[19] Billings, RF (2002). Pine Bark Beetle Outbreaks in Central America: Impact and Management.

The agricultural sector contribution to the GDP of countries within the region, measured by the national accounts, represents about 20% in Guatemala and Nicaragua, between 10% and 15% in Honduras and El Salvador and less than 10% of GDP in Costa Rica and Panama while for the Dominican Republic it represents 8.9% of total GDP.

Family agriculture produces about 50% of the total agricultural production of the region's countries and attains more than 56% in countries such as Honduras and Panama. In terms of food, Family Agriculture produces over 70% of Central American food. (FAO 2012).

The primary agricultural sector is closely linked to other sectors such as agribusiness and food production through commercial agricultural production chains in sectors such as coffee, bananas, sugar, oils, flours, concentrates, fruit, meat, dairy, fisheries and aquaculture, among others. If the agricultural sector is considered as a whole, its contribution to the GDP is much more significant, as an example, in countries such as Guatemala, Honduras and Nicaragua the sector as a whole contributes 30% of the GDP.

The agricultural sector is also important in terms of its contribution to intra- and extra-regional trade. Since 1990s, intra-regional trade has significantly grown, with the agricultural sector having an outstanding share.

Increased yields from family agriculture as a result of agricultural sectoral policies (mainly innovation and technology) would allow to increase the availability of food in a region with a domestic supply highly dependent on importing. This, in turn, would reduce the influence of external factors (such as the increase in prices of agricultural supplies, price fluctuation, commercial negotiations, climate change, among others) in the region's food availability.

~~f~~e) Land use

Agriculture, livestock and forestry activity still are the foundations of the economy in Central American countries. However, their use is incorrect and deficient. 51.2% of the surface area of Central America is over-used and 21.7% is under-used. As a result, only 27% of the surface area is correctly used. The overuse consists in the logging of woodlands in very steep slopes with high precipitation and fragile soils in the face of erosion processes, which cause serious environmental problems mainly impacting the "campesina" population of little economic resources. The tendency in Latin America of expanding the lands devoted to agriculture and livestock and reducing tree coverage occurs in Central America as well. However, Central America differs from the entire region in that whereas the remaining Latin American countries have managed to increase their agricultural production through more intensive land use, agriculture in Central America has grown based on the expansion of lands for pastures and crops.

	Country	2013
Percentage of agricultural lands	*(percentage of land surface area)*	
Percentage of the territory devoted to agricultural activities.	Costa Rica	35.6
	El Salvador	76.4
	Guatemala	34.7
	Honduras	28.9
	Nicaragua	42.1
	Panama	30.4
	Dominican Republic	48.7

Source:http://datos.bancomundial.org/indicador/AG.LND.AGRI.ZS?name_desc=false. World Bank

Agricultural Production

The agricultural activity in Central America has been the most important source of wealth ever. Central America has fantastic soil and favorable climate for growing tropical products.

Agricultural practices can be classified into two types:

- One devoted to food production for the population (self-consumption). Chief among them there is corn, rice, cassava, beans, and sweet potatoes.
- And then there is plantation agriculture devoted to exports with high yields, highly modernized in terms of technology and huge capital investments. Chief among them there are sugar cane, plantains, coffee and tobacco. To a less extent, cocoa and pineapple.

Foreign capital has boosted tropical plantation agriculture with the following characteristics:

- Owners of the plantations, machinery, means of transport, warehouses, etc. are foreigners backed by their countries of origin.
- Normally, these are monocultures which also constitute monopolies~~, thus harming the country's economies~~.
- The technical and administrative staff is from overseas, and only workforce is local.
- In some areas, tropical agriculture is not very advanced, since the use of machinery is very restricted, and frequently only machetes or hoes are used.
- Products intended for exporting are subject to prices of the international market. Where there is any excess in the supply, prices are reduced in producing countries and cause economic crises.
- The domestic market is frail, and frequently these countries tend to import food given that the lands mostly devoted to plantations.
- The main crops of the area include: coffee, cocoa, plantains, sugar cane and tobacco.

- Coffee: main crop grow in El Salvador, Guatemala, Costa Rica, Honduras and Nicaragua. In this case, the production techniques have been perfected. Furthermore, volcanoes enrich the soil with ashes favoring this crop.

- Cocoa: This is the second most important product in the Dominican Republic and Costa Rica.

- Plantains: Guatemala once was among the biggest producers of bananas, but upon nationalization of North American companies controlling this monoculture, the government boosted other products, mainly cotton and rubber. Currently, the leading countries in this area are: Panama and Dominican Republic and their main market is the United States.

- Sugar cane: This is obtained in Dominican Republic. It is important as Central America and the Caribbean occupy an important place in worldwide production (34%).

- Tobacco: produced in Dominican Republic. Trade is not that important as in the previous cases.

Livestock

Livestock has not been massively developed in this region due to shortage of pastures, and no technical advances have been applied to solve problems of tropical farming.

Fishing

Fishing is not quite a relevant commercial activity in Central America. It is more related to subsistence and sports, with the exception of Panama. This is due to the relative shortage of species in tropical waters for plankton, main feed for fish, is scarce.

Forestry Activity

In Central America this activity is not economically relevant given that most of its forests have been transformed into plantations, and those still remaining contain numerous species entangled, which makes it difficult to exploit. In Guatemala, rubber is thoroughly exploited.

Organic Production[20]

[20] FAO.org

Since the 1980s, food organic production has developed in the region. This market with demanding consumers and increasingly larger demand worldwide provides a huge opportunity for small producers who traditionally do not use chemicals.

Most of the certified and transitioning farms in the Central American region have less than average 5 hectares. That is to say, organic production in Central America mostly comprises small producers, integrated to the local and international market.

The following table shows the organic products which each country of the region markets domestically and internationally.

Table No. 7. Main organic products in Central America, per target market
(D = domestic, I = International)

Product	Guatemala		Honduras		El Salvador		Nicaragua		Costa Rica		Panama	
	~~Domestic~~ D	~~Internat~~ I	~~Domestic~~ D	~~Internat~~ I	~~Domestic~~ D	~~Internat~~ I	~~Domestic~~ D	~~Internat~~ I	~~Domestic~~ D	~~Internat~~ I	~~Domestic~~ D	~~Internat~~ I
Coffee	X	X		X	X	X	X		X	X	X	
Bananas		X		X			X		X	X	X	
Cocoa		X		X	X				X	X		X
Sesame		X		X		X	X					
Pineapple	X		X	X	X		X		X	X	X	
Cashew	X					X	X	X				
Cotton								X				
Cardamom		X										
Honey	X	X				X	X	X	X		X	
Añil					X							
Sugar	X	X	X		X	X	X		X	X	X	
Blackberry	X		X		X				X	X		
Medicinal plants	X	X			X		X	X	X		X	
Oranges	X		X		X		X		X	X	X	
Orchard products	X	X	X		X	X	X		X		X	
Ginger	X			X			X		X	X		
Pepper		X		X			X		X			
Other fruits	X			X	X		X		X	X	X	
Cattle							X					

Agricultural production by country

i. ***Guatemala***

In Guatemala, the agricultural activity is the most important source of income. Guatemala has good soil quality and favorable climate for growing tropical products. Agriculture can be devoted to food production for the domestic market: corn, rice, cassava, beans and sweet potatoes. And then there is plantation agriculture devoted to exports with high rates of return, which are highly modernized in terms of technology and huge capital investments: sugar cane, plantains and coffee.

Foreign capital has boosted tropical plantation agriculture. The main crops of the area include: coffee, cocoa, plantains, sugar cane and tobacco. Meanwhile, Guatemala is the first worldwide exporter of cardamom.

ii. ***El Salvador***

Agrarian production is still highly marked by a very strong distinction between products for trading and products for subsistence. Under the *latifundio* [large production estates] regime, products are grown for exporting, mainly coffee and cotton, as well as corn. *Minifundios*, of reduced sized and insufficient productivity, families of *campesinos* grow corn, rice, wheat and green beans, for domestic consumption.

iii. ***Honduras***

The economy of Honduras is mainly based on agriculture, with products for export such as coffee, banana, African palm tree, sugar cane, etc. Bananas and coffee are the main export products, whereas Cuban cigars are not so renowned internationally in spite of being of very good quality. Also, industry, livestock production, trade, mining and tourism constitute a big boost to the country's economy.

To a lesser extent and depending on the specific department, livestock production can be found with cattle, horse, pork, goat and poultry breeding, growing of potatoes, cabbage, *maicillo*, corn, cassava or *yuca*, *camote* or sweet potato, sorghum, rice, *pataste* or pear squash, sesame and a wide variety of fruits, fishing and even shrimps.

iv. Costa Rica

Costa Rica is still basically an agricultural country. 40% of the national territory is used in agriculture mainly coffee and bananas. Other relevant products are: organic vegetables, fruits, cocoa, sugar cane, corn, rice, sorghum, grain, potatoes, pineapple, tobacco, cotton, beans, broad beans, beef and wood for construction. Banana plantations are found mostly in the hands of independent landowners and a large portion of the coffee growing farms are not of large extension, which has given rise to the existence of a broad middle-class. Cattle is the main livestock sector, followed by pork and poultry.

Small and medium sized companies are devoted to the drying of coffee, the sawing of wood and the production of cheese, beer and liquors.

Also, tourist ports and complexes of the Pacific are the gateway to some of the best deep fishing places worldwide, whereas the channels and rivers of the North Atlantic coastline are famous for world-class fishing of "snoop" and "tarpon".

v. Panama

Even though international trade is the country's main economic activity, the agricultural sector is highly relevant for Panama's social and economic development. So far, agriculture has not been a well organized activity, except for some products for export such as bananas, sugar, coffee, and cocoa. The largest portion of the agricultural activity for domestic consumption is carried out by small and medium sized producers whose economy is of the subsistence type, unlike plantation agriculture, where production goes to the domestic and export markets. The agricultural activity is the production platform of the country's regions that are not integrated to the service-based economy which prevails in Panama, constituting the main source of jobs and income for rural population, and which represents 30% of the economically active population. Out of the above population, 20% works in the livestock sector due to the extensive farming system prevailing in this activity. According to the 1980 census, there are approximately 153,194 agricultural farms with a total surface area of 2,258,557 ha planted.

Panama's main agricultural activity is the production of bananas, which are grown nation-wide in suitable areas. This production is significant due to its exporting. Sugar production, though depressed on account of international low prices, remains one of the most important products for export. It is produced mainly in the central provinces. Coffee and cocoa are also export-oriented products, mainly produced in the central cordillera area and in areas with the greatest relative humidity, respectively. Cereal and grain production for domestic consumption is deficient. That is why the importing of rice, corn and bean is required. The main rice producing provinces are Chiriquí, Coclé, Veraguas and Herrera. Bejuco is mainly produced in the province of Chiriquí and gandú, in the provinces of Veraguas and Panama. Other products such as bell peppers, cabbages, lettuce, tomatoes, carrots, beetroots, cucumbers and pear squashes are produced at very small scale, mainly in the provinces of Chiriquí, Herrera and Los Santos. Chief among the permanent crops there are pineapples, oranges, passion fruits, coffee, cocoa, papayas, avocados, lemons, grapefruit, *guayaba*, cashews, bananas and plantains. Most of them are distributed across all production areas.

Livestock production is extensive and rudimentary, with little technology, focused on the production of livestock cattle for domestic consumption (99%) and export, covering 74%

of the lands available for such activity. Pork production is carried out in a semi-intensive and extensive in almost all regions of the country, solely devoted to domestic consumption. Poultry is conducted by three large companies, which generate almost 70% of the country's total production. The rest is in the hands of small producers distributing in almost all regions. Chicken meat production is solely used for national consumption.

Panama is a country with great fishing potential including a wide variety of species, including sea fish for industrial use (anchoveta, herring) and fresh consumption, shrimps, lobsters, bivalve mollusks, octopuses, squids and turtles. The development of fishing has been playing an important role in the country's socio economy, although it occupies a secondary position within the context, given that the national economy is essentially service-oriented.

vi. Dominican Republic

In the Dominican Republic, the agricultural sector encompasses agriculture, farming, silvicultural and fishing sub-sectors, and its contribution to the national production is based on the production of cereals, traditional export products (cane, tobacco, coffee, cocoa), oil-bearing crops, textile (cotton, pita fiber), legumes, tubers, fruits, orchard vegetables, and miscellaneous products.

The main agricultural products are: sugar cane, coffee, cocoa, tobacco, rice, products from the orchard, beans, meat and eggs.

At the beginning of 1980s, work began in organic production in the Dominican Republic. By mid-1990s production was expanding, and today, it is an important component of the agricultural sector. Bananas, cocoa, and coffee are mainly traded.

~~g~~)*f)* ***Relevance of MSMEs in agricultural sector.***

As mentioned before, in Central America and the Dominican Republic, there are almost 2.1 million agricultural small production units or MSMEs of 5 hectares or less, many of them considered vulnerable in the face of climate change, pests and diseases, and market price instability.

Indeed, the production area is characterized by low productivity and little diversification, losses on account of droughts and floods, absence of product quality controls and standardization, high transportation and logistics costs, low investment in resource and development: low technological innovation and adaptation, not enough qualified staff and limited managerial capacity; constraints in the work market: high formalization costs, social and cultural problems, informality, corruption, lack of trust, among others.

In Latin America, micro-sized enterprises represent 85% of the facilities, SMEs, 9%, and large-sized enterprises, roughly 6%.

MSMEs push the economic growth in the Region. Some relevant data about MSMEs in the Region are highlighted below[21]:

- There are about half a million SMEs (SMEs with 5 to 200 employees).
- Companies are concentrated in trade and services (activities easier entry and exit and low productivity).
- Microenterprise is the largest group of companies in the region (90% or more).
- They are generators of growth for all economies.
- They are important generators of jobs and local development in terms of wealth creation and entrepreneurial culture as well as the implementation of new technologies and innovations.
- The SMEs form the basis for moving from a model of comparative advantage towards a model of competitive advantage.

In Guatemala, agriculture and trade prevail within the productive structure of the country and in those sectors MSMEs occupy 54% of the total, and most of the activity in microenterprises is related agriculture, with 38.7% of workers. In the case of small business agriculture related activities reach 16.5%. Finally, agriculture midsize businesses become relevant, occupying 24.6% of workers.

In El Salvador, the distribution of MSMEs by economic sector shows that 86.98% are engaged in trade and services, followed by 11.54% dedicated industry.

The Chamber of Commerce and Industry of Cortes (CCIC) of Honduras, affirms that about 1,800 MSMEs are affiliates to the organization. They are located throughout the north of the country, especially in San Pedro Sula. They are mainly engaged in the services and trade sector.

During the last period, Nicaraguan MSMEs report an increased growth in their financial balance which according to AMCHAM and COSEP is attributed to the dynamism this sector has shown due to following factors: reduced time of starting a business, macroeconomic stability, high level of public safety and government-business consultation private-unions.

[21] Based on “Assessment of SMEs in Central America”. Revista SUMMA, July 2015.

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In the case of Costa Rican MSMEs, they have had to address internal factors arising from the nature of the course of business and external factors that arise from the effects of globalization on the economy and business competition.

In Panama, records show that there are currently 49,979 micro, 6,751 small and 1,558 medium-sized enterprises. The majority of these MSMEs economic activities are trade and services, who represents 40% and 25% respectively. Agriculture sector is the third economic activity who shows more potential for small and medium enterprises. This MSMEs creates jobs for more than 60% of the economically active population.

In the Dominican Republic, there are 1.4 million MSMEs established who represents 99% of the economic structure of the country. These MSMEs contribute with the 38.6% of the national income, and creates more than 2 million jobs who represents the 54.4% of the economically active population. In the country there are approximately 224,173 agricultural MSMES.

~~h~~)g) General tendencies in the financial sector in the promotion of MSMEs

i. Evolution of the competency in the financial sector assisting the MSMEs

The MSME sector in Central America is characterized by a common purpose, which is to substantially boost the region's economic growth. The MSME sector represents over 90% of the business structure of the region and it is estimated to contribute between 20% and 50% of the GDP.

The importance of this sector is worth stressing where 94% of the business sector in Costa Rica comprises MSMEs; in Guatemala they generate over 4,500,000 of jobs, whereas in Honduras, these types of businesses total more than 127,000.

As a result, the Financial Sector has shown a significant interest in this market portion. Financial Institutions have increased their portfolio of financial products and services available for the MSMEs, with the purpose of enabling access to credit and accelerating financial inclusion.

To promote an appropriate development of MSMEs, Central American countries are currently developing incentive strategies for this sector. In the case of Guatemala, the Deputy Minister of Development of MSMEs has programs focusing on competitiveness, entrepreneurship, productivity, as well as support to companies through access to loans, training and technical assistance, among others. Countries such as El Salvador and Honduras have shown the efforts made to improve the business climate for MSMEs fostering the increase of exports, associative work, and use of technologies.

All efforts to improve legal frameworks of the Central American countries, and to strengthen the endeavors, have led to face the lack of timely financing by means of the evolution of the Financial Sector, which has designed appropriate products to the needs for MSMEs using the technology as an ally for the search for commercial opportunities and financial management and fostering access to credit.

ii. Changes in the political framework, reforms in the field of bank supervision and legalization

Guatemala

As part of the Plan of Alliance for Prosperity in the Northern Triangle (Guatemala, El Salvador and Honduras), Guatemala, through the financing of loans, assisted 1,024 businessmen of MSMEs in the trading and industry, service, craftsmanship and agro-industry sectors. Guatemala has led the promotion in the legislative agenda for improved regulation and access to credit of MSMEs. As a result, in April, 2016, through executive order 25-2016, the Law on Microfinances was enacted, the purpose of which is to regulate the formation, authorization, merge, operation, services, suspension and liquidation of savings and loan microfinance companies and the investment and loan microfinances companies. This new regulation will help consolidate institutions and make them stronger. Presently, the legislative agenda is being pushed forward whereby four bills are to be discussed (law of stock exchange, bankruptcy, securities and law of savings and loans for cooperatives).

Honduras

In Honduras, the Presidential Program "Banca Solidaria" was created seeking to allocate 50,000 credits during 2015. This disposal of resources through the public banks boosted the economy of the MSMEs enabling access to solidary credit with technical assistance. During 2015, more than 4,000 micro businessmen and entrepreneurs received support through this initiative.

El Salvador

In turn, El Salvador has enacted the Law on Financial Inclusion creating the first Mutual Guarantee Fund Administration Company, thus promoting the bankarization of the population, together with the approval by the Assembly of a loan portfolio devoted to MSMEs for a sum of USD 100 million ad regulatory changes to foster the supply of credits to MSMEs, chief among them being the special program of BANDESAL known as "Banca Mujer". Through the latter, USD 4 million are expected to be allocated for businesses led by women to be developed in the last quarter of 2015.

Nicaragua

Bank "Produzcamos" is a public institution in Nicaragua which provides support to micro, small and medium businessmen, either individually or collectively, thus promoting entrepreneur development of MSMEs. Also, the Ministry of Promotion, Industry and Trade carries out the Program of Nicaraguan MSMEs Competitiveness Strengthening, by promoting products for export. In year 2015, the Nicaraguan Council of the Micro, Small and Medium Enterprise (CONIMIPYME) promoted the reform of Law No. 645 (Law of promotion and development of MSMEs) so as to allow equating the parameters of MSME classification and speed up the procedures to set up such businesses.

Costa Rica

In April 2015, the Ministry of Economy, Industry and Trade introduces the report "State of the art for MSMEs in Costa Rica". The report informed that there are 31,657 SMEs in Costa Rica, which represents 3% less as regards 2013. This information has given rise to the need to understand and characterize the MSMEs through a system of indicators generating information from time to time for the Government to undertake policies promoting the development by micro-enterprises. As a result of this situation, the Ministry of Economy, Industry and Trade of Costa Rica, in order to address the development of policies, programs and projects of support to the SME sector, articulated a public-private institutional network of over 50 institutions belonging to the governmental, academic, financial, guild sectors, among others to assist businessmen of MSMEs. Five added regional offices were created across the country to provide commercial support to micro-enterprises, known as CREAPYMES.

Dominican Republic

The Ministry of Industry and Trade (MIC), through its Deputy Minister of Promotion to the MSMEs and the Dominican Confederation of the Small and Medium Sized Enterprise (CODOPYME) signed a collaboration agreement in February 2016 to train and strengthen the levels of financial and accounting management of 240 firms of the provinces of Santo Domingo and San Cristobal, through the National Program of Financial Education for MSMEs.

During the first stage of execution of this initiative, intended to be replicated nation-wide, the beneficiary firms could learn to organize their finances in a manual, systematized manner. In addition, their businesses went into the banking system with the aid of commercial financial products intended to this sector.

The impact that this training and financial relation will have in these MSMEs consists in strengthening the use to which production loans are devoted, as well as the management and the growth that allows this approach of financing in the companies.

iii. Access to credit for rural MSMEs

Although previous sections show significant progress in favoring conditions for MSMEs in the region, rural MSMEs still face important challenges. The IDB carried out a study about Financial Inclusion in Latin America and the Caribbean[22] that ~~helped having~~ aserves as a comprehensive diagnosis of the actual ~~knowledge of the~~ situation of credit for the agricultural sector. Some of the main conclusions ~~are optimal for~~help to understand~~ing~~ the difficulties that are encountered by the target beneficiaries of this project.

Intermediary institutions

In Latin America and the Caribbean there are over 1,000 financial intermediaries including banks and non-banking institutions~~, to~~ and ~~the~~ excluding ~~exclusion of~~ cooperatives. There is also a wide array of institutional forms: banks, financial corporations, financing firms, mutual associations, cooperatives, amongst others.

The relevance of the various stakeholder types for financial inclusion constitutes unchartered territory, partly due to the absence of information in this regard.

The unregulated sector is also a topic with little analysis as part of the structure of the financial system, and in terms of scope for the purposes of financial inclusion. Upon analyzing the supply of micro-loans, for example, the picture of dimensions and quantity of stakeholders belonging to the unregulated sector for the purposes of supplying micro-loan shows that there are more than 700 institutions not regulated with a portfolio of over 5 billion Dollars.

Central America and the Dominican Republic

In the majority of Central American countries, credit to the agricultural sector accounts for roughly 3% of total credit offered by regulated financial systems (Costa Rica, El Salvador, Honduras, Panama, Dominican Republic), with a higher percentage in Guatemala (8%) and Nicaragua (10%). Even so, there is a significant number of microfinance institutions (MFIs) devoted to serving the rural sector that have a presence there, but they face the following problems: on the supply side, MFIs do not have permanent long-term financing, methodologies or trained employees to implement financial products and services that better meet client needs. On the other side, there is an unmet demand on the part of rural clients in terms of higher amounts of credit to invest in productive assets, longer term loans (between 26 and 48 months) and different modalities and mechanisms that facilitate the use of resources when necessary (i.e. line of credit).

[22] Trujillo, Verónica y Navajas, Sergio (2014). Financial Inclusion in Latin America and the Caribbean: Figures and trends. FOMIN, BID. Modified version January 2016.

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Agricultural credit

There is little information of regional or national levels that allow to properly size the actual and potential market as regards the agricultural sector. However, we can assert that agriculture is an important activity still today in economies of the region in terms of population participating in it as well as in relation to the country's economy. For example, it has been noticed that rural population of the 19 countries under analysis ranges between 20% and 40% of the total population, and is accompanied with high levels of rural poverty, above 40% in countries including Honduras and Panama.

The agricultural portfolio exceeds 77 billion dollars in Latin America and the Caribbean, representing over 5% of the portfolio of the regulated financial system in several countries. The following table provides information on the agricultural portfolio of the countries participating of this project.

Table No. 8 Agricultural portfolio of the participant countries

Country	Agricultural Portfolio				
	Agricultural portfolio as a share of the regulated financial system portfolio (%)	Agricultural portfolio as a share of GDP (%)	Balance in USD	Rural population (%)	Rural poverty (%)
Guatemala	5.95	1.85	1,085,244,078.95	49.40	22.50
El Salvador	3.33	0.17	41,768,174.07	32.30	17.10
Honduras	2.99	1.86	353,861,003.72	44.20	86.40
Nicaragua	11.14	3.61	416,174,695.49	40.50	23.70
Costa Rica	3.23	1.89	937,540,925.58	23.20	7.70
Panama	2.67	3.20	1,478,988,159.15	33.20	45.70
Dominican Republic	2.24	0.58	366,336,270.34	21.70	31.60
Total	**4.51**	**1.88**	**4,679,913,307.30**	**34.93**	**33.53**

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Source: selection of countries based on Table IV.5 of the referred report, V. Trujillo and S. Navajas, 2014. This report has used public information or information directly disclosed to the authors by the financial authorities of each country. Rural population information has been obtained from the World Bank's "World Development Indicators" and rural poverty information, from the "Socio-Economic Database for Latin America and the Caribbean" by CEDLAS and the World Bank.
Notes: (1) The agricultural portfolio in general comprises the agricultural loan, plus credit related to farming, fishing, silviculture and forestry activities. (2) The results shown in the 'Total' row derive from the simple addition of the figures per country.

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In the same vein, the Central American Agriculture Policy 2008-2017[23] also offers a view of the situation of the targeted beneficiaries. The content of the Policy was the result of an extensive process of exchanges among the public sector, the private sector and the civil society, both at the level of each individual Central American country and at the regional level. This process, which was spearheaded by the CAC, also had the support of regional and international organizations providing assistance to the regional agricultural sector. Some of the main statements of this policy are highlighted below.

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Small-scale enterprise-based agriculture

As regards small-scale agriculture conducted by business organizations, the document states the need for the measures of the Central American Agricultural Policy to acknowledge the specificities of the small-scale agricultural producers and to consider, when applicable, the instruments that allow to face the limited capabilities, the technological lagging, the little access to financing, the high exposure to risks and the frailty in the resource availability on the part of a substantial part of this sector.

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The Central American Agricultural Policy has intended to direct special attention to favoring the small-scale, enterprise-based agriculture, composed of agricultural production units and their market-oriented organizations of a small economic size, using mainly family workforce and diversified production systems with varied sources of income and limited access to services and assets, characterized by heterogeneity and territorial agglomeration.

It promotes insertion of small-scale agriculture in the markets, as well as its regional integration, by strengthening their organizations and associations to turn it into an attractive, profitable and sustainable sector, so as to contribute to achieve a greater level of human equal development for Central American rural population.

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[23] Central American Agriculture Policy, 2008-2017: A competitive and integrated agriculture for a global world / Central American Agricultural Council. – San José, Costa Rica: Consejo Agropecuario Centroamericano, 2007.

The above warrants defining differential instruments and measures to meet the specific conditions and requirements of the small-scale agricultural business and the rural territories where they are mostly located. Effective mechanisms must be established to allow the small-scale, enterprise-based agriculture to have access to public and private services, and this way improve their capabilities, ease up their competitive market insertion, and use natural resources in a sustainable manner.

Obstacles for the development of financial services

At the formulation and consultation phase of the Central American Agricultural Policy elements have been identified that constrain the development of financial services and risk management instruments in the rural areas, including but not limited to:

- The perception by the private sector, financial and non-financial, of the agricultural sector as a high risk.
- The little information available on the options and conditions of the existing financial services.
- The lack of financial instruments that accommodate the needs inherent to the agricultural activities.
- The absence of real estate as collateral, particularly for the small-scale producers.
- The weakness of the public entities from the agricultural sector in terms of financing to seek solutions in this area.
- The insufficient development of the risk insurance mechanisms.

Among the regional measures proposed in the Policy document, the promotion of enhanced rural financial services is worth mentioning apart.

As explained in the document, in spite of the wide array of actors in the financial system (private banks, development banks, insurance companies, cooperatives, NGOs, rural-oriented savings and loan associations, among others), there is little financial reach across the rural areas, characterized by the little presence of financial intermediaries. In addition, a high proportion of financial organizations present in the rural areas are frail and offer only low-quality credit or reduced range of services (not appropriate to meet the needs of the demand), and at an overall high cost, including transaction costs and rates of interest.

Furthermore, the financing granted by non-financial businesses is considerable within the chains, including agro-industry chain, machinery and equipment importers, and supermarkets, among others.

Given the above, the need to strengthen the capabilities of the ministries of agriculture to promote and influence the decision making has been established to allow the agricultural

sector to have greater access to financing, and thus make the necessary investments to enhance competitiveness and their productivity. Some of the key actions that must be developed include the following: i) promote greater presence of the financial system in the rural medium, ii) regulate the operation of non-banking rural financial intermediaries, and iii) develop standards for the intermediation of non-financial companies in the rural medium.

~~i)~~h) *Gender considerations vis-à-vis MSMEs in the agricultural sector*

According to FMICA[24], impacts from climate change will have significantly different effects on Central American women – and in some cases even more rigorous – given the fact that because of their high levels of discrimination-based vulnerability, women are among the most impoverished and uninformed sectors of the population.

According to UNDP[25], ~~G~~gender inequalities intersect with the risks and vulnerabilities associated with climate change. Their historical disadvantages, added to limited rights, limited access to resources, and limited participation in decision-making venues, makes women highly vulnerable to climate change. Climate change is likely to increase the existing gender disadvantage patterns ~~(Human Development Report, UNDP, 2007 in Aguilar, L., 2009)~~.

~~With regards to gender considerations vis-à-vis MSMEs in the agricultural sector, no statistics have been found. Therefore, in order to provide an approximation of this aspect, an analysis of the participation of women and men in the CAMBio project has been performed and included in the next section.~~

According to OXFAM International, in Latin America, 58 million women reside in the countryside. However, only 30% own agricultural fields and barely 5% have access to technical assistance, worldwide[26]. Rural and indigenous women play an important role in the face of climate change, particularly regarding food security of their households and their countries, and regarding adaptation to climate change. Impacts of this phenomenon affect everyone in different manners. However, gender-based discrimination puts women in a more vulnerable position in the face of such adverse effects. This is particularly true for rural and indigenous women, who are exposed to a greater extent due to their living conditions and marginalization.

[24] Gender and Climate Change: Central American Women's Contributions to Regional Climate Change Policies, June 2010. Women's Forum for Central American Integration, FMICA.

[25] Human Development Report, UNDP, 2007 in Aguilar, L., 2009

[26] OXFAM International: Rural women of Latin America and the Caribbean faced with climate change - https://www.oxfam.org/es/peru-brasil-nicaragua-cuba-mexico-bolivia-el-salvador-republica-dominicana/las-mujeres-rurales-de

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According to information from the Central American Network of Rural, Indigenous and Peasant Women (RECMURIC), in Central America, 41.4% of the total population is rural population, 49.4% of which are women who typically have limited autonomy, greater risk of having their rights stepped all over, limited land property, giving rise to poverty and social exclusion. According to this Network, only 15% of rural women would have access to land.

Production and reproduction activities

A study conducted under an agreement of technical cooperation IICA-IADB[27] has analyzed the organization of production and reproduction activities by food producing women in Central America and Panama. The results showed that the typical work day for the Costa Rican rural woman, serving production, reproduction and community roles, is of 16 hours/day. Women's participation in the agricultural sector depends not only on family structure and social class of their belonging, the number and age of children, the presence of other adults in the family, or whether they are the heads of household either permanently or temporarily, but also on the cultural, agricultural tradition, the crop pattern, and the technology used. The income from activities usually carried out by women is normally more regular than the income from extensive agriculture, perceived only once upon selling the harvest. Similar patterns are repeated across the region.

Gap between credit supply and demand

Next there follow some of the results of the study Rural Women and the Gap between Micro-loan Supply and Demand conducted in 2003[28] , the conclusions of which continue to apply.

According to this study, which intended to characterize the gap between microloan supply and demand for Central American rural women, the major factors that have traditionally prevented women from being economically and socially incorporated are:

- Women's contribution to the economy and society has traditionally gone unnoticed.
- There exists a set of social and cultural rules that have posed a barrier to women's development.
- Reproduction functions, almost entirely in their care, have limited their participation in the production sphere.

[27] G. Rodríguez, 1999. *Mujeres Productoras de Alimentos en Costa Rica. Tecnología y Comercialización. Programa de análisis de la política del sector agropecuario frente a la mujer productora de alimentos en Centroamérica y Panamá*. Convenio de cooperación técnica IICA/BID/ATN-SF-3893-RE

[28] *Mujeres Rurales y la Brecha entre Oferta y Demanda de Microcréditos: Los casos de Costa Rica y Nicaragua. Informe Final de Consultoría para el IICA y el BID*. J.A.J Karremans, P. Petry. San José, Costa Rica, Agosto 2003.

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This brings a series of consequences for rural women, who:

- Have limited access to production resources (land, money, technology).
- Have little access to loan and a strong tendency towards micro-loans.
- Normally achieve lower education and training levels than men.
- Have little entrepreneurial, organizational and financial experience.
- Conduct micro-business activities of lower profitability.
- Receive less attention in the definition of development programmes and plans.
- Have their work days overburdened (double or triple shifts).
- Feel dependent of men (guarantees, trading, handling of savings).

Access of micro-business women to micro-loan

As far as access to credit is concerned, women have been excluded from traditional financial systems due to a series of factors, chief amongst them are:

- Macro-economy policies orienting most of the funds to the agro-industrial sector, where relatively few women share in at a business level.
- Little interest from the traditional financial system to manage small credits, which entail high administrative costs, and in activities deemed of high risk.
- Lack of experience, both in the activity for which they require resources, and in the use and handling thereof (accounting, development of profitable projects, etc.)
- Absence of real estate as collateral, added to other demands regarding sums, installments, terms and credit lines, that do not conform to women's conditions and interests.
- Low levels of literacy, connected to a limited access to training services.
- A sexist culture where spouses or partners often take over the credits granted to women, or utilize the benefits, making it difficult for women to make production investments.

As a result, women have been forced to resort to informal sources of credit, from the family, friends and neighbors, and through their involvement in savings and credit organizations community wide (to wit, solidarity groups, rural savings associations, loan and saving cooperatives).

One aspect worth mentioning is the estimation that micro-businesses make up for over 80% of Latin American total businesses, average, creating jobs for approximately a fourth of the total number of employees. Also, micro-businesses appear to be seen by rural women as a common alternative to escape poverty, and a high percentage of them falls within this line, as compared with small and medium sized enterprises. So that the orientation towards micro-businesses becomes a feature to be taken into account when producing training tools, making sure they reach a vast population of potential female users and beneficiaries.

As regards access to credit by women with the purpose of making investments specifically to favor resilience in the face of climate variability, no precedents - and thus no studies - have been found. Therefore, in order to provide an approximation of this aspect, an analysis of the participation of women and men in the CAMBio project, as well as in the history of intermediation programs within CABEI, have been performed and included in the next section.

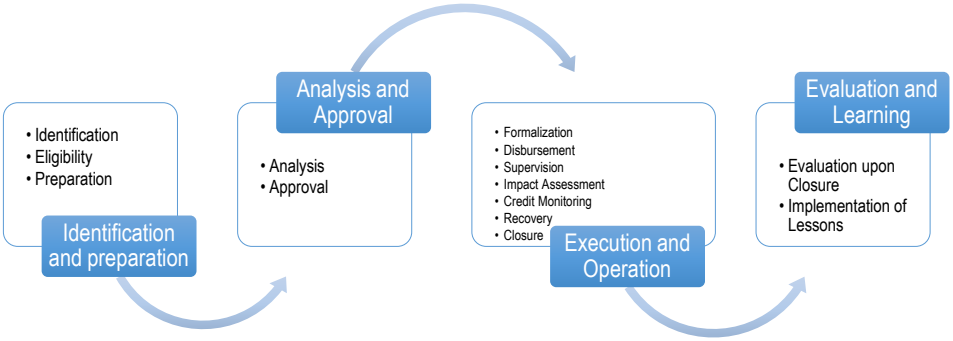
III. CABEI's financial intermediation scheme

a) CABEI's project cycle

Each one of the macro-processes of the Project Cycle incorporates elements of the sub-cycles of Impact in Development, Financial Sustainability, and p~~P~~rudent Risk Management ~~of Risk~~. This alignment is that allows CABEI to have a solid Cycle to ensure that its operations are oriented to fulfill the Bank's mission.

Such macro-processes are split into processes detailing the activities to be conducted for the achievement of the Bank's Mission and Vision, with impact upon development, financial sustainability and prudent management of risk as guiding principles; providing the beneficiaries a quality service, oriented to an ongoing improvement and institutional learning.

The macro-processes within the Project Cycle are herein below described in a flowchart:



1. Project Identification and Preparation:

The purpose of the Identification and Preparation macro-process is to identify projects that allow CABEI to have a significant impact over economic integration and upon a balanced economic and social development of Central American countries.

2. Project Analysis and Approval:
The purpose of the Analysis and Approval macro-process is to determine whether the projects identified are viable from the point of view of the impact upon development (*ex ante* evaluation) and their technical, legal, and financial feasibility. It is also to identify market factors that could affect the operation, and to make conclusions on the results of the application of the guiding principles, to wit Impact upon Development, Financial Sustainability and Prudent Management of Risk.

3. Project Implementation:
The macro-process of Implementation represents the materialization of the results proposed for the projects. It starts once the intervention is approved and encompasses execution and follow-up, including mid-term evaluation.

4. Project Evaluation and Learning:
The purpose of the macro-process of Evaluation and Learning is the strengthening of the CABEI as an institution subject to ongoing learning, by capitalizing on the lessons learned during execution of the entire Project Cycle. It is upon the end that these are gathered and integrated as a whole.

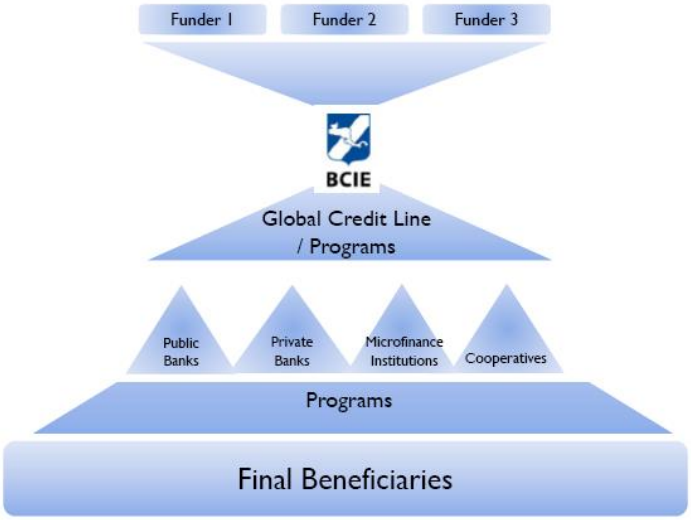
b) Project Cycle of Intermediated Credit

Currently, CABEI is the multilateral organization with the largest network of strategic intermediaries to distribute resources in the Central American region through a Global Credit Line (GCL). It is a network that comprises almost 100 intermediate financial institutions (IFIs), which may be the following: Public Banks, Private Banks, Finance institutions, Non-Banking Financial Institutions (IFNB, in Spanish) and Savings and Loan Cooperatives.

Currently, there are 15 Programs of Financial Intermediation, which are implemented through GCLs. These Programs cover support to MSMEs, education credit, social housing, productive sectors, and gender. At the moment the IFI has a GCL from CABEI, it may freely use any of the 15 Programs of Financial Intermediation, depending on the sector it assists or it wishes to assist, as well as the criteria for the use of such program.

The following figure explains CABEI´s model of execution of ~~a credit~~ intermediated credit.

Figure No.12. ~~-~~Network of financial intermediation



In the model of execution of intermediated credit, different sources of financing step in, and these provide specific guidelines for resource execution. For such execution, CABEI is underpinned by a network of Financial Intermediaries providing it with access to a Global Credit Line (GCL). Such intermediaries may be private or public banks, microfinance companies or cooperatives.

The GCL consists in a revolving credit quota that any IFI may access through different disbursements under financial intermediation programs implemented by CABEI, pursuant to such IFI financing needs.

The IFIs, through the GCLs, offer financing to the final beneficiaries according to the programs and criteria approved by CABEI. Access to such programs is evaluated in terms of the eligibility criteria inherent to each program, defined by the external source of resources.

c) Analysis and Approval of intermediated credit

Within CABEI, there are Regional Offices in each one of the Bank's founding member countries (Guatemala, El Salvador, Honduras, Nicaragua and Costa Rica). Each office is directly responsible for the clients within that country, including ~~has direct contact with the~~ IFIs (intermediated modality) and government and private sector.~~other projects at each Regional Office's discretion~~ (direct modality with the public and private sector).

Panama and the Dominican Republic are supervised directly from the ~~L~~Bank's Headquarters in Honduras ~~-~~through a similar structure as within the regional offices.

In the case of IFIs, the analysis for their eligibility to the GCL ~~in order to be eligible to opt for a~~n ~~GCL~~ happens~~,~~ during the preparation and analysis stage~~s~~ of CABEI's project cycle. In this stage~~,~~ the creditworthiness of the IFI is analyzed depending on the type of institution (regulated or not regulated) using a credit risk methodology to assign to it a credit quota which may be later used through the different intermediated credit programs. The credit risk methodologies used are CAMEL from ACCIÓN International for the case of microfinance companies and PERLAS for the case of savings and loans cooperatives. For the case of banks (both public and private), a methodology known as METRIC is used.

Each one of the above credit risk methodologies analyzes areas such as the institution's capital, the quality of its assets, efficiency, rate of return and liquidity. Such areas have financial indicators to determine a credit risk rating. Among the most important indicators there is financial vulnerability and delinquency, which reflect the quality of the assets of the institution, with which the health and performance thereof is measured.

Also, CABEI has in place an Identification, Evaluation and Mitigation System for Environmental and Social Risks - SIEMAS - through which, and as part of the analysis process, the relevant documents on environmental and social aspects of the IFI are reviewed ~~in order~~ to study and mitigate environmental and social risks. Such analysis takes into account two types of impacts: direct and indirect. Direct impacts derive from the institution's own activities and indirect impacts stem from the projects included in the loan portfolio of the IFI, the latter defining the level of such institution's environmental and social risk.

The environmental and social risk analysis for financial institution reviews and mitigate against the size and probability of direct and indirect impacts of the IFI, the category of environmental and social risk is defined, the existing controls to mitigate the risks are determined, and any additional measures are established relative to the minimization, mitigation or compensation of risks. This last process is conducted through the preparation of an Environmental and Social Action Plan, which establishes the measures that allow the IFI to manage the risks and/or impacts stemming from the operations with its clients.

The environmental and social credit and impact analysis for the GCL to be granted to the IFI is submitted to the credit committee, which is comprised by different technical areas of CABEI. After approval by the credit committee, such analysis must be submitted for approval by CABEI's Executive Presidency and Board of Directors.

The environmental and social analysis is part of the documents presented to the decision-making spheres for the GCL to be granted to the IFI together with the credit and financial risk assessment. The Environmental and Social Action Plan is an integral part to the loan agreement and its fulfillment is mandatory. In addition, such Action Plan provides a monitoring frequency for the environmental and social aspects during the execution stage of the GCL.

d) Implementation of intermediated credit

After approval of the GCL, the process of loan formalization is conducted, which commissions the IFI to request disbursements related to the programs approved by the CABEI.

Any potential beneficiary MSME may be identified by the IFI or by programs facilitators of CABEI. To grant resources of any program to such MSME, the latter must fill in an eligibility questionnaire containing the selection criteria established by the program. Should the MSME be eligible for such program, the IFI requests the disbursement. To such end, it must deliver a Resource Justification Form, better known as F1, which is stored in a database administered by the FINAM (Unit of Financing for the Majority).

For each disbursement of any operation with intermediated credit, the F1 goes through the following management process:

Table No. ~~89~~: Process of Management of the Resource Use Form - F1

~~F1 Management~~							
Responsible	**Apply for**	**Complete**	**Review**	**Validate – Rules, Conditions, Policies**	**Process**	**Amend – Substitute - Remove**	**Consult**
Intermediate Financial Institution		✓				✓	✓
Project manager	✓		✓				✓
Intermediary Operations Technicians				✓	✓		✓

The F1s and the databases have become CABEI's reliable instruments backed by internal agencies and external resources, which serve among other purposes to fulfill the obligations deriving from agreements entered into with such funders.

The information generated through the database, on each one of the intermediation programs, also serves as input for: 1) generating statistics of the programs to understand and direct the channel of intermediated resources; 2) making on site visits requested by

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the different external sources at the domicile of the final beneficiaries; 3) supervising on site periodically by the CABEI; 4) conducting impact assessments by the CABEI and its external sources, over the final beneficiaries; and 5) conducting internal and external audits on the dockets.

It is worth mentioning that CABEI keeps a monthly statistical control of the disbursements made per country, per IFI and Program. With that, CABEI keeps its external sources and the internal Bank's sources up to date. Such process allows to keep a control over the maximum amounts that can be allocated per program, and calculate resource availability to ensure the GCL remains revolving.

Each one of the disbursements made are recorded in the bank systems in such a way that disbursements are assisted with external resources, allowing to obtain information on the portfolio, the sum disbursed, as well as information of final beneficiaries and projects assisted with CABEI's own resources and with external resources.

e) Revolving process

The revolving nature of the GCL of the IFI makes it possible to generate resource availability to the extent credit is paid back. And such resources available may be allocated again, and in this way, allow the disbursements or financing to grow to keep assisting the demand.

With the revolving nature of the GCL, the IFI may keep channeling resources granted by the CABEI to cover its demand and thus reach sustainability. For example, a financial institution of the region has disbursed over a period of 15 years a total sum of US$ 54 million using a line approved for US$ 9.0 million. This entails a GCL revolving 6 times, thus contributing in its own way to its sustainability. The allocation of resources thus revolved entails the performance of new disbursements. That is why the same requirements to use the GCL are applied.

f) CABEI's experience with intermediation schemes

~~The~~ CABEI is the multilateral organization with the largest network of strategic intermediaries to channel resources in the Central American region. This network comprises 98 intermediate financial institutions (IFIs): 9 Public Banks, 36 Private Banks, 14 Finances companies, 27 Non-Banking Financial Institutions (IFNB), and 12 Cooperatives.

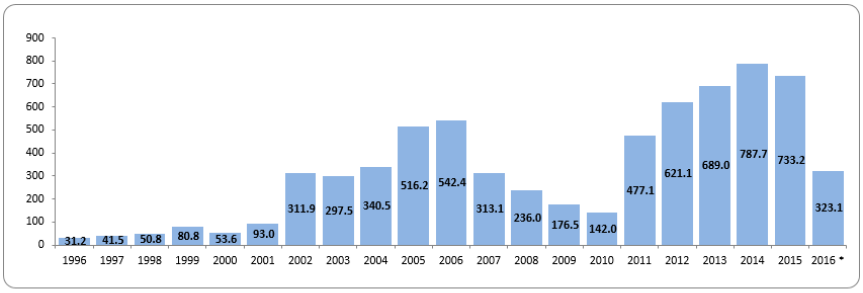
Table No. 109 Composition of the network of intermediary institutions of the CABEI, per country.

Institution Type	Guatemala	El Salvador	Honduras	Nicaragua	Costa Rica	Panamá	Colombia	Total
Public Banks	0	4	2	0	2	0	1	9
Private Banks	5	5	9	5	11	1	0	36
Finances co.	1	3	3	1	6	0	0	14
Non-Banking Financial Inst.	3	18	1	3	2	0	0	27
Cooperatives	1	1	4	1	5	0	0	12
Total	10	31	19	10	26	1	1	98

Source: FINAM Unit, CABEI

Since 1996, through intermediation, **US$ 6,858.3 million** have been disbursed through ongoing applicable programs. The following figure shows the annual level of disbursements which the CABEI has made through "ongoing" intermediated programs.

Figure No. 13 Disbursements Programs through of Intermediated Credit (US$ million)



*Datos actualizados al 30 de junio de 2016
Fuente: Datos obtenidos del Sistema Datawarehouse, BCIE. Datos actualizados al 30 de junio de 2016
Nota: Se excluye Deuda Subordinada.

It is worth stressing that all financial intermediation programs of the CABEI keep the same operative rationale, which allows the Bank to know with the best possible detail, and in an efficient and reliable manner, all projects and persons benefiting from the resources that the CABEI channels through the IFIs of the region, public and private.
The CABEI has achieved great results, positive and tangible results, by engaging in the financial sector. As of June 2016, 722,341 businesses employing 1,350,918 people have received support. Opportunities have been provided for progress to low-income households by strengthening their efforts with loans of US$ 740.0 in average for micro-sized enterprises and US$ 41,805 for SMEs.

Likewise, through microfinance institutions, the CABEI has managed to progressively extend its effect towards poorest households, towards rural areas and towards the most vulnerable sectors. Through the program of Support to MSMEs, US$ 662.7 millions have

been channeled towards production activities in rural areas, US$ 161.2 million of which have been related to agriculture and livestock.

The vast experience of the CABEI, through its unit specialized in MSMEs, (currently FINAM Unit) in the management of financial intermediation programs, with special emphasis on the support to Micro, Small and Medium Sized Enterprises (MSMEs), are summarized in the following table. All of them have had a 100% execution.

Table No. 11~~0~~ CABEI experience in the management of financial intermediation program with emphasis on MSMEs.

SOURCE	PROGRAM / MECHANISM	OBJECTIVE	SUM PROGRAM
Global Environment Fund (GEF)	Regional project "Central American Markets for Biodiversity (CAMBio)"	Draw investments in MSMEs and promote biodiversity conservation in the region	US$ 10.2 million
	Regional Project "Accelerating Investments in Renewable Energy in Central America through CABEI (ARECA, its acronym in Spanish)	Remove any financial and capacity barriers for the development of small or mid-scale renewable energy projects (of less than 10 MW) in Central America.	US$ 6.92 million
Taiwan	ICDF- CABEI SME Support Program I	Provide financing for Small and Medium Sized Enterprises (SMEs), whether urban or rural, through intermediate financial institutions.	US$ 10 million
Taiwan	ICDF – CABEI SMME Program II		US$ 10 million
Taiwan	CABEI Program for Education-oriented Loans (PBCE)	Support the formation of human resources of member countries by granting resources on long term through the regional financial system and Central American institutions devoted to educational financing to increase access to technical formation and higher education.	US$ 4 million
Mexico	Program for the Development of Social Housing in Central America.	Aid low-income households to acquire, build and improve their houses.	US$ 32.4 million
Germany	Regional Microfinance Program	Provide financing for Micro, Small and Medium Sized Enterprises (MSMEs), whether urban or rural, through intermediate financial institutions.	€ 15 million
Germany	Regional Microfinance Program II		€ 20 million
Germany	Green MSMEs Initiative / Environmental Credit Program	Contribute to climate and environment protection through MSMEs in the region.	€ 30 million
European Union	Green MSMEs Initiatives		€ 3 million

Germany	DINAMICA Initiative	Contribute to foster innovation and entrepreneurial attitude as well as to strengthen the financial sector assisting the MSMEs in order to contribute to the socio-economic development and reduction of regional poverty.	€ 40 million
European Union	DINAMICA Initiative		€ 3.8 million

g) Experience with CAMBio project

With regards to the project with most of similarities with the proposed project, *Proyecto regional "Mercados Centroamericanos para la Biodiversidad* (CAMBio)"[29] and its prolongation, "*Biodiversity friendly MSMEs*", a total of 22 IFis have participated, having disbursed more than USD 56 million. The majority of the participating IFIs have corresponded to non banking institutions. The table below shows a detail of the numbers.

Table No. 12. Types of IFIs having participated in CAMBio and Biodiversity Friendly MSMEs programs, 2008-2015

Tipo de Institución	# de Instituciones	Monto Desembolso Justificado USD
Banco Estatal	2	19,507,789.54
Banco Privado	8	24,501,453.38
Cooperativa	5	1,932,834.56
Institución Financiera No Bancaria	12	10,497,198.49
Total	**22**	**56,439,275.97**

Type of IFI	Number of institutions	Amount of justified disbursement
Public Bank	2	19,507,789.54
Private Bank	8	24,501,453.38
Cooperative	5	1,932,834.56
Non-bank financial institution	12	10,497,198.49
Total	22	56,439,275.97

[29] The project CAMBio, *Central American Markets for Biodiversity: Mainstreaming biodiversity conservation and sustainable use within micro-, small, and medium-sized enterprise development and financing*, was a tripartite initiative of the GEF (Global Environment Facility), UNDP (United Nations Development Programme), with financial support from CABEI (Central American Bank for Economic Integration). The main objective of the project was to remove financial barriers by providing loans to Micro, Small and Medium Enterprises that facilitate technology adoption and cause the transformation of production practices that contribute to biodiversity conservation.

In order to have an approach to the type of beneficiaries that this project will likely reach, this section offers an analysis of the results of the CAMBio project. As presented in the Introduction section, the project was successfully implemented with the same intermediation scheme as the one proposed in this project. This project is taken as a basis for the new project because it focused on access to credit for MSMEs for environmentally friendly investments and thus it is the most similar experience in CABEI, and constitutes a foundation of the new proposal.

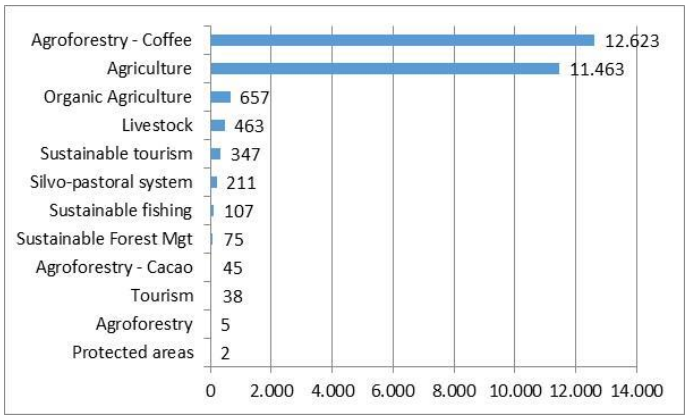
CAMBio has granted 12,107 loans to date, reaching a total of 26,036 beneficiaries. 60% of the more than 56 million disbursed have been awarded to medium-sized enterprises, 26% medium and 14% small. However, in terms of number of loans granted, the vast majority, 92%, have been granted to small businesses. This responds to a logic of credit decision capacity for different types of businesses: it is important to note that a significant portion of the loans were micro scale.

With regards to size producers, it is important to note that the size of the companies does not necessarily reflect the size of producers~~,~~; medium sized companies were mostly large cooperatives composed of several small-scale producers, where credit is managed and distributed within the organization.

Table No. 1~~3~~2. Amount and number of loans and beneficiaries, by type of MSMEs in the CAMBio project

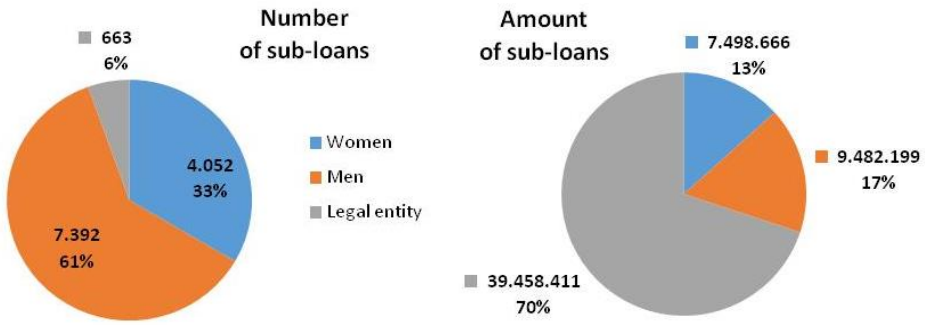
Type of MSME	Amount of loans (USD)	Number of loans (USD)	Total beneficiaries
Micro	7.977.476,69	11.084	11.224
Small	14.567.075,92	738	5.701
Medium	33.894.723,36	285	9.111
Grand Total	56.439.275,97	12.107	26.036

Chart No. 4. Total beneficiaries by productive system



CAMBio's database allows analyzing women's participation under two aspects: first, how many women and how many men gained access to credit, either because they have applied directly or because they have obtained it through their cooperative; on the other, how many women, men and organizations had the credit in their names. Thus, it can be seen that 37 % of the total beneficiaries having the credit in their names, were women. As for credits direct application, 70% of the total amount was recorded in legal entities (organizations, cooperatives, companies), representing 6 % in terms of quantity. It is important to note that this figure does not allow knowing the portion of women and men that accessed to credit under the "legal entity" category. ~~Figures below show these proportions.~~

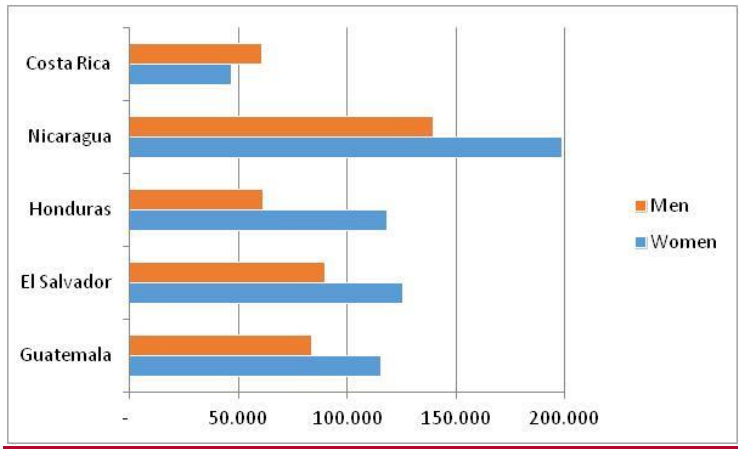
Figure No.14 Number and amount of sub-loans by gender/legal entity in CAMBio project



h) Experience with Intermediation projects focused on MSMEs

Although CAMBio constitutes a reference due to its thematic approach, it is worth observing the trends in the whole history of intermediation within CABEI's programs directed to the MSME sector, which bring other type of distribution.

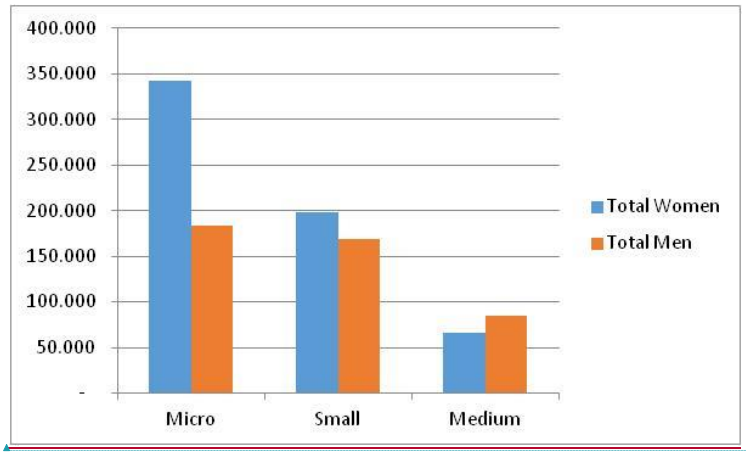
Figure No.15 Number of sub-loans granted to the MSME sector by CABEI's programs in the period 1996-2016, by gender and by country



Note: no statistics for Panama and Dominican Republic, where programs were not implemented

These numbers show that, apart from Costa Rica, women have been historically more prevalent than men as beneficiaries of intermediated credit. Honduras is the most relevant example, with 66% of the sub-loans been provided to women.

Figure No. 16 Number of sub-loans granted to women and men through intermediated credit, during the period 1996-2016, per size of enterprise.



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It can also be observed that women are more present in the credit access through micro and small enterprises. This is consistent with the diagnosis performed in the sector in Central America (see statistics presented in previous section).

Regardless of these figures, this new initiative will incorporate a gender perspective in order to ensure gender equity. Please see project's gender approach in Section II-A, and project's benefits in terms of gender equity in Section II-C.

i) Lessons Learned

~~**Lessons Learned**:~~ The Project CAMBio~~,~~ has allowed the identification of lessons learned that have been taken into account during the design of this project, among the main ones are the following[30]:

- Public-private partnership has a great potential for expanding environmental and social benefits generated through lending to agricultural activities.
- Financial institutions have very well-defined strategies for financial markets and credit infiltration. Lending to agriculture continues to be seen as a very risky business. With the exception of microfinance institutions, FIs do not target micro and small farmers and this sector continues to face severe barriers to financial

[30] Based on CAMBio Project's Final Evaluation Report.

inclusion. A new initiative must openly address these limitations, to define potential project beneficiaries.

- Microfinance institutions and agricultural lending cooperatives are better prepared to provide financial services to the smaller production sectors and achieve greater financial inclusion in their networks.
- Ideally, the bracket of potential profitable farmers would be identified that--with the assistance of loans, technical assistance and chain markets--would be able to overcome barriers and become competitive, and exit the productive stagnation that keeps them in poverty.
- A new initiative must clearly define a typology of farmers and productive systems as target groups. A clear target group will allow lending to be effectively integrated with technical assistance and anchor market chains.
- There are substantial differences in production technologies, and in levels of vulnerability faced by farmers for sustaining livelihoods. A new initiative must be firmly anchored among small-scale farmers.
- A profound assessment is required to understand sector niches and opportunities.
- A comprehensive ecosystem approach is needed. To reduce deforestation, land degradation, climate change adaptation and biodiversity losses, additions at the farm and landscape levels must be carefully assessed with an agro-ecology perspective. Conservation management strategies must also be part of the picture.
- A project of this scale and complexity needs optimal institutional anchoring and active stakeholders very embedded in project implementation.

Project / Programme Objectives:

List the main objectives of the project/programme.

The project's **goal** is to enhance the capacity of micro, small and medium agricultural enterprises from Guatemala, El Salvador, Honduras, Nicaragua, Costa Rica, Panama and Dominican Republic to implement adaptation measures ~~for micro, small and medium agricultural enterprises from Guatemala, El Salvador, Honduras, Nicaragua, Costa Rica, Panama and Dominican Republic, in order to~~by increasinge their resilience to climate change, ensuring the provision of financial and non-financial services to support ecosystems and agricultural production, as well as providing technical assistance in the adaptation planning processes and incentives to define specific alternatives of resilience and investment management.

The project will support the mainstreaming of ecosystem services conservation and sustainable use within micro, small, and medium-sized enterprise (MSME) development and financing in seven countries (Guatemala, El Salvador, Honduras, Nicaragua, Costa Rica, Panama and Dominican Republic), linked to production and service activities related to agroforestry coffee, cocoa agroforestry, organic agriculture, silvopastoral systems, sustainable tourism, private / community protected areas, sustainable forest management, fisheries and sustainable aquaculture, among others.

This project will enhance adaptation measures and build resilience of micro, small and medium scale enterprises by encouraging transformed productive and service sector practices related to investments that can have a positive environmental impact.

The project will be implemented through CABEI´s regional financial sector network, in order to develop and extend new green financial products and increase the level of lending to MSMEs that implement adaptation measures in their production process promoting Ecosystem-based Adaptation systems.

The project will also work in partnership with a range of national and international institutions that have been supporting their sustainable growth and development, in order to increase the ability of MSMEs to develop environmentally friendly business opportunities, which are financially viable and secure financing for the investments.

Finally, it will work with Governmental and inter-governmental institutions, including Ministries of Environment, relevant sectorial ministries (agriculture, industry, tourism, finance, etc.) to support an enabling environment that will encourage MSMEs both to prosper and generate adaptation measures.

The initiative will promote innovation and provide solutions of adaptation to climate change through the following **specific objectives**:

1. **By reducing the obstacles to credit access for MSMEs.** Access to lending will be promoted through financial and non-financial mechanisms that will allow reducing the risk inherent to all production activities. These systems will be promoted through the network of IFIs accredited by CABEI across the region. Through this financing, the implementation of best adaptation measures with a natural resource conservation approach (soil, water, forests and biodiversity) will be promoted as well as the consolidation of production systems adapted to climate change.
2. **By Strengthening Capacities.** Producers will benefit from training and technical assistance services, as well as participatory processes, improvement of their organizational, productive, administrative, accounting capacities, improvement of their access to selected markets, and introduction of new technologies. All of the above with the purpose of developing best adaptation measures for production models.
3. **By promoting MSMEs** willing to prepare themselves to adequately face climate variability, at the same time preserving natural resources and assets, **and supporting IFIs** adoption of credit mechanisms that enhance adaptation measures.

Project / Programme Components and Financing:

Fill in the table presenting the relationships among project components, outcomes, outputs and countries in which activities would be executed, and the corresponding budgets.

For the case of a programme, individual components are likely to refer to specific sub-sets of stakeholders, regions and/or sectors that can be addressed through a set of well-defined interventions / projects.

Project/Programme Components	Expected Outcomes	Expected Outputs	Countries	Amount (US$)
1. Innovative financial mechanisms for Ecosystem based Adaptation measures	Barriers to credit for MSMEs adopting ~~EbA~~ adaptation measures are reduced and MSMEs' resilience is strengthened.	5,000 MSMEs receive credit for the implementation of adaptation~~EbA~~ measures, and are entitled to receive technical support.	Guatemala, Honduras, El Salvador, Nicaragua, Costa Rica, Panama and Dominican Republic	25,000,000 (CABEI)

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	Increased awareness among financial institutions of potential market opportunities for lending to MSMEs that invest on resilience to climate change	At least 10 IFIs operate credit lines for adaptation investments		
2. Capacity Building for the Development of Production Models Resilient to Climate Change	MSMEs receive support for adequately designing their adaptation investments	About 100 MSMEs are supported with Pre-investment activities. More than 200 MSMEs and at least 1 IFI per country have completed capacity building activities related to adaptation solutions, organizational and similar issues.	Guatemala, Honduras, El Salvador, Nicaragua, Costa Rica, Panama and Dominican Republic	~~2,000,000~~1,668,203 (Adaptation Fund)
	MSMEs increase their knowledge and means adapt their agricultural production systems, and increase their capacities related to organizational, production, administrative, accounting, marketing and new technology capabilities. Intermediary Financial institutions increase their knowledge about adaptation financing. Activities and results of the project are visible to beneficiaries, stakeholders, general public.	More than 30 sponsorships; more than 30 dissemination events; publications and promotional materials are achieved/ disseminated.		

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3. Incentive schemes to promote Ecosystem based Adaptation measures (Adapt-Award)	Incentive to MSMEs adopting ~~EbA~~ adaptation measures is expanded	4,000 MSMEs receive incentives for adopting ~~EbA~~ adaptation measures.	Guatemala, Honduras, El Salvador, Nicaragua, Costa Rica, Panama and Dominican Republic	~~3,000,000~~ 2,502,304 (Adaptation Fund)
6. Project/Programme Execution cost (only Adaptation Fund components)				~~525,000~~437,788
7. Total Project/Programme Cost (only Adaptation Fund components)				~~5,525,000~~4,608,295
8. Project/Programme Cycle Management Fee charged by the Implementing Entity (if applicable)				~~469,625~~391,705
Amount of Financing Requested				~~5,994,625~~5.000,000

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Projected Calendar:

Indicate the dates of the following milestones for the proposed project/programme

Milestones	Expected Dates
Start of Project/Programme Implementation	~~April~~ October 2017
Mid-term Review (if planned)	~~June~~ April 2019
Project/Programme Closing	~~December~~ October 2022
Terminal Evaluation	~~June~~ April 2023~~2~~

PART II: PROJECT / PROGRAMME JUSTIFICATION

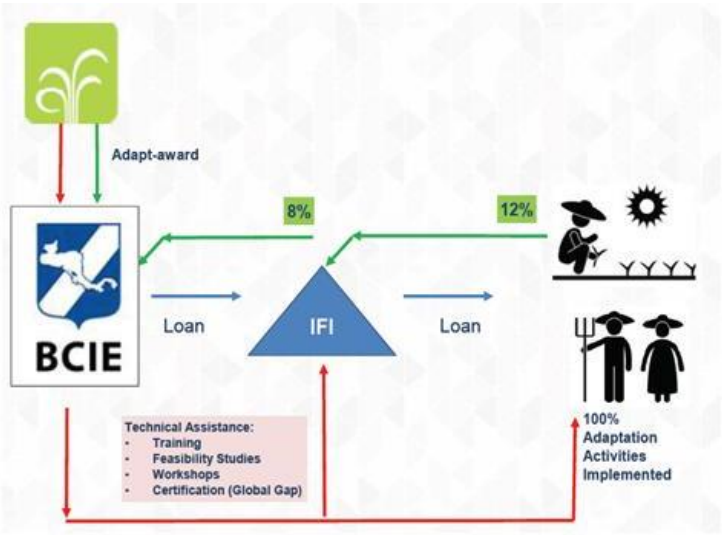
A. Describe the project / programme components, particularly focusing on the concrete adaptation activities, how these activities would contribute to climate resilience, and how they would build added value through the regional approach, compared to implementing similar activities in each country individually. For the case of a programme, show how the combination of individual projects would contribute to the overall increase in resilience.

I. General framework

This section provides a brief introduction about the general scheme of the project, in order to describe the interaction between the three Components and the adaptation measures

proposed by the project. A more in-depth description of the components is provided in the subsequent sections.

Figure No. 17~~5~~. Project operational scheme



It is important to emphasize that the three components are fully interlinked and thus they would all contribute to the adaptation objectives of the project. No credit granting would be possible without the existence of Adapt-awards and Technical Assistance.

With regards to dependency between activities in their execution, it can be affirmed that Adapt-awards are totally dependent on the granting of loans, since they will be awarded to the projects that have successfully implemented adaptation measures; however, training activities have not the same level of dependency: activities related to raising MSMEs and IFIs' awareness on climate change, events, lessons learned and dissemination, are not necessarily linked to the rest of the activities in a timeline perspective and can be delivered independently of the granting of loans.

~~Thus~~All the same, AF results are equivalent to the results of the whole project. A summary of the functioning of the scheme is as follows:

1) Technical Assistance (Component 2 - AF) is provided in order to prepare IFIs for the management of this project, to understand MSME's adaptation needs, and to lower their perception of the sector as high risk; as well as to support MSMEs in needs of assistance to undertake assessments of their adaptation needs and to help them prepare their ~~Business~~ adaptation ~~Plans~~plans. Technical Assistance is provided throughout the project to enhance knowledge about adaptation strategies, markets, organizational aspects of MSMEs; to perform feasibility assessments; and to support lessons learned and dissemination activities, among others.

2) Loans are granted (Component 1, CABEI) after having assessed their eligibility (vulnerability to climate change and credit capacity) ~~–~~and having evaluated the ~~Business~~ adaptation ~~P~~plan submitted by the MSME. This ~~Business P~~plan includes at least a description of climate change threats, adaptation measures proposed, environmental and social plan if applicable, budget and credit payment plan.~~,~~

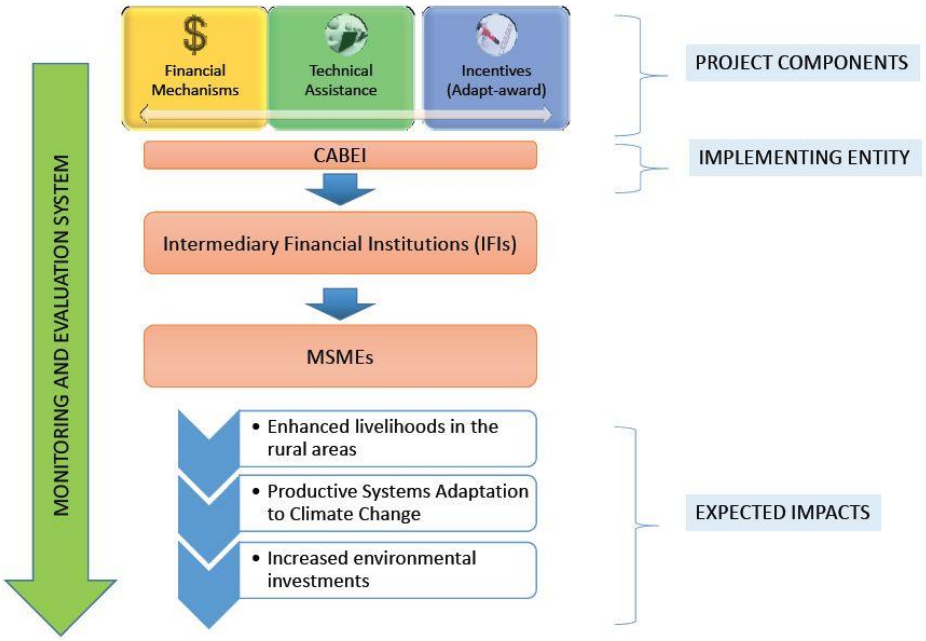
3) Once adaptation activities are achieved and verified, Adapt-awards are granted (Incentives, Component 3 - AF). The measure consists in the refund of 20% of the loan principal granted by the IFIs (up to USD 10,000). This incentive will be distributed between MSME and IFIs in a percentage of 60% of the refund for the MSME and 40% for the IFI, and has the objective of helping re-payment of the loans.

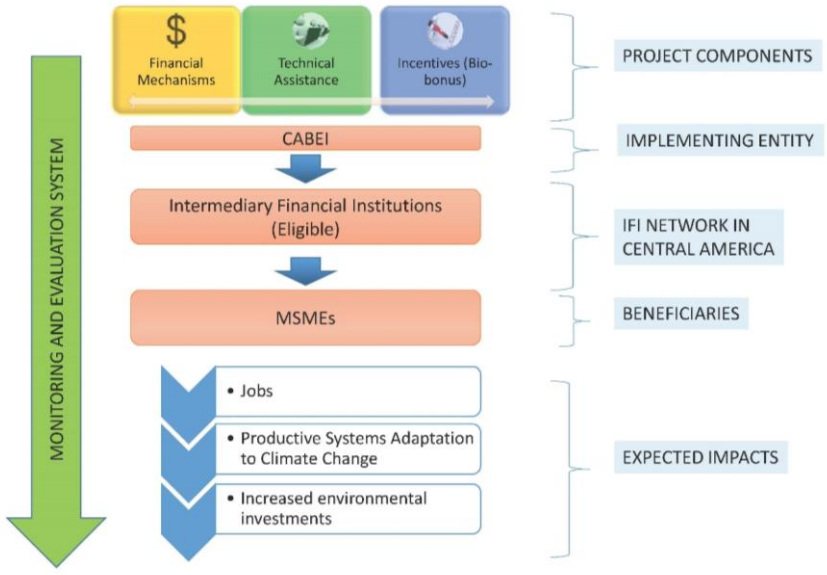
It is essential to ensure that MSMEs and IFIs are trained by Technical Assistance to comply with the functioning of the scheme and to adequately understand climate threats and design adaptation measures. The access to credit is enhanced by the application of Adapt-awards that help beneficiaries re-paying the loans and IFIs to lower their funding costs and the level of risk of MSMEs. Incentives and Technical Assistance are the catalyzers of the loan granting. For further details about CABEI's experience with other intermediation programs, please refer to background/context section.

It is important to highlight that whist loans are managed and monitored by the IFIs and approved by CABEI, Technical Assistance and Adapt-awards are directly managed and monitored by CABEI. Implementation modalities for each component are described in the next sections.

Implementation mechanism for service delivery and expected benefits

To ensure delivery of services to MSMEs, the next model will be implemented.


Financial Mechanisms
Technical Assistance
Incentives (Adapt-award)
PROJECT COMPONENTS
CABEI
IMPLEMENTING ENTITY
Intermediary Financial Institutions (IFIs)
MSMEs
MONITORING AND EVALUATION SYSTEM
• Enhanced livelihoods in the rural areas
• Productive Systems Adaptation to Climate Change
• Increased environmental investments
EXPECTED IMPACTS


Financial Mechanisms
Technical Assistance
Incentives (Bio-bonus)
PROJECT COMPONENTS
CABEI
IMPLEMENTING ENTITY
Intermediary Financial Institutions (Eligible)
IFI NETWORK IN CENTRAL AMERICA
MSMEs
BENEFICIARIES
MONITORING AND EVALUATION SYSTEM
• Jobs
• Productive Systems Adaptation to Climate Change
• Increased environmental investments
EXPECTED IMPACTS

Thus, each component will be implemented through the network of IFIs accredited by CABEI, with the aim of support beneficiaries, MSMEs, to adapt their production systems to climate change, while generating employment and environmental investments increase (expected impacts). This whole model crossed by an appropriate monitoring and evaluation system that allows continuously feedback with lessons learned.

a) Eligible adaptation measures

A list of possible adaptation measures that will be funded is provided below.

Table No. 14~~3~~ Possible adaptation measures

Reducing risks associated with climate events in production activities through the implementation of actions including: • Promotion of local seed banks and varieties resilient to droughts, pests, and diseases. • Mix-use greenhouses • Diversification of production units and staggered planting of crops with the purpose of mitigating the risk associated with prices, climate seasonality and risk of losses. • High-density planting • Establishing agro-forestry systems, and agro-silvopastoral (pastures and fodder) systems. • Crop rotation • Soil conservation (zero tillage, coverage). • Preparation and use of organic fertilizers. • Integrated pest management. • Production and processing certification. • Construction of water reservoirs (water harvesting), drainage and efficient irrigation systems (drip) • Rainwater catchment in water reservoirs or cisterns connected with agricultural production. • Shade houses for a protected agricultural production. • Storage structures (silos, warehouses, stockpiling centers) • Protection against hurricanes, floods, sea level rise
Reducing the pressure on the ecosystems and conservation of natural resources. • Sustainable forestry management and design of forest management plans. • Use of firewood-saving stoves. • Firebreaks.

• Reforestation with native species. • Conversion of land use through species for medicinal and edible use (fruit trees and others). • Use of forest by-products • Certification for forest plantations and natural woodlands, among others.
Improving social and economic resilience of the populations. • Family and community vegetable gardens. • Eco-tourism and sustainable tourism • Beekeeping • Fish farming • Access to credit, specialized technical assistance and incentives (Adapt-award) for adaptation to climate change.

Tables 15~~4~~ and 16~~5~~ below describe a) how these activities would respond to the threats posed by climate change in the region, and b) how the proposed adaptation activities are related to derived ecosystem services and benefits.

Table No. 154 Purpose of the activities and climate threats

Activity	Climatic threats addressed				
	Temperature increase	**Drought increase**	**Increase in rainfall intensity**	**Wildfires**	**Accelerated deforestation**
Restoration: • Reforestation • Conversion of land use • Firebreaks. • Firewood saving stoves	Expand tree planting to reduce temperature and evapotranspiration	Enhance tree cover helps retain soil moisture and protect from wind and water erosion.	Enhance tree cover helps protect against and prevent landslides.	The use of firebreaks prevents the advance and dissemination of forest fires and loss of biodiversity.	Firewood-saving stoves reduce firewood consumption for energy uses.
Adaptation of crops to climate variability (seed banks)	Increased resilience to high temperatures, pests and diseases	Increased tolerance to droughts.	N.A.	Fires are reduced due to substitution of land use for food production	N.A.
Soil conservation: • Zero tillage • Crop rotation/association • Organic fertilizers	Reduced evapotranspiration and invariable temperature well suited for growing crops.	Soil coverage maintains soil moisture and reduces evapotranspiration.	The impact and process of erosion diminishes through soil coverage.	Fires are reduced due to substitution of land use for food production	N.A.
Agro-forestry/Agro-silvopastoral systems	Temperature and evapotranspiration are reduced.	Soil moisture is maintained, evapotranspiration is reduced as well as wind erosion.	Direct impact on the crops, pastures and erosion is reduced.	N.A. Fire risk is reduced: livestock helps to fight fire risk as it feeds on dry matter of the undergrowth of the forest.	N.A. The combined system of crops, forest and livestock successfully reduces the deforestation risk.

Activity	Climatic threats addressed				
	Temperature increase	**Drought increase**	**Increase in rainfall intensity**	**Wildfires**	**Accelerated deforestation**
Integrated pest management.	The occurrence of pests and diseases as a result of climate change is prevented.	The occurrence of pests and diseases as a result of climate change is prevented.	The occurrence of pests and diseases as a result of climate change is prevented.	N.A.	N.A.
Crop rotation/diversification	The entire-year production is secured against loss of crops	The entire-year production is secured against loss of crops	The entire-year production is secured against loss of crops	The entire-year production is secured against loss of crops	N.A.
Post-harvesting storage	Post-harvesting losses and poor storage conditions are reduced	Food availability during the dry season.	Food availability during the rainy season.	Post-harvesting losses and poor storage conditions are reduced	
Reservoirs and irrigation systems	N.A.	Production is secured as well as the increase in the number of production cycles per year. Production stability during droughts.	N.A.	N.A.	N.A.
Shade houses	These regulate temperature and reduce soil evapotranspiration and loss of soil due to wind erosion.	Production is secured as well as the increase in the number of production cycles.	Production is protected against impacts	N.A.	N.A.

Activity	Climatic threats addressed				
	Temperature increase	Drought increase	Increase in rainfall intensity	Wildfires	Accelerated deforestation
~~Credit/micro-credit~~	~~Increases adoption of measures of adaptation to climate change~~	~~Increases adoption of measures of adaptation to climate change~~	~~Increases adoption of measures of adaptation to climate change~~	~~Increases adoption of measures of adaptation to climate change~~	~~Increases adoption of measures of adaptation to climate change~~
~~Technical Assistance~~	~~Increases adoption of measures of adaptation to climate change~~	~~Increases adoption of measures of adaptation to climate change~~	~~Increases adoption of measures of adaptation to climate change~~	~~Increases adoption of measures of adaptation to climate change~~	~~Increases adoption of measures of adaptation to climate change~~

Table No. 16~~5~~. Proposed adaptation activities and their relation to derived ecosystem services and benefits

Activity	Ecosystem services	Benefits for the agricultural production system	Additional Benefits (social, cultural, economic)
Restoration	• Increased levels of nutrient cycling, soil formation and fertility. • Improvement of the water cycle. • Pest and disease regulation • Improved water quantity and quality • Increased tree coverage and	• Protection from extreme climate events • Increased availability of water for irrigation • Less pests and diseases • Reduced soil erosion • Crop pollination secured	• Timber and non timber product availability • More freshwater for human and animal consumption • Improved scenery and generation of investment opportunities centered around it.

Activity	Ecosystem services	Benefits for the agricultural production system	Additional Benefits (social, cultural, economic)
	improved forest connectivity • Carbon storage		
Adaptation of crops to climate variability (seed banks)		• Increased crop resilience before extreme events, pests and diseases. • Food secured during the dry and rainy season. • Food availability and strengthened food security. •	• Decrease in the levels of acute and chronic malnutrition in children of 5 years of age and less, lactating women and the elderly.
Soil conservation: • Zero tillage • Crop rotation/association • Organic fertilizers	• Increased levels of soil moisture retention, structure and fertility • Increased soil biota.	• Increased levels of soil moisture retention, structure and fertility • Increased soil biota. • Erosion prevention • Crop diversification • Increased biomass for animal consumption.	• Improved self-consumption • Generation of surpluses for selling. • Increased food offer for family, community and national consumption. • Improved levels of family, community and national nutrition.
Agro-forestry/Agro-silvopastoral systems	• Increased levels of soil moisture retention, structure and fertility • Increased soil biota. • Carbon storage • Improved nutrient cycling.	• Increased crop yield • Increased production of milk, meat and weight gain of livestock • Greater food availability for animals during the dry season.	• Increased food offer and diversity • Access to forest, food, medicinal and other products. •

Activity	Ecosystem services	Benefits for the agricultural production system	Additional Benefits (social, cultural, economic)
	• Increased biodiversity (undergrowth, lower, medium and upper canopy) • Climate regulation. • Pest and disease regulation	• Crop, pastures and animal protection against extreme events (short and medium term) •	
Integrated pest management.	• Improved biological control. • Reduced use of chemicals	• Pest and disease prevention • Secured production for dry seasons. • Reduced pest and disease damage	• Improved producers income • Increased healthy diet
Crop rotation/diversification	• Improved soil structure and fertility	• Diversified food production • Improved soil structure and fertility •	• Increased and varied family diet • Improved nutrition levels
Post-harvesting storage		• Secured production • Post-harvesting losses reduced • Food quality secured •	• Market price mitigation and regulation
Reservoirs and irrigation systems		• Access to water during water stress periods • Improved efficiency in water use for production purposes. • Water availability for livestock	• Improved families' income • Increased production volume per year • Access to differentiated markets

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Activity	Ecosystem services	Benefits for the agricultural production system	Additional Benefits (social, cultural, economic)
		• Increased number of production cycles per year • Increased crop resilience to climate change	
Shade houses		• Reduced losses on account of pests, diseases, winds, extreme rainfall • Increased crop yield • Efficient use of soil and water resources • Production intensification • Increased crop resilience • Temperature, shade, moisture regulation	• Improved families' income • Generation of local jobs
Beekeeping , aquaculture, vegetable gardens, eco-tourism, etc.		• Production intensification • Food quality secured	• Improving social and economic resilience of the populations • Decrease in the levels of acute and chronic malnutrition • Stabilization of income
~~Credit/micro-credit~~			• ~~Improved income~~ • ~~Implementation of adaptation measures in production systems~~

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Activity	Ecosystem services	Benefits for the agricultural production system	Additional Benefits (social, cultural, economic)
			• ~~Access to financial and suppliers' markets of materials and inputs.~~
~~Technical Assistance~~			• ~~Improved income~~ • ~~Implementation of adaptation measures in production systems~~ • ~~Access to the market of technical assistance providers.~~

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~~II.~~

~~III.~~II. Components

a. Component 1: Innovative financial mechanisms for Ecosystem based Adaptation Measures (EbAM)

The purpose of this component will be to stimulate financing (through Intermediate Financial Institutions or IFI) in favour of Micro, Small, and Medium Sized rural Enterprises for the adoption of adaptation measures in the face of climate change impacts, based on sustainable management of resources with an ecosystem-based approach in their productive systems. Adaptation measures proposed in this project have been deeply described in the previous section.

Credit will be provided through the Intermediate Financing Institutions (IFI) Network either regulated or not regulated accredited by CABEI. This network, as well as CABEI's experience with intermediated credit, has been described in detail in the background/ context section.

Loans provided under this component will entirely go towards the implementation of the possible adaptation measures listed under Table No. 14. With the revolving nature of the GCL, the IFI may keep channeling resources granted by CABEI to cover its demand and thus reach sustainability by promoting adaptation measures, since revolving credits would be re-invested in adaptation activities under the same credit line.

Intermediary Financial Institutions activities

As mentioned in the context/background section, IFIs may be private or public banks, microfinance institutions or cooperatives. Currently, CABEI's network comprises almost 100 IFIs and this project aims to reach a target of at least 10 IFIs that operate credit lines for adaptation investments. Their eligibility to opt for a GCL will follow the standards described in the background section (see section I-III-g "analysis and approval of intermediated credit").

IFIs' activities will include the following:

- Planning for and monitoring the technical aspects of the project, including regular field visits and periodic reporting to CABEI.
- Actively participating in all relevant project activities where appropriate.
- If applicable, adopting, during the course of the project, the systems, programmes and tools developed by the project to ensure sustainability of the project outcomes.
- Play an active role in coordinating with other stakeholders throughout the project and in particular to maintain a close relationship with CABEI

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- Preparation and submission of periodic progress reports, and regular consultations with beneficiaries and contractors.

Eligibility considerations

i. MSMEs

Definition of MSMEs

There are some quantitative aspects that officially define MSMEs that vary depending on the country. These are related to number of employees, annual sales, and value of assets. While in Guatemala a medium enterprise has 50 to 199 employees, in Honduras it has 26 to 100 and in Costa Rica 31 to 100; Value of assets of a small enterprise can vary from US$ 62,000 in Guatemala to US$ 250,000 in Costa Rica. However, in order to define Micro, Small and Medium Enterprises, there is a need to go beyond the official/institutional definitions and qualitative variables must be used for targeting due to the characteristics of certain production activities that require greater specialization.

The chart below shows qualitative variables for the definition of the MSMEs proposed by CABEI. The Project will consider these aspects when defining the target MSMEs.

Table No. 176 Qualitative variables for the definition of the MSMEs

Establishment	Qualitative aspects
Medium enterprise	Internal division of labour, administrative and accounting controls, meets the legal requirements, more diversified products
Small enterprise	Production processes with some level of technology, greater division of labour without liability, records and accounting controls
Micro enterprise	Low capital-labour relationship, use of simple technology, little division of labour, lack of accounting records

Source: Assessment of MSMEs of five countries in Central America. FINAM. CABEI

In order to attend the MSMEs financial needs across the region, CABEI defines MSMEs as those legalized or not legalized enterprises that count from 1 to 100 employees and have financial needs up to US $ 1 million. This definition of MSMEs includes producers associations and cooperatives if they meet the requirements described above.

In order to ensure that the project is anchored among small-scale farmers, organizations and cooperatives of small-scale farmers will be prioritized over medium-sized enterprises that concentrate the power of ownership in a single individual or a small group of partners.

A proportion of micro, small and medium enterprises that will be reached cannot be estimated at this stage; however, CABEI expects this Initiative to present dynamics similar to the mentioned CAMBio project (please refer to the Background section for a description of the relevant patterns observed in CAMBio). It is worth emphasizing that, during the period 2008-2015, 92% of the loans were granted to micro-enterprises; in terms of number of final beneficiaries, 42% of them were associated with micro-enterprises. Preliminarily, it is expected that these figures will be replicated during the execution of this Initiative, although the aim to further promote associative investments may probably change the trend. Finally, as described in the next section, the vulnerability assessment to be undertaken during the development of the full proposal will bring a better understanding of the additional considerations that should be incorporated regarding MSMEs typologies.

~~i.~~ **Eligibility of MSMEs**

Any potential beneficiary MSME may be identified by the IFI or by the program~~s~~ facilitators of CABEI. In order to provide resources of any program for MSME, the IFI must fill in an eligibility questionnaire containing the selection criteria established by the program. ~~In Addition~~In parallel, it is necessary to validate MSME eligibility in order to request~~s~~ the disbursement by the IFI for such program. ~~It must deliver a Resource Justification Form, better known as F1, which is stored in a database administered by CABEI.~~

The program will develop its own eligibility guidelines, which will help IFIs select projects based on the sector and the adaptation needs of MSMEs. The first step for the presentation of a project is the presentation to the IFI of: 1) credit form, which includes the information of the applicants and the reasons why they need the credit. This is the first instance in which they must document their adaptation project proposals or 'adaptation plans' or 'projects' based on their vulnerability conditions; And 2) the supporting information: business plan, quotes of machinery, inputs and services, feasibility studies of the investment, budgets, legal status of the company, among others. This information will be analyzed from the technical point of view (eligibility based on adaptation needs) and credit point of view (capacity of indebtedness, ability to pay), finally to be approved by the credit committee. In case of approval, it will proceed to the stage of formalization and disbursement. It is not until the IFI submits to CABEI the documentation of the MSME project, accompanied by the F1 form, that CABEI authorizes the disbursement to the IFI.

This way, MSMEs will be granted support based on their vulnerability to climate change and appropriateness of the measures proposed in responding to the climate change threats, as well as on their financial capacities. Currently, the Resource Justification Form (F1 or eligibility questionnaire) ~~mentioned already~~ includes a significant number of socio-economic variables that help assessing some aspects of beneficiaries' vulnerability. For this project, an Adaptation Specialist will develop a guidance manual with adaptation parameters that will be systematized by CABEI and incorporated in the eligibility guidelines to be used by the IFIs, that will be registered in the F1 form.

A vulnerability screening of agricultural sectors and MSMEs will be undertaken during full project proposal development.

i) Sectors: As an early pre-assessment, it can be affirmed that most of the sectors that are linked to small-scale farmers have a significant level of vulnerability. These sectors are related to coffee and cocoa agroforestry, agro-ecologic production, silvo-pastoral systems, eco-tourism, productive activities developed in protected areas or related to forest, artisan fisheries and small-scale aquaculture systems, among others.

ii) MSMEs: the vulnerability screening will as well assess agricultural MSMEs' vulnerabilities. It can be anticipated that MSMEs have in general high levels of vulnerability due to a large amount of factors, ranging from climate variability itself, to environmental degradation (deforestation, pollution, accelerated desertification processes, overexploitation of the fishing resource), to the fact that production units are highly disperse, socio-economic conditions, limitation of access to basic needs such as water, limited access to financial services, to technical assistance, to providers, to market, to adequate technologies. This assessment will help to better define the MSMEs eligibility criteria.

Some of the criteria that are envisaged for inclusion among the eligibility criteria in the various selection instances will be related to (non-exhaustive list):

- Production unit surface
- Type of activity and if it generates income
- Association status
- Weather phenomena to which productions have been exposed
- Access to climate information
- Access to water
- Soil management practices
- Storage structures
- Technical assistance received
- Gender / belonging to vulnerable minorities

Nevertheless, and as described in the context / background section, it is important to remember that the whole region presents high vulnerability to climate change; and that adaptation measures are in their essence, site-specific. Thus, the project will attend proposals from MSMEs with a case-by-case vulnerability consideration.

Special emphasis will be placed on the potential for creating jobs and on the incorporation of a rights approach (gender, indigenous peoples) aligned with the Adaptation Fund's Environmental and Social Safeguards and CABEI's Environmental and Social Policy.

Before authorizing disbursements to IFIs, CABEI technicians will carry out an analysis of coherence, relevance, sustainability and cost-effectiveness. It is important to highlight that the project will have an adaptation specialist and a specialist in agribusiness, in addition to having the structure of managers in each country who are in daily contact with the beneficiaries. In this way, it will ensure that the proposals of MSMEs are framed within the objectives of the project For more details on institutional arrangements, please refer to Section III-A.

ii. IFIs

CABEI's experience with intermediated credit in environmental programs (CAMBio) or renewable energy programs, has demonstrated the importance of working on the financial supply side, apart from the demand side.

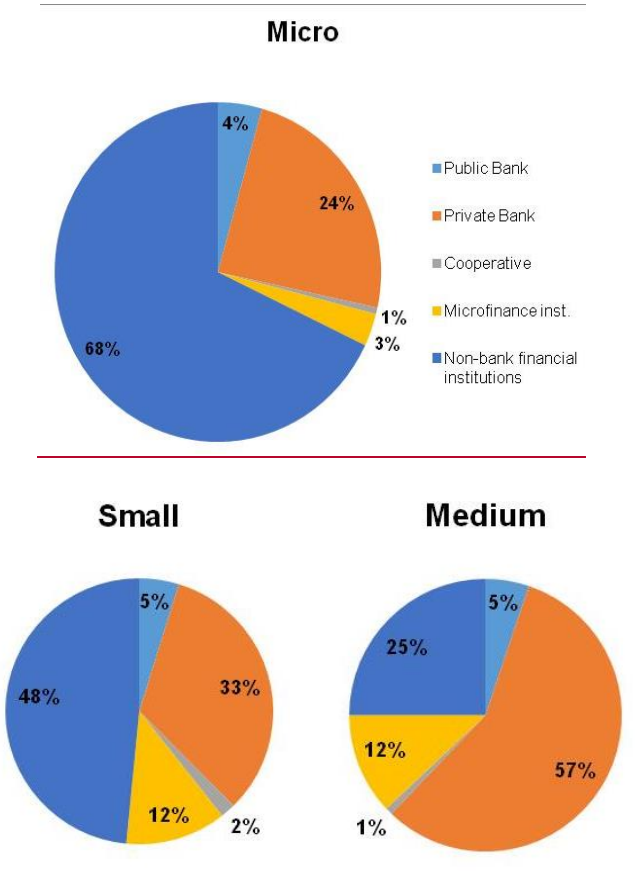
All types of IFIs will be eligible for accessing the GCL, for receiving Technical Assistance and / or Adapt-award under this initiative, provided that technical and financial standards and requirements are met in each case.

While cooperatives and microfinance institutions may need more support in terms not only of adaptation to climate change knowledge but also of credit management for this vulnerable sector, large IFIs such as commercial banks are effectively the ones that can achieve the greatest results because of their geographic coverage and their ability to work not only with small businesses but also with producer associations. Microfinance institutions, because of their operating costs, can only cover very limited areas in general; the commercial bank can assume those operating costs and reach more and further places. Some IFIs also have multi-country reach, so once the global credit line is open, they can attain a large reach effectively.

Commercial banking needs to be convinced that the small-farming sector may not be as risky as they think. Nowadays, banks, regardless of their size, are not willing to allocate funds to enter the business or to be trained in this type of credit line, so it is necessary to work hard on their awareness to encourage them to create a specific adaptation product that reaches MSMEs. Once the perspective of adaptation to climate change is incorporated, they will understand the challenges facing their clients and those that will continue to face given the forecast of extreme events in the region.

In order to illustrate the importance of engaging with all types of IFIs in the success of intermediation for adaptation, some statistics extracted from the financial intermediation of CABEI programs in the period 1996 - 2016 are presented below.

Figure No. 18. Proportion of credits granted by CABEI's programs, per type of IFI and per type of MSME (period 1996-2006)



As can be seen, the presence of private banks is key for reaching microenterprises: in intermediated credit since 1996 private banks have granted 24% of loans to microenterprises, being second in importance after non-bank financial institutions. In the case of small and medium-sized enterprises, the largest number of loans have been granted by non-bank financial institutions and private banks.

The same kind of information can be analyzed in the next two figures, where number of credits and amount of credits per type of MSME and per type of IFI are shown. In both indicators, non-bank financial institutions are the key actor, followed by private banks. In terms of enterprise sizes, it is clear that although micro enterprises have been far more numerous, capacity of taking credit is larger in larger enterprises.

Figure No. 19. Number of credits provided to MSMEs, per type of IFI (period 1996-2016)

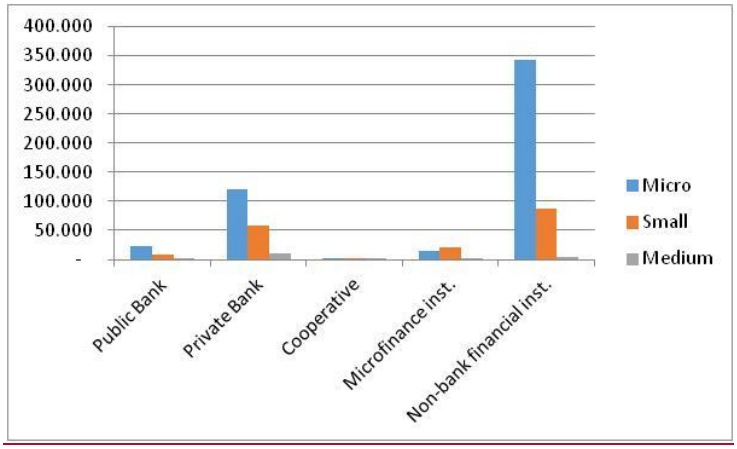
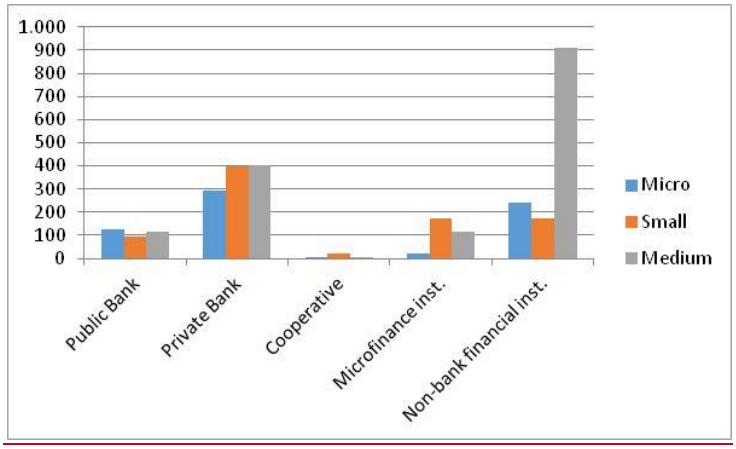


Figure No. 20. Amount of credits provided to MSMEs per type of IFI (million USD, in the period 1996-2016)



In terms of gender, in the next figures it can be observed that women are much more present in credit taking through micro and small enterprises, which in turn, in the previous graphics are shown to be reached mainly by non-financial institutions and private banks. This shows the importance of including all types of IFIs in the present project, since different IFIs have different reaches, some of them key to some perspectives such as gender equity.

Figure No. 21. Number of credits provided to women and men having accessed intermediated credit (period 1996-2016)

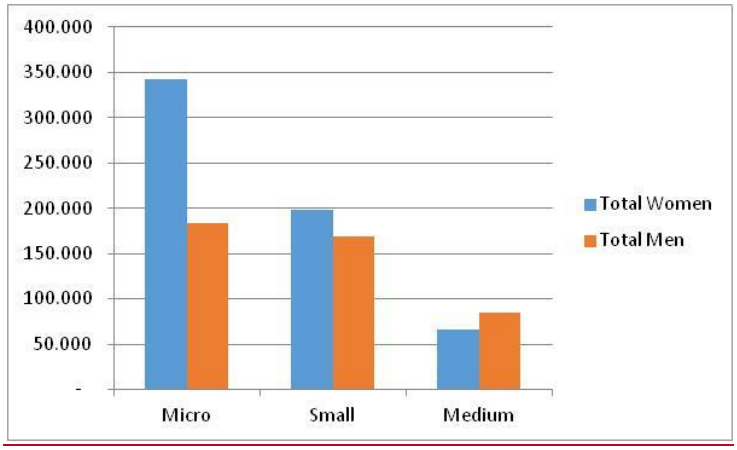
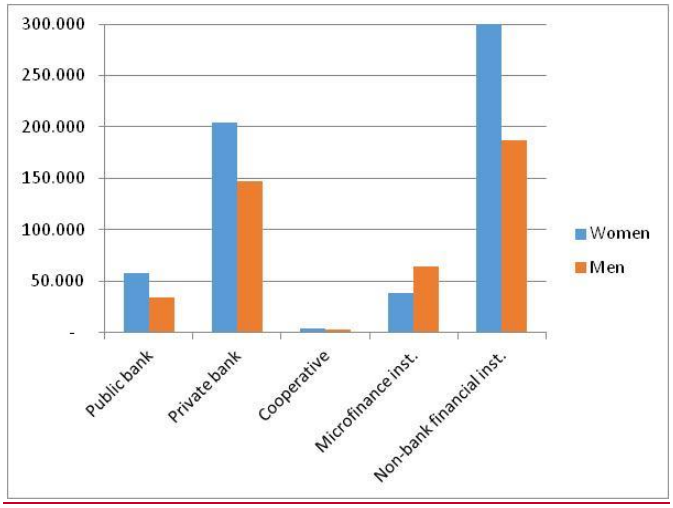


Figure No. 22. Total beneficiaries women and men having accessed intermediated credit (period 1996-2016), per type of IFI



The difference in women's access according to the type of IFI is significant: in the case of public banks, non-banking institutions and private banks, there has been correspondingly 25%, 24% and 16% more access for women than for men. The opposite happens with the microfinance institutions, through which 25% more men have access to credit than women.

~~Definition of MSMEs~~

~~There are some quantitative aspects that officially define MSMEs that vary depending on the country. These are related to number of employees, annual sales, and value of assets. While in Guatemala a medium enterprise has 50 to 199 employees, in Honduras it has 26 to 100 and in Costa Rica 31 to 100; Value of assets of a small enterprise can vary from US$ 62,000 in Guatemala to US$ 250,000 in Costa Rica. However, in order to define Micro, Small and Medium Enterprises, there is a need to go beyond the official/institutional definitions and qualitative variables must be used for targeting due to the characteristics of certain production activities that require greater specialization.~~

~~The chart below shows qualitative variables for the definition of the MSMEs proposed by CABEI. The Project will consider these aspects when defining the target MSMEs.~~

~~Table No. 16 Qualitative variables for the definition of the MSMEs~~

~~Establishment~~	~~Qualitative aspects~~

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Medium enterprise	Internal division of labour, administrative and accounting controls, meets the legal requirements, more diversified products
Small enterprise	Production processes with some level of technology, greater division of labour without liability, records and accounting controls
Micro enterprise	Low capital-labour relationship, use of simple technology, little division of labour, lack of accounting records

Source: Assessment of MSMEs of five countries in Central America. FINAM. CABEI

In order to attend the MSMEs financial needs across the region, CABEI defines MSMEs as those legalized or not legalized enterprises that count from 1 to 100 employees and have financial needs up to US $ 1 million. This definition of MSMEs includes producers associations and cooperatives if they meet the requirements described above.

In order to ensure that the project is anchored among small scale farmers, organizations and cooperatives of small scale farmers will be prioritized over medium-sized enterprises that concentrate the power of ownership in a single individual or a small group of partners.

Prioritized sectors

An assessment of vulnerability of agricultural sectors will be undertaken during full project proposal development. As an early pre-assessment or screening, most of the sectors that are linked to small-scale farmers has a significant level of vulnerability. These sectors are related to Coffee and Cocoa agroforestry, agro-ecologic production, silvo-pastoral systems, eco-tourism, productive activities developed in protected areas or related to forest, artisan fisheries and small scale aquaculture systems, among others

ii. **Activities of Intermediary Financial Institutions (IFIs)**

As mentioned in the context/background section, IFIs may be private or public banks, microfinance institutions or cooperatives.

IFIs' activities will include the following:

- Planning for and monitoring the technical aspects of the project, including regular field visits and periodic reporting to CABEI.

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- ~~Actively participating in all relevant project activities where appropriate.~~
- ~~If it is appropriate, adopting, during the course of the project, the systems, programmes and tools developed by the project to ensure sustainability of the project outcomes.~~
- ~~Play an active role in coordinating with other stakeholders throughout the project and in particular to maintain a close relationship with CABEI Preparation and submission of periodic progress reports, and regular consultations with beneficiaries and contractors.~~

b. Component 2: Capacity building for the development of production models resilient to climate change.

The purpose of this Component is to provide support through non-refundable resources to MSMEs and IFIs, with the objective of building capacities on the demand side of the adaptation credits (MSMEs) as well as on the supply side (IFIs), which, in CABEI's experience in its intermediation programs, is the key for obtaining the expected results and effectively breaking barriers to finance.

This component will bring the possibility to **MSMEs** of accessing technical assistance for pre-investment (previous to the adaptation projects' final design), as well as ~~the MSMEs that benefit from credits by~~ more intensive training for improving their knowledge about concrete adaptation measures to face climate change, and complementary training on technical and entrepreneurial capacities ~~to enhance their efficiency and competitiveness through the adoption of adaptation measures~~related to credit management. This output will substantially contribute to raising the awareness level of the MSMEs on the needs to adapt to climate change and their concrete measures, under a sustainable management approach regarding natural resources (water, soil, forests and biodiversity), improved technical and production capacity, as well as an improved capacity to do business and access new markets.

The **IFIs**, in turn, will be able to access training that increases their knowledge of the reality faced by their clients, MSMEs, with regards to climate change: they will learn about the factors that improve their resilience, and they will be motivated to reduce their perception of the risk which entails working with this sector and this size of producers.

Technical assistance will be provided to financial institutions certified by the Project Administration Unit (PAU) in its network of intermediaries, who support the overall project objective.

~~Similarly, through technical assistance, the implementation of the adaptation measures detailed in the General Framework sub-section will be promoted direct adaptation measures to hydro-meteorological extreme events.~~

Technical Assistance modalities will be:

2.1 Technical assistance for pre-investment: support aimed at Micro, Small, Medium and Sized Enterprises (MSMEs) for the performance of studies prior to execution of new investments of adaptation to climate change or for the support of existing investments that call for expansion, diversification or support to access financing.

Aimed at existing as well as potential clients of the IFI~~ such as potential clients~~. Consultants from the network of Technical Assistance Providers will be hired depending on the specific needs.

Assessments that can be provided under this activity are:

- ~~-~~Adaptation projects' ~~F~~final designs
- ~~-~~Environmental assessments / analysis~~nalysis~~
- ~~-~~Financial assessment~~study~~
- ~~-~~Accompaniment to the final design of Business Plan to obtain credit.

In order to promote an equitable access to these activities from the seven countries, a minimum target of 10 pre-investment technical assistance per country will be set.

2.2 Capacity building: financial support for initiatives aimed at strengthening capacities on investments oriented to a) ecosystem and agricultural production system adaptation to climate change, and at removing financial obstacles for these sectors; and b) to enhance their technical and entrepreneurial capacities~~, including technical support and assistance to the associated IFIs~~.

Activities under this subcomponent are ~~A~~aimed at MSMEs which have received credit and at the IFIs which are part of the Global Credit Line. The objective is to create awareness, provide knowledge to the MSMEs and IFIs and support the IFIs in the creation of credit lines ~~of~~ focused on adaptation to ~~CC~~climate change. ~~It could be~~The capacity building activities can consist on short or long trainings in ongoing formation modalities.

The proposed activities are summarized hereunder:

2.2.1 Capacity building for MSMEs: managed through sectorial trade associations or IFIs against the proposal presentation.

Topics: Adaptation measures (please refer to Table No. 14), and complementary oOrganizational capacities, eEntrepreneurial, MmarketingMarketing, aAccounting, information technologyIT.

In order to promote an equitable access to these activities from the seven countries, a minimum target of 10 capacity building activities per country will be set.

2.2.2 Capacity building for IFIs: requested to CABEI against presentation of proposal.

- Adaptation to Climate Change for the internal team of the IFI.

- Construction of programs of adaptation to climate change inherent to the IFI (sustainability)

IFIs will be prioritized on the basis of their needs and actual capacities. A minimum target of training 1 IFI per country will be set.

To reinforce the regional aspect, exchanges between project's participants from the 7 participating countries willould be promoted. In the same line, advisory will be provided aiming at improving the managerial, accounting, administrative, permitting and marketing aspects.

Furthermore, sSubstantial boost will be given to the development of production chain building, and innovations will be implemented within the production systems, through adaptation measures to climate change impacts based on sustainable resource sustainable management with an ecosystem approach.

It will also benefit the teams within financial institutions in the Region, strengthening their capacities for credit analysis, incorporating environmental and social risks issues, financial evaluation of projects, business plans, management of protected areas, certification seals, biodiversity and diversification of the loan portfolio. It is expected that capacity building will have an effect on a larger and more flexible placement of loans, better attention to MSMEs and diversification of their portfolio.

2.3 Visibility and Lessons Learned

This sub-component will seek to promote visibility of and learning through of the whole project. The proposed activities are:

2.3.1 Sponsorships: events, courses and conferences are sponsored organized by the IFIs or the organizations/ trade associations and similar, to disseminate adaptation measures. At least, one sponsorship per country per year will be promoted.

2.3.2: Events: organized by the CABEI to disseminate knowledge on adaptation measures. At least one event per country per year will be promoted.

2.3.3: Promotion and Lessons Learned: ~~Promotion:~~ logo design, publicity, publications in magazines, newspapers, brochures, promotion material, banners on the project, always fostering visibility of Adaptation Fund and CABEI; and studies and other activities related to Lessons Learned.

-The project has developed a detailed Lessons Learned strategy, which has been described in Section II-H. The activities described in that section will be financed through this component: systematization of innovating adaptation practices by MSMEs, participatory workshops that gather experiences to be disseminated and that can serve as input for evaluation of the progress of the project, creation of an exchange network of experiences and practices among IFIs, activities of sharing knowledge between the countries.

The Project will promote the participation of MSMEs in entrepreneurs' meetings, congresses, shows, trade fairs, and business rounds (i.e. Agritrade, Biofach, Biofach America, Hablemos de Café, Hablemos de Roya, Taiwan Tea, Coffee and Wine Expo, among others) for them to promote their products and achieve more access to new selected markets.

Eligibility for technical assistance

Whilst loans are managed and monitored by the IFIs and approved by CABEI, Technical Assistance and Adapt-awards are directly managed and monitored by CABEI.

~~As introduced in the previous section, a~~An Ad Hoc Committee, whose composition will be defined during full proposal development, will be established as the decision making body for confirming the assignment of non-refundable resources above USD 10,000 (components 2 and 3). Under this amount, the Project Administration Unit (PAU) will approve selections and disbursements (please refer to section III-A for further details on Implementation arrangements).

The way to access Technical Assistance is through a request that must be sent to CABEI and which contents requested include: background of the IFI / MSMEs, history of training they have received to date, reasons why they need technical assistance, technical description of the requested technical assistance, disaggregated budget, execution schedule and expected results. CABEI's analysis of the application will focus on training needs in terms of climate change adaptation and intermediated credit management.

Before authorizing disbursements to MSMEs / IFIs, CABEI technicians carry out an analysis of coherence, relevance, sustainability and cost-effectiveness. It is important

to highlight that the project will have an adaptation specialist and a specialist in agribusiness, in addition to having the structure of managers in each country who are in daily contact with the beneficiaries. In this way, it will ensure that the proposals of MSMEs / IFIs are framed within the objectives of the project.

A manual including instructions on the conditions under which technical and/or business assistance to MSMEs will be provided. The MSMEs that will be considered will be those having the greatest needs. A draft of this manual will be provided at the fully developed proposal stage.

~~Technical assistance will be provided to financial institutions certified by PAU in its network of intermediaries, who support the overall project objective.~~

MSME's Technical Assistance eligibility of its initiative or project shall be checked by the PAU, through compliance with the requirements listed in the forms designed for this purpose. MSMEs shall submit to the PAU all information necessary to complete the application requirements for technical assistance.

PAU will determine, based on the manuals and conditions of the project, if the initiative submitted by the MSME meets the requirements and has the potential to be viable and feasible. Should it require the submission of an additional study (e.g. pre-investment), the PAU will be responsible for determining its scope and quality.

The ~~MSMEs shall submit to PAUI all information necessary to complete the application requirements for technical assistance.~~

PAU will approve the request based on project's vulnerability criteria and will carry out the recruitment and monitoring process. To perform this process, no objection from the project's administration unit, based on project's guidelines, will be required.

Tasks related to the disbursement of technical assistance and appropriate follow-up will be ensured.

~~Technical assistance will be provided to financial institutions certified by PAU in its network of intermediaries, who support the overall project objective.~~

c. Component 3: Incentive scheme to promote Ecosystem-based Adaptation Measures (Adapt-Award).

Incentives will support changing attitudes towards adaptation to climate change with an approach of conservation and sustainable use of natural resources (land, water, forest, biodiversity), through the implementation of adaptation measures on MSMEs

productive systems. In addition, the incentives will support IFIs adoption of a ~~green~~ credit mechanism that enhances adaptation measures. The implementation of best practices and improved investments will be favoured. This will promote the generation of businesses willing to prepare themselves to adequately face climate variability, and at the same time preserving natural resources and assets.

As introduced in the Background section, Micro, small and medium enterprises are a new world for financiers. The businesses are normally run by families, their financing needs are much smaller, fixed investments limited and business based on quick cash flow. Very few formal banks can service this sector.

The region has, however, an established network of successful financial institutions able to cater for a good deal of the needs for business financing for small entrepreneurs. There still exists a vast need for financing for this sector, even if the lending volumes have been growing rapidly. Environmentally friendly activities pose an even larger financing challenge at this moment for micro-enterprises. As the IFIs work close to them and are subject to smaller individual transaction risk they can accept less stringent collateral.

The measure proposed by this component consists in the refund of 20% of the loan principal granted by the regulated or non-regulated IFIs (up to USD 10,000 as cap - this means that in the case that loans are beyond USD 50,000, the MSME will be granted a maximum of USD 10,000). This incentive will be distributed between MSME and IFIs in a percentage of 60% of the refund for the MSME and 40% for the IFI (12% and 8% of the credit amount, respectively). This incentive is to be awarded only after the adaptation measures have been achieved and monitored.

In order to ensure an equitable distribution of the incentives between target countries, the budget corresponding to a minimum of 100 awards per country will be reserved.

As previously mentioned, whilst loans are managed and monitored by the IFIs and approved by CABEI, Technical Assistance and Adapt-awards are directly managed and monitored by CABEI.

The ratio 12% - 8% is based on CABEI's experience with previous programmes, and is expected to set the optimum conditions for catalysing the repayment mechanism that will ensure the implementation of adaptation measures.

- The refund of 12% of total loan will allow the MSME to repay the sum granted to the balance of capital of the credit held with the financial institution. By paying a sum to the balance on the capital total loan, the proportion that each MSME contributes to the capital balance is increased, and the interest deriving from the credit is reduced. Therefore, the MSME pays the credit acquired in less time.

The incentive of 8% of the total loan will allow the IFI to repay a sum to the total capital ~~total~~ credit to CABEI and will promote changes within IFIs' structures and organization. Adapt-awards are a guarantee of making the credit attractive for the financial institutions: these incentives are expected to increase the level of adoption of the credit line based on CABEI's knowledge of the IFIs' low profit margins from the credit management.~~.~~

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On one hand, this incentive would motivate the IFI to reduce the level of risk of MSMEs and promoting credit mechanisms focused on adaptation to climate change. On the other hand, this incentive acts as a boost towards increased spread (i.e. lower funding cost) for the IFI. Increased funding to new clients (and especially to MSMEs with adaptation needs) should be achieved due to the resulting lower price of borrowing for potential clients.

In addition, the lending terms are tighter in terms of shorter loan maturities, and are priced high to reflect the high funding and transaction costs. The proposed reward facility, shared by the IFI and the clients after the adaptation measures have been achieved, would act as a de facto interest subsidy. The micro-or small enterprise client could thus afford to service the loan from business proceeds and would be induced to plan the adaptation investment.

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Eligibility for Adapt-Award

In order to receive this incentive, MSMEs

- Must have received a loan through mechanisms under Component 1.
- Must have selected at least one ~~EbA~~adaptation indicator at the time of receiving the loan (indicators will be determined during project formulation)
- Must have recorded the parameter to comply with, related to the indicator mentioned above
- Must have met the target set in previous paragraph. Eligible MSMEs will only be awarded one prize per loan.

MSMEs requesting refinancing of a loan, on loan amount or payment period, will not be subject to receiving Adapt-award.

~~Micro, small and medium enterprises are a new world for financiers. The businesses are normally run by families, their financing needs are much smaller, fixed investments limited and business based on quick cash flow. Very few formal banks can service this sector.~~

~~The region has, however, an established network of successful financial institutions able to cater for a good deal of the needs for business financing for small entrepreneurs. There still exists a vast need for financing for this sector, even if the lending volumes have been growing rapidly. Environmentally friendly activities pose an even larger financing challenge at this moment for micro-enterprises. As the IFIs work close to them and are subject to smaller individual transaction risk they can accept less stringent collateral.~~

~~On the other hand, the lending terms are tighter in terms of shorter loan maturities, and are priced high to reflect the high funding and transaction costs. The proposed reward facility, shared by the IFI and the clients after the adaptation measures have been achieved, would act as a de facto interest subsidy. The micro or small enterprise client could thus afford to service the loan from business proceeds and would be induced to plan the adaptation investment.~~

~~On one hand, this incentive would give an incentive to the IFI in order to reduce the level of risk of MSMEs and promoting green credit mechanisms .On the other hand, this incentive act as a boost towards increased spread (i.e. lower funding cost) for the IFI. Increased funding to new clients (and especially to MSMEs with adaptation needs) should be achieved due to the resulting lower price of borrowing for potential clients.~~

The target setting for the incentive scheme will be set on a case-by-case basis. The selection process, which will be defined during project formulation, shall be competitive and transparent. These requirements for granting will be oriented towards good adaptation practices implemented under the focus of the community and not individuals, ensuring that effective monitoring and evaluation procedures have been implemented. An Ad Hoc Committee, whose composition will be defined during full proposal development, will be established as the decision making body for confirming the assignment of non-refundable resources above USD 10,000 (components 2 and 3).

~~IV.~~III. Project's gender approach

The gender strategy must be contemplated from the very design of the project actions, through their execution and implementation, and their monitoring and evaluation thereof.

The Gender strategy will entail the permanent consideration of situations of gender inequality, working with different tools at each intervention, action or activity and will develop the means of adjustment or affirmative action to attain equal opportunities for men and women. This entails, also, advice, accompaniment and training activities for technical equipment and decision-makers of the Project, and the organizations and institutions with which the Project is to work.

The aspect of gender is an integral part to the objective of social equality. That is why it is incorporated and applied as a cross-cutting approach, as an analytical instrument and as the subject of research, which allows to account for the inputs and the different demands or needs of men and women. These asymmetries occur in institutions, in organizations and in the development of the field work. Women are an invisible but active part in the production and community work, and a silent contribution to the management of farms and organizations. It is then necessary to question certain cultural touchstones and develop measures aimed at equating opportunities and making efficient endeavors.

Even though the application of instruments and methods for the incorporation of the gender approach will have a different concrete expression depending on each component, next a set of lineaments is defined to be applied across all Project activities.

These relate to:

- Fostering the composition of mixed groups, including men and women in equal proportions.
- Ensuring that men and women, adult and young population actively partake in groups. To such end, promotion actions and specific motivation techniques must be implemented for women to participate, to take part in groups of interest and organizations and of the economic and political decisions in the different spaces of participation and decision-making.
- Guaranteeing that the information and dissemination systems, as well as support materials of the training and technical assistance training of the Project services, are not designed in a sexist language and are free of any stereotyped roles.
- Ensuring that times, frequencies and places of all activities for each component (meeting, workshop, field days, tours, among others) are compatible with women's time availability.
- Implementing systems of child care, so that women may take part in Projects activities in full.
- Training for technical teams related to commercial and management aspects must contain a gender approach, so that they adequately orient their assistance, involve women in the topics, and capitalize on the potential for management and trading by women.
- Technical teams conducting field work must foster the active participation of women in technical assistance activities, must orient technical assistance bearing in mind the individual conducting the task at hand.
- For training in other aspects, such as management, administration, organization, trading, business promotion, etc. these must contain the gender approach and the appropriate methodology to ensure the actual participation and reception of women.

- Approval of plans and/or projects must be subject to the supervision of a gender expert.
- Execution of funds for different objectives of the Project will give priority to the financing of such projects or plans of business submitted by the organizations with a greater number of women as partners and participants of the project submitted.
- Indicators that show the women's access to the project's benefits, as well as the proportion of women-led MSMEs participating from the Initiative will be monitored.
-

~~V.~~IV. Indigenous People approach

Regarding the specific need of Minorities and Indigenous People, the following activities are proposed:

- Regarding project beneficiaries, this is an open and inclusive Project through which vulnerable rural communities and local organizations can present their own initiatives in order to access credit facilities as well as technical assistance
- The development of the Technical Assistance Instrument/component, will consider the potential beneficiaries' languages and dialects, as well as their contributions and comments during the project formulation phase (socialization process).
- Indigenous Peoples and vulnerable minorities will benefit from T~~t~~echnical Assistance through capacity building, which will enable them to develop and execute projects related with climate changes, entrepreneurship based on an EbA approach~~a~~, taking into account the different cultural and language barriers of the potential beneficiaries.

~~VI.~~V. How the project will take into account non-climatic barriers

Besides barriers related to prices, which are out of the reach of this project, the main non-climatic barriers that have been identified are related, on one side, to access to credit, access to markets, and lack of sufficient knowledge about adaptation measures: the project will directly address these barriers through its three components.

Another category of barriers, would be related to access to energy, housing or basic education. These could be addressed by the project if related with adaptation considerations; however, CABEI is committed to bring support to the communities in these aspects by articulating with its other programs directed to this kind of issues.

Other non-climatic barriers in the small-scale agriculture sector may be related to market access, availability of suppliers and inputs, use of agrochemicals, and land ownership.

In this regard, the project will promote that within the activities of the MSMEs' adaptation proposals, a comprehensive analysis covering the marketing aspects is taken into account specifically and incorporated into the project. This implies including an analysis of the situation of the marketing channels used by the producers and specific actions tending to promote the incorporation of the producers in the production chains. When appropriate, market analysis can also be integrated as part of the business plan. Other subjects of analysis in this sense will be market's access linkage with the road network, delivery times of production, quality and post-harvest losses.

Likewise, the use of agroecological practices limiting the use of agrochemicals will be promoted, and a request will be made to include in the MSMEs' proposals an analysis section on how pest management will be carried out in production - where appropriate. The project will promote performing soil analysis, as an investment that clearly defines the true requirements of the soil in terms of the use of fertilizers. In addition to the climate change approach, information on the damages and hazards associated with agrochemicals will be included in the training activities, in order to promote the generation and dissemination of knowledge on the subject.

The ownership of land is one of the requirements to access the credits, and indeed there are cases where this requirement is not met. This problem is longstanding and cannot be tackled comprehensively from the project. In this sense, what will be attempted from the project is to provide information to those producers who want to access credits and cannot do so because they do not have land ownership, to the corresponding agencies of each country that can advise and initiate actions to modify / solve their situation.

~~VII.~~VI. Added value of the regional approach

Intermediation as proposed, is characterized by the impact potential. Funds are delivered to a widespread network of financial institutions, which are those having direct relationship with the local MSMEs. This impact is then multiplied by the regional approach: CABEI is a regional Development Bank, with the capacity of massively extend the aim of the project to seven countries where the credit to small agriculture is almost non-existent.

As presented in the background / context section, within CABEI, there are Regional Offices in each one of the Bank's founding member countries (Guatemala, El Salvador, Honduras, Nicaragua and Costa Rica). Each office has direct contact with the IFIs (intermediated modality) and other projects at each Regional Office's discretion (direct modality with the public and private sector). Panama and the Dominican Republic are supervised directly from the Bank's Headquarters in Honduras through a similar structure as within the regional offices.

CABEI has proven expertise in financial intermediation with a regional scope, as shown in the background / context section (see sub-section *f* and its Table No. 11). The scheme proposed for this project has been largely tested and has proven to be

the most cost-effective for the purpose of reaching the rural MSMEs effectively and with the lowest transaction and management costs.

One of the main advantages of the regional approach is that it fosters best practices under standards which show a significant variability among countries. As such, best adaptation and financial practices can be capitalized in the whole region. Other kind of activities that will benefit from being implemented uniformly across all 7 countries are those regarding the monitoring, evaluation and information systematization formats. It can as well guarantee a regular flow of information where progress of activities can be contrasted against the plan, adjusting any discrepancies per country from a central unit. This allows taking corrective actions if necessary during project execution.

This system also promotes a better process for learning, by identifying cases that may have succeeded, in order to systematize information on the factors that helped promote best practices and in order to replicate them. Similarly, the search for problems faced during project execution will be promoted across all 7 countries, as well as the experiences that did not turn out as intended in order to learn to overcome such problems and to avoid them in the future.

Finally, it can be emphasized that El Salvador and Guatemala do not have Adaptation Fund accredited Implementing Entities; this regional proposal is therefore a great opportunity for countries to access AF funds and for the AF to reach these countries. In the case of Costa Rica, it has already used the 10 million cap per country and this is the only way they can continue developing adaptation strategies, and in innovative manners.

B. Describe how the project /programme would promote new and innovative solutions to climate change adaptation, such as new approaches, technologies and mechanisms.

In the region, a major constraint limiting the growth of any small business is the availability of capital. Conservative banking practices have left the agricultural sector with limited financing, due to the high risks associated with its operations. Therefore, barriers in banking and business need to be removed and an enabling environment that catalyses resilient investments in micro-small and medium sized enterprises needs to be created.

Therefore, one of the major innovations of the Project is to reduce the obstacles to credit access on the part of producers: the project is to promote access to lending through financial and non-financial services that will allow to reduce the risk inherent to all production activities; similarly, these systems will be promoted through the network of IFIs that CABEI has across the region. Through this financing, the implementation of best practices for production and conservation of natural resources (soil, water, forests and biodiversity) will be promoted.

The promotion to **incorporate an adaptive approach to climate change in training**, introducing instruments based on the conservation of ecosystem services for the adaptation to extreme events and climate variability aimed at small scale producers is necessary but still has not been carried out in the region. This training is intended to promote sustainability of the measures favoured by this Project over time.

Also, it is key to **strengthen production chains**: during the project's cycle, producers will be coupled with buyers, benefits and agro-industries interested in the production and trading of environmentally friendly services and goods.

The incorporation of a **gender approach,** as well as visibility of **indigenous peoples' issues** across all activities and project stages is new and poses a challenge for all actors involved, ranging from the executing units to the targeted population itself.

Lastly, the **regional aspect** is worth stressing: even though there are precedents with the above mentioned CAMBio project, this project proposes to overcome the difficulties to reach the most vulnerable producers with emphasis placed on building resilience to climate change. The fact that two more countries have joined the initiative must not be underestimated. This will constitute an invaluable contribution to building resilience in a region where climate change impacts are common and where good or poor practices adopted by the producers of one country may affect the neighbouring country given the short distances between their territories. A good example of this may be the dissemination of some pests or the management of water resource.

C. Describe how the project / programme would provide economic, social and environmental benefits, with particular reference to the most vulnerable communities, and vulnerable groups within communities, including gender considerations. Describe how the project / programme would avoid or mitigate negative impacts, in compliance with the Environmental and Social Policy and Gender Policy of the Adaptation Fund.

The project will facilitate access to credit to MSMEs practices that incorporate adaptation measures while ~~protection and conservation of natural~~protecting natural resources, increasing their adaptive capacity and reducing vulnerability to climate variability. This being an integral approach, the project brings a significant variety of benefits. ~~(land, water, forest and biodiversity) in their~~ ~~The project will facilitate access to credit to MSMEs practices that incorporate protection and conservation of natural resources (land, water, forest and biodiversity) in their businesses, products and services. Thus, the importance in which the three pillars, economic, social and environmental, enhance each other becomes undoubted.~~

Please find below a first screening of the economic, social and environmental benefits that project's activities will provide.

Economic benefits	Social benefits	Environmental benefits
• Further increases in household incomes as a result of improved adaptation measures and diversified livelihoods. • Generation of rural employment • Development of environmentally sustainable business allows entry to new business niches. • Increased financial stability during times of extreme events • Increased competitiveness • Sustained and resilient production yields comparable to conventional agricultural approaches. • Increased forest services and soil carbon. • Increased capacity for developing and implementing efficient adaptation approaches to climate change leads to protection of property and farmer's incomes. • Gender perspective promoted by the project will enhance self-consumption, generation of small-scale income and the care of the family production unit. • Increased capacity for developing and implementing efficient adaptation approaches to climate change that lead to protection of	• Increase in agricultural yields and income will improve living conditions of the small farmers. • Enhanced resilience and preserved landscapes promote the roots of communities. • Food supply will be enhanced. • Increased potential for agriculture diversification. • Increased skills focused on climate change adaptation approaches. • Increased gender equality and representation by women within community structures. • Participatory processes enhance local capacity of coming together and making collective decisions. Social cohesion. • Increased capacity for developing and implementing efficient adaptation approaches to climate change • Incorporation of gender and indigenous perspective.	• Increased maintenance and provisioning of ecosystem services such as carbon sinks, water flow regulation, erosion control, pollination and soil fertility. • Load on land diminished, contributing to strengthen the carbon and essential nutrients cycles. • Avoid erosion risks upon the occurrence of heavy rain that causes the decapitation of the surface horizon and the exposure of low permeability layers and less content of organic matter • Enhanced carbon sequestration contributing to mitigation of climate change. • Increased forest and crop species diversity creating resilience to climate change and sustained ecosystem functioning and services. • Increased knowledge and awareness about climate change and its impacts will help create consciousness on environment protection.

property and farmer's incomes. • Access to credit for adaptation investments ~~and promoting green credit products.~~ • Regional partnerships will be established to promote environmentally friendly business in the countries~~, such as Central American Commission on Environment and Development (CCAD), Cleaner Production Centers, among others~~.		

Economic benefits

Access to credit for rural MSMEs

As presented in the background section, according to a recent IDB assessment[31], in the majority of Central American countries, credit to the agricultural sector accounts for roughly 3% of total credit offered by regulated financial systems, with a higher percentage in Guatemala (8%) and Nicaragua (10%). Even so, there is a significant number of microfinance institutions (MFIs) devoted to serving the rural sector that have a presence there, but they face the following problems: on the supply side, MFIs do not have permanent long-term financing, methodologies or trained employees to implement financial products and services that better meet client needs. On the other side, there is an unmet demand on the part of rural clients in terms of higher amounts of credit to invest in productive assets, longer term loans and different modalities and mechanisms that facilitate the use of resources when necessary.

The Central American Agriculture Policy 2008-2017[32] aims to promote insertion of small-scale agriculture in the markets, as well as its regional integration, by strengthening their organizations and associations to turn it into an attractive, profitable and sustainable sector, so as to contribute to achieve a greater level of human equal development for Central American rural population. Regarding this objective, the Policy expressed concerns on the same line as the IDB assessment.

[31] Trujillo, Verónica and Navajas, Sergio (2014). Financial Inclusion in Latin America and the Caribbean: Figures and Trends. FOMIN, IDB. Modified version January 2016.

[32] Central American Agriculture Policy, 2008-2017: A competitive and integrated agriculture for a global world / Central American Agricultural Council. – San José, Costa Rica: Consejo Agropecuario Centroamericano, 2007.

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Some of the obstacles for the development of financial services are, among others, the perception by the private sector of the agricultural sector as a high risk, lack of financial instruments that accommodate the needs inherent to the agricultural activities. This Policy

These are all obstacles that this project aims to face. This initiative will reduce barriers to credit for at least 5,000 rural MSMEs for adopting adaptation measures, and will increase awareness among IFIs of potential market opportunities, having a target of at least 10 IFIs that operate credit lines for adaptation investments. Both MSMEs and IFIs will receive incentives for adopting this scheme (at least 4,000 projects will be granted Adapt-awards); and training will build capacities of MSMEs to manage credits and of IFIs to implement a financial product that responds adequately to MSMEs' needs and to reduce their perception of rural MSMEs as a high risk.

Production losses due to climate change

Aggregate estimates put the economic cost of a 2.5°C rise in temperature (most probably around 2050) for the region at between 1.5 and 5% of the region's present GDP. As introduced in the background section, estimates based on climate change scenarios suggest that grain production could drop significantly during this century. Decreases in yields could be of up to about 35%, 43% and 50% for maize, beans and rice, respectively, by the end of the century under the A2 scenario and of 17%, 19% and 30% under the B2 scenario relative to the yields of the last decade, assuming the absence of adaptive measures. These potential losses would have a direct impact on producers, most of whom operate as family businesses at subsistence levels, but they would also impact food security, poverty and the degree of dependence on grain imports, which has already been rising over the past three decades[33].

Other processes that generate large impacts on the agricultural sector are those related to plagues: epidemic diseases provoked by the pine beetle ("gorgojo") or the coffee rust ("roya"), have already caused irreparable damage to woods and plantations. These plagues are having greater impact with climate change, since they are related to longer drought periods (in the case of pine beetle) and with excessive humidity due to intense rainfall (coffe rust).

This project will bring access to credit for a wide range of adaptation measures, that will help to reduce risks associated with climate events in production activities, to reduce the pressure on the ecosystems and promote conservation of natural resources, and to improve social and economic resilience of the populations (please see Table No. 14). These measures will build resilience to the impacts of climate variability and impacts that are predicted by the different scenarios, related to

[33] CEPAL – ECLAC. The economics of Climate Change in Latin America and the Caribbean, 2013d.

temperature increase, droughts, rainfall intensity, wildfire, hurricanes, and all consequences derived from them.

These adaptation measures will be adopted by at least 5,000 MSMEs in a first stage and envisages multiplying the effect based on the revolving nature of the GCL. Adaptation measures will reduce production losses due to the negative effects of climate variability, and will contribute to increase productivity and quality of local production, thereby improving the living conditions of the rural producers. In addition, and considering the difficulties of access to financing sources of the beneficiary group, the project provides for knowledge strengthening about all potential negative effects of climate change and variability over the family groups of small-scale producers.

Social vulnerability

Assessments throughout the whole region draw the same picture: scenarios of water availability in Guatemala indicate a reduction from 5% to 30% by 2050 over the current period (2010); areas located in the dry corridor (from the border of El Salvador and Honduras to the border of Mexico) and the Petén area will present significantly less water availability by 2050. Today, in Central America and Dominican Republic, small farmers are already seriously impacted by droughts associated to climate change, and future scenarios indicate that impacts will be highly intensified. Changes in streamflow and water availability have been observed and projected to continue in the future. These patterns will affect human health, given the region's population growth rates and vulnerabilities in existing health, water, sanitation, nutrition, and food production in poor regions.

Assessments show that today, farmers lose, on average, 55% of their basic grain production during drought periods. The response capacity of these farmers is very low, since very few actually take specific actions to adapt to climate variability.

The region presents 33.5% of rural poverty and a high rate of migration from rural areas to the cities, which continue their growth at each climate impact, as Tegucigalpa, that has been doubling its population every 10 years during the last 3 decades.

Adaptation measures promoted by this project will contribute to improving socio-economic wellbeing and building resilience of the rural communities to the impacts of climate change. Without the project's proposed adaptation investments, food security, access to water and ecosystem resilience will remain a major challenge which will be exacerbated by climate change. The project will enhance preservation of landscapes; will promote preserving the roots of communities; will increase skills focused on climate change adaptation approaches; will increase gender equality; and will promote participatory processes that enhance local capacity of making collective decisions.

Environmental benefits

The available evidence for Central America indicates that environmental degradation and the destruction of biodiversity are processes that are already in full sway and that will very probably become more marked as climate change progresses. For example, the potential biodiversity index (PBI) for Central America points to a reduction of approximately 13% during this century as a result of changes in land use (without climate change). Climate change is projected to boost this loss to something between 33% and 58% (respectively, for scenarios B2 and A2) by the end of the century (see map III.1)[34].

Likewise, communities of rural areas are more vulnerable to climate change due to their levels of environmental degradation. As expressed by the UNISDR, environmental degradation, settlement patterns, livelihood choices and behavior can all contribute to disaster risk, which in turn adversely affects human development and contributes to further environmental degradation. That environment, development and disasters are connected is rarely disputed, but the multi-dimensional role of environment has caused considerable confusion. While it is often recognized that ecosystems are affected by disasters, it is forgotten that protecting ecosystem services can both save lives and protect livelihoods[35].

Implementation of project activities by at least 5,000 MSMEs will increase the ability of ecosystems to sustain essential ecosystem provisioning, supporting and regulating services in the face of climate change: provision of clean water, erosion prevention, flood control, reduction of load on land increase of forest and crop species diversity as well as leading to co-benefits such as carbon storage. This increased resilience to climate change will have a positive impact on livelihoods, acting as soft infrastructure against extreme events.

The project as a whole will support, through its Technical Assistance component, changing attitudes towards adaptation to climate change with an approach of conservation and sustainable use of natural resources (land, water, forest, biodiversity), through the implementation of adaptation measures.

The implementation of best practices and improved investments will be favored. This will promote the generation of businesses willing to prepare themselves to adequately face climate variability, and at the same time preserving natural resources and assets.

Benefits for Indigenous Peoples and vulnerable minorities

The Seventh session of the UN Permanent Forum on Indigenous Issues, held in May 2008, focused on the relationship between climate change and indigenous peoples' livelihoods[36]. In this Forum, it was declared that Indigenous peoples are among the

[34] ECLAC (Economic Commission for Latin America and the Caribbean). (2011b), "*Variabilidad climática y eventos extremos en Centroamérica: reporte exploratorio*", paper prepared for SICA Presidential Summit and Consultative Forum, Mexico City, 14-16 December 2012, ECLAC sub regional headquarters in Mexico, unpublished.

[35] UNEP – ISDR. Environment and Vulnerability: Emerging Perspectives. Prepared on behalf of the UN ISDR Environment and Disaster Working Group, 2007.

[36] Seventh session of the United Nations Permanent Forum on Indigenous Issues, 21 April to 2 May 2008 in New York: "Climate change, bio-cultural diversity and livelihoods: the stewardship role of indigenous peoples and new challenges"

first to face the direct consequences of climate change, owing to their dependence upon, and close relationship with the environment and its resources.

As expressed by Minority Rights Group International, Indigenous peoples tend to live close to nature, in relatively natural environments, rather than in cities, growing and making much of the food and other products that they need to survive. This gives them an extraordinarily intimate knowledge of local weather and plant and animal life. Traditional wisdom on matters such as when to plant crops or where to hunt for food has been accumulated over many generations, but now that the climate is shifting, some of those understandings are proving to be no longer valid[37].

Some of the main obstacles faced by the Indigenous peoples and vulnerable minorities in light of climate change have been identified by these bodies:

- Some mitigation measures may have undesirable direct and indirect consequences for indigenous communities. For instance, **certain agricultural initiatives** may reduce greenhouse gas emissions but may lead to an increase in monoculture crops and plantations and an associated decline in biodiversity and food security.
- **Deforestation**, particularly in developing countries, is pushing indigenous families to migrate to cities for economic reasons, often ending up in urban slums. Then, they will be unable to maintain the current balance between people and nature. Loss of the forests will exacerbate climate change, with consequences for the entire world.
- Adaptation actually takes place at local level and people are already making the changes they can. But individuals' and communities' ability to adapt is limited, for instance by **lack of financial resources and technical expertise**, and by the sheer scale of some of the changes that are needed.

Finally, the UN Permanent Forum on Indigenous Issues, in its fifteenth session held in May 2016, focused on the relationship with land and environmental degradation: "While it is recognized that land and environmental degradation are factors of global concern, they have caused severe and stressful negative impacts among indigenous peoples as a result of land mismanagement such as the overexploitation of natural resources through factors such as mining and the overutilization of forest wood (timber) and other products. This has resulted in soil and water degradation, leading to the acceleration of the effects of climate change, low food production and uncertain livelihoods for communities"[38].

[37] The Impact of Climate Change on Minorities and Indigenous Peoples © Minority Rights Group International, April 2008
[38] UN Permanent Forum on Indigenous Issues, Report on the fifteenth session (9-20 May 2016). Economic and Social Council, Official Records, 2016, supplement No. 23.

This project will address many of the identified challenges: it will promote adaptation measures with an approach of conservation and sustainable use of natural resources (land, water, forest, biodiversity). These practices will promote the conservation of natural habitats and ecosystems where indigenous communities live, preventing deforestation and environmental degradation, and encouraging agriculture diversification. Moreover, adaptation projects will be proposed by each community and will therefore be aligned with the communities' culture and knowledge. Livelihoods will be conserved and strengthened, reinforcing communities' roots.

The project will help addressing the issue of lack of financial resources and technical expertise, since components 1 and 3 will help accessing credit for rural organizations / MSMEs, with the technical support of component 2. Technicians working on the project will always consider the potential beneficiaries' languages and dialects for any call, training performance, and communications in general. This will ensure the inclusion of beneficiaries belonging to vulnerable minorities.

Benefits related to gender equality

From the economic point of view, gender perspective promoted by the project will enhance self-consumption, generation of small-scale income and the care of the family production unit.

Considering there is little interest by the traditional financial system to manage small credits, which entails high administrative costs, and in activities deemed of high risk, and even more so in the case of women, this initiative intends to provide credit to those groups of risk, with gender mainstreaming.

As micro-businesses seem to be seen by rural women as a common alternative to escape poverty, and a high percentage of them falls within this line , as compared with small and medium sized enterprises, the fact that this Initiative will include micro-businesses is important to reach impoverished rural women.

Literature and case studies about Costa Rica and Nicaragua have been analyzed, and what stands out the most is the fact that managing micro-businesses and credit collectively provides rural women in conditions of poverty an opportunity that would be difficult to attain individually. Main reasons: use of joint guarantee; more chances for time distribution among the house and the business obligations; exchange of experiences and skills; greatest chances of seizing offers for training and increased levels in self-confidence.

One of the challenges mentioned by women concerning access to credit is the lack of experience, both in the activity for which they require resources, and in the use and handling thereof (accounting, development of profitable projects, etc.). These sorts of topics will be addressed by the project's Technical Assistance, which will be especially careful when making the calls, with the purpose of promoting women participation.

It is in the interest of the Initiative that women have a significant role: as highlighted by Technical Assistance Providers from the CAMBio project, women are better at meeting due dates and at implementing business plans. Working with women will likely bring more probabilities of assigning Adapt-awards.

With respect to social issues, gender perspective promoted by the project aims to promote gender equality and representation by women within community structures. In addition, the fact of promoting women participation in technical assistance activities will attempt to counteract the typically limited access to training services, related to lower literacy levels than of that men.

It is important to highlight that women are among the most impoverished and uninformed sectors of the rural population. This Initiative will help increase knowledge and awareness about climate change and its impacts - which are higher in the face of women's vulnerability - and will help create consciousness on environment protection that will provide healthy and sustainable livelihoods. Moreover, women have in general a better vision of how necessary sustainable practices and adaptation measures are.

Indicators will be available to show the women's access to the project's benefits. In no case may the project's activities increase or create new gender gaps. To ensure this principle, gaps will be detected as well as specific situations where special attention must be paid by providing specific training in this topic to technicians in contact with producers. The forms will be the instruments that will enable technicians to initially survey information. Based on the accompaniment needs detected, work may also be conducted through workshops with MSMEs and/or IFIs' beneficiaries.

D. Describe or provide an analysis of the cost-effectiveness of the proposed project / programme and explain how the regional approach would support cost-effectiveness.

The cost-effectiveness of the proposed Project relies on many factors, mainly related to the cost-effectiveness inherent to the Ecosystem based Adaptation approach, and to the participation mechanisms that will be undertaken during the project.

The selected adaptive measures contained in the project consist mainly of a series of activities that will strengthen ecosystem services and achieve resiliency in food production systems as a means to reduce the vulnerability of rural communities. This has multiple benefits that will greatly exceed the costs in the short, medium and long term.

Although detailed estimates for the project have not been done at this stage, if we consider the **cost of production/productivity losses** due to climatic events and we take into account that the technologies and practices proposed in this project are low-

cost, adapted to the reality of MSMES, constructed from local knowledge, strengthening production systems in the long term, catalysing new business and job creation, cost-effectiveness is demonstrated.

Resilience to multiple pressures: as emphasized by UNEP/SEI, EbA pathways result from the combination of ecosystem management strategies supported by flexible mechanisms and enabled through adaptive processes. Management of ecosystems within interlinked social-ecological systems will enhance ecological processes and services, essential for resilience to multiple pressures.

Stakeholder participation at all project levels will contribute to the cost-effectiveness of the project. Participation will ensure adequate planning and implementation of activities in line with the project objectives and with the local development and stakeholder priorities, as well as complementarity with ongoing and planned programs and projects. At field level the project will benefit from the experiences and knowledge of MSMEs, farmers, indigenous peoples, NGOs, and other institutions.

The regional approach is key to bring communities and financial institutions to learn much more that in a scenario of isolated adaptation projects. There are many activities through which exchanges between countries will be undertaken, whether as a consequence of results dissemination, or as a product from the Capacity Building Component, that will connect MSMEs from the different countries in sectorial events or event trainings designed especially for the purpose of sharing adaptation experiences. One of the main benefits of this regional approach is the possibility of connecting MSMEs which may be otherwise isolated by geography or lack of resources.

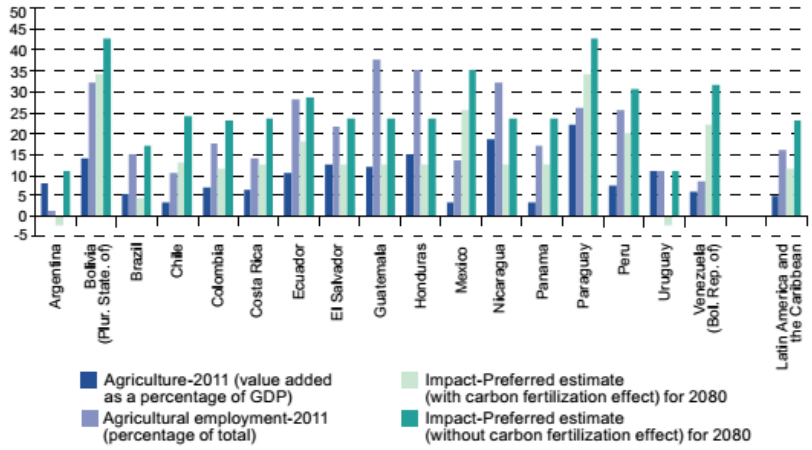
In order to generally support the concepts about cost-effectiveness of the project components, the following data, extracted from *The economics of climate change in Latin America and the Caribbean* report developed by ECLAC[39], have been taken as a reference.

The expected impacts of climate change are significant and they will vary strikingly across countries in line with the importance of the farming sector in the different economies and with varying socioeconomic and climatic conditions.

[39] The economics of climate change in Latin America and the Caribbean Paradoxes and challenges of sustainable development

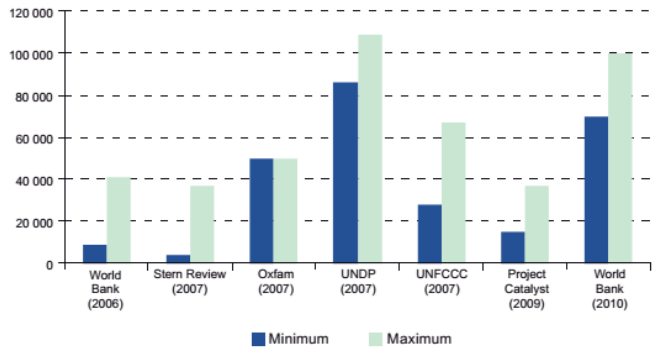
Latin America: the agriculture sector and the impacts of climate change, 2011 and 2080 [a]

(Percentages)



In general, the estimated global costs of adaptation represent less than 0.5% of GDP, and the World Bank (2010c) estimates that the economic costs of adaptation will represent 0.2% of the projected GDP for developing countries for this decade. These costs are expected to fall to 0.12% for the period 2040-2049, while, for South-east Asia, they are projected at over 0.5% for 2020-2029 (World Bank, 2010c). As these are conservative estimates, in all probability the final costs will be higher (Parry and others, 2009).

Figure No. 23.~~16~~ Developing countries estimated adaptation costs (millions of dollars per year)

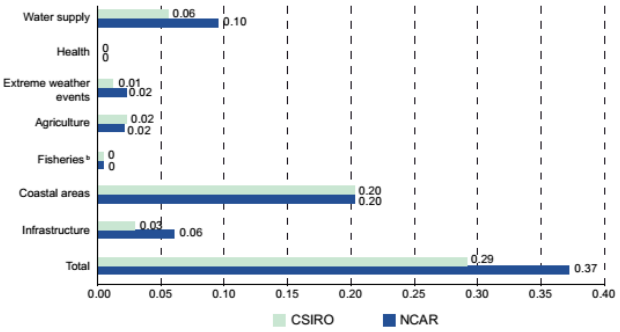


The adaptation costs estimated for the Latin American and Caribbean region are below 0.5% of the region's current GDP, although these estimates entail a high level of uncertainty and will very probably increase (World Bank, 2010c; Vergara

and others, 2013) (see Figure No. 2316). The World Bank estimates that adaptation costs in agriculture, water resources, infrastructure, coastal zones, health, extreme weather events and fisheries will be below 0.3% of the region's GDP (between US$ 16.8 and US$ 21.5 billion per year up to 2050 (World Bank, 2010b). Agrawala and others (2010) estimate the region's adaptation costs for irrigation, water resource infrastructure, coastal protection, early warning systems, investments in climate-resistant housing, cooling and refrigeration, the treatment of illnesses and research and development to be around 0.24% of regional GDP. The United Nations framework Convention on Climate Change (UNFCCC, 2007) believes that the investments and financial flows needed to forestall the impacts of climate change in the region between now and 2030 will amount to approximately US$ 23 billion for the water resources sector and between US$ 405 million and US$ 1.726 billion for additional infrastructure. Investment in coastal protection will also be required, and is estimated at between US$ 570 million and US$ 680 million or around 0.2% of regional GDP (see Figure No. 2417).

The estimates that have been prepared so far for adaptation costs in Latin America are thus based mainly on providing protection for coastal zones, agricultural activities and water resources (i.e. "hard adaptation measures"). However, there are many other types of costs that have yet to be identified. Nonetheless, the available evidence demonstrates that implementing adaptation processes makes economic sense where they can help to reduce some of the other higher —and in some cases unavoidable and irreversible— economic costs of climate change.

Figure No. 24.17 Latin America and the Caribbean: annual costs of adaptation, to 20150 (Percentages of regional GDP)



There is still some uncertainty about what the results of these processes will be, but they may help to reduce the economic costs of climate change considerably and may even generate additional economic gains[40] ~~(Agrawala and others, 2010; Tan and Shibasaki, 2003; Bosello, Carraro and De Cian, 2010; Rosenzweig and Parry, 1994)~~.

[40] Agrawala and others, 2010; Tan and Shibasaki, 2003; Bosello, Carraro and De Cian, 2010; Rosenzweig and Parry, 1994

The evidence indicates that adaptation is a complex, heterogeneous process that is difficult to gauge accurately, since it involves non-linear patterns and generates unequal and uncertain costs from one region to the next. There is already a wide range of cost-effective options that can significantly reduce the economic, social and environmental costs of climate change and that bring considerable side-benefits, such as promoting energy efficiency, improving the health care, and reducing deforestation and air pollution. The fact remains, however, that these adaptive measures do have some limitations and can therefore not prevent some of the residual —and irreversible— damage associated with climate change. Some of the available options will prove to be inefficient because they will cause significant collateral damage. Furthermore, there are institutional, technological and resource barriers that will hinder the implementation of some suitable adaptive measures, and cases where the market may not be able to interpret some of these measures correctly. For example, a sustained change in mean temperatures that is believed to be temporary may lead to the over-use of water resources that will have adverse consequences in the future[41]. ~~(Easterling and others, 1993; Bosello, Carraro and De Cian, 2010; Fankhauser, 1995; Rosenzweig and Parry, 1994; Darwin and others, 1995; Galindo, Reyes and Caballero, 2014).~~

Be that as it may, current conditions underscore the importance and the economic advantages of planning and implementing adaptive processes, including a range of flexible measures that may help improve risk management in the context of sustainable development. This kind of adaptive strategy for reducing the most negative and irreversible impacts of climate change can be implemented without waiting for agreement on a global programme to deal with climate change[42] ~~(Bosello, Carraro and De Cian, 2010)~~. Adaptive measures should consider both preventive and corrective measures for forestalling extreme, irreversible types of damage in order to protect the most vulnerable sectors of the population and the region's natural assets, along with actions that will yield an array of added benefits (improvements in health, social security and energy efficiency, reductions in air pollution and deforestation) while avoiding inefficient forms of adaptation. All of this will entail a transition to a sustainable form of development (World Bank, 2008). Sustainable development processes directed along a path of equality and low-carbon growth will require the concurrent implementation of interconnected processes for supporting adaptation to, and the mitigation of, climate change (IPCC, 2014b). This means that the outcomes of adaptation processes will hinge upon mitigation processes, while, at the same time, adaptation processes contribute towards mitigation.

E. Describe how the project / programme is consistent with national or sub-national sustainable development strategies, including, where appropriate, national adaptation plan (NAP), national or sub-national development plans, poverty reduction strategies, national communications, or national

[41] Easterling and others, 1993; Bosello, Carraro and De Cian, 2010; Fankhauser, 1995; Rosenzweig and Parry, 1994; Darwin and others, 1995; Galindo, Reyes and Caballero, 2014

[42] Bosello, Carraro and De Cian, 2010

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adaptation programs of action, or other relevant instruments, where they exist. If applicable, please refer to relevant regional plans and strategies where they exist.

The project is a result of the preparation of environmental plans in Central America. During the process of constructing the Environmental Plan for the Central American Region (PARCA, Spanish acronym), the Mesoamerican Biological Corridor (MBC) was the backbone for forest and biodiversity conservation. In this approach, traditional conservation activities in protected areas are complemented with sustainable productive activities in areas of interconnection, considered vital for biodiversity and the livelihood of rural populations. According to the CBM rationale, these areas of interconnection are private lands (individual or collective) that support the economy of millions of people and agroforestry practices and forest plantations play a key role in their sustainability.

Likewise, the Project is aligned with the 2008-2017 Central American Agricultural Policy (PACA), approved by the Council of Ministries of the CAC and Heads of State and Government of the Countries of the Central American Integration System (SICA), on October 19 and December 12, 2007, respectively, as the "key instrument to strengthen regional integration, competitiveness of the agricultural sector, regional food security, and to favour greater access by small and medium sized producers to the benefits of regional integration and private-public collaboration".

In addition, such initiative is aligned with the 2009-2024 Regional Strategy on Agro-Environment and Health (ERAS), the purpose of which is to build a mainstreaming approach model in socio-economic and environmental management of the Central American region; the 2010-2030 Central American Strategy for Rural Territorial Development (ECADERT), the purpose of which is to respond to the needs of attaining an integrated development of rural territories, while keeping the cultural identity of its inhabitants and communities; the 2010 Regional Strategy of Climate Change (ERCC), based on the implementation of actions directed at safeguarding the natural heritage, the biodiversity, the multiple cultures and the diversity in the face of the threats that pose Climate Change, as well as seize the opportunities to reverse the accumulated social deficits and improve the populations' life quality.

I. Central America

Supplementing the economic integration process, the bonds between the environmental and the agricultural sectors have grown stronger over the last years. The collective drafting of an inter-sectorial agenda between the Council of Agricultural Ministries (CAC) and the Council of Environmental Ministries (CCAD) was the springboard for this process, which has become consolidated with the participation of the Central American Ministries of Health. In June 2006, the preparation of the Regional Strategy for the Agro-Environment (ERAS) was agreed upon. This Strategy addresses topics related to land sustainable management (water and forest resource

management, land planning), climate change, biodiversity and green businesses, among other aspects.

In this regard, the 2010-2030 Central American Strategy of Territorial Rural Development (ECADERT) is the answer to a need of Central American societies to overcome structural obstacles for a sustainable and inclusive national development. To such end, the integrated development of rural territories is paramount. Territories, as socio-geographical spaces historically constructed, are associated with a specific cultural identity of its inhabitants and communities.

This Strategy arises from the urgency for strengthening creative and innovating capacities of the rural population, public institutions and organizations of the civil society in the Region's territories, to establish inclusive mechanisms that allow access to development leading to social and territorial cohesion. That is the ultimate purpose of ECADERT.

The Central American Agricultural Policy (PACA) favors free trade. This poses multiple challenges to the agricultural sector in its traditional role of supplier of raw material and food. These challenges include, among others: the demand for secure and quality food; a higher level of competition, both at international and regional markets; value concentration in the trading links closer to the final consumer in the chain of agro-production; the new technology development based on IT and communication, and on the development of knowledge; the defense and strengthening of the region's sanitary and phytosanitary assets; and a stronger commitment with environment preservation.

The 2012-2032 Food and Nutrition Security Policy for Central America and the Dominican Republic stems from the efforts of the Government members and the Institutions of the Central American Integration System to ensure Food and Nutrition Security of the population. To such end, principles have been established consistent with the project's outputs, mainly the Sustainability principle. Such promotes regional actions in benefit of the development of a food and nutrition system that is sustainable in political, economic, social, cultural, educational and environmental terms.

II. Beneficiaries' countries adaptation strategies.

Beneficiary countries existing plans and Adaptation strategies are included below, with the purpose to demonstrate the consistency of the project with National strategies.

1. Guatemala.

i. Law on Climate Change

The law enacted on September 9, 2013, provides the need for a plan of action for adaptation and mitigation in the face of climate change, expressly stating that one of the adaptive measures or actions should be instrumenting financial tools to help comply with adaptive actions or biodiversity conservation.

ii. Nationally Determined Contribution to the Mitigation of Climate Change (NDC) before the United Nations Framework Convention on Climate Change (UNFCCC).

The Government of Guatemala, through several national instruments, promotes and proposes reduction of vulnerability and improvement of adaptation processes all across key sectors; by prioritizing the strengthening of adaptation processes.

As regards agriculture and food security, the crop monitoring system coordinated among the government and private sector programs, focused on nutritional food security, together with international agencies, gives priority to those actions with a direct effect in food production, mainly for self-consumption and subsistence in top priority areas. The largest portion of the population is connected to the agricultural sector and there is the need to provide producers with the necessary tools and technology to cope with climate change and variability in the sector, promoting best adaptation practices fostering the adjustment of the agro-productive systems to the changing scenario of the climate and its derivatives.

iii. Integrated Coastal Area Management Plan of Guatemala (Governmental Agreement 328-2009).

The plan contemplates the climate change variable and is consistent with the National Policy of Climate Change for the protection of marine-coastal ecosystems.

iv. National Strategy of Biological Diversity (2012-2022)

This strategy promotes the integration of biological diversity in the adaptation to and mitigation of climate change, as well as the appreciation of traditional knowledge of indigenous peoples, by acknowledging the role played by the indigenous and *campesino* economic models, culturally pertinent in the adaptation to climate change.

v. 2032 K'atun National Development Plan

The National Development Plan: *K'atun, Nuestra Guatemala 2032* incorporates the notion of sustainability and resilience in social, economic, and environmental terms; the promotion of social equality; the respect for cultural plurality and the defense of human rights; and the consolidation of democracy, highlighting the importance of citizens' freedom and participation in the management to improve living conditions and production capacities of the population.

One of the main development focus of the plan is Natural Resources today and onwards (chapter thirteen). This chapter proposes that sustainable development cannot be thought of without appropriate environment and natural resources management. There is no room for sound economies, sustainable societies or healthy population in countries where the environment and the natural resources are not respected and protected. This focus stresses the need to protect and enhance natural resources in a healthy balance with social, cultural, economic and territorial development, allowing meeting the current and future demands of the population in conditions of sustainability and resilience, especially in the face of the impact of phenomena currently posed by nature.

2. El Salvador

i. National Climate Change Plan.

In El Salvador, the National Climate Change Plan (PNCC) is a key instrument for the equitable application of the United Nations Framework Convention on Climate Change (UNFCCC), since it will allow generating information for the building up of evidence on impacts from climate change on the territory. It will ensure consistency with national objectives of development project and country's climate actions, while promoting Monitoring, Reporting and Verification (MRV) systems capable of showing results, efficiency and transparency in the use of resources. It will enable to build an institutional architecture necessary for financing and technologies management, and it will provide the opportunity for the alignment with international policies in matters of trade, technology and intellectual property, sustainable development, cooperation and migration, among others.

The PNCC of El Salvador has 8 outputs. Outputs 2, 3 and 4, listed below, are directly aligned with outputs 1 and 2 of this project.

Output 2. Program of protection of public finances and reduction of loss and damage associated with the adverse effects of climate change.
Output 3. Program of biodiversity and ecosystem management for the adaptation to and mitigation of climate change.
Output 4. Program of transformation and diversification of agricultural, forestry and agro-forestry practices and activities.

ii. Nationally Determined Contribution to the Mitigation of Climate Change (NDC) before the United Nations Framework Convention on Climate Change (UNFCCC).

Given the weight of the agricultural sector in El Salvador's economy and in water and food security, and given the need for reducing vulnerability thereof in the face of

climate change, urgent actions are required for such sectors to continue to be economically viable under the anticipated climate change scenarios. The purpose of this contribution is to reduce vulnerability of the sectors and the adaptation to climate change, and to promote the mitigation associated co-benefits.

By 2030, El Salvador will have established and managed one million hectares through "Sustainable and Resilient Landscapes to Climate Change". This is an integral approach to landscape restoration, whereby wood areas will be reclaimed and preserved, biological corridors will be established through the adoption of resilient agro-forestry systems, and agricultural areas will be transformed through low-carbon, sustainable practices, aiming at Land Degradation Neutrality. In this context, the current tree coverage will be preserved - 27% of the territory - maintaining the natural areas, including the existing mangroves, agro-forestry systems and forest plantations. Also, carbon forest sinks will be improved, by increasing woodland coverage in 25% of the territory, with agro-forestry systems and reforesting activities in critical areas, such as gallery forests, areas of aquifer recharge and areas prone to landslides. For the fulfillment of such goals, the necessary means of implementation beyond the reach of the national finances will be established.

iii. 2014-2019 Five-Year Development Plan

The plan adopts the Good Life rationale as national value, course and horizon, which demands a different way of understanding and making public policies. It entails that the State institutions will have to plan and implement their interventions seeking to fulfill the following commitments: (a) prioritize the protection of people's lives and ensure the conditions for people's development throughout their life cycle; (b) progressively reduce gender inequalities to attain an egalitarian and equal society that provides opportunities for women and men, and in which their specific needs and interests are acknowledged; (c) diversify production and economic reproduction forms and relations, giving human labor the importance it deserves; (d) revalue and celebrate intercultural reality and diversity of livelihoods and knowledge; (e) highlight the importance of the territory as a space of creation, reproduction, production and co-existence of the community; (f) recover the social-community fabric and strengthen peaceful coexistence processes; (g) establish inclusion and dialog processes to reach common grounds on what it means to have community well-being; (h) acknowledge the importance of nature and move towards a responsible type of management, which is respectful of the natural resources.

3. Honduras

i. Law and Action Plan for Adaptation to Climate Change

The Republic of Honduras deems adaptation to climate change a top priority to reduce the country's vulnerability. There are opportunities to promote mitigation measures

and actions that also enhance the adaptive capacity of its population and of its natural and production systems. All of the above is expressed in the General Law on Climate Change and in the National Strategy on Climate Change that describes actions and plans to protect, preserve, and restore marine coastal ecosystems, and land ecosystems, and their biodiversity; integrated risk management; and sectorial vulnerability.

ii. Nationally Determined Contribution to the Mitigation of Climate Change (NDC) before the United Nations Framework Convention on Climate Change (UNFCCC).

The agri-food sector has prioritized adaptation measures such as the implantation of "Quesungual" agro-forestry systems, which promotes less use of fertilizers; the use of slow-absorption organic fertilizers; changes in the calendar of crops; incentives to produce introduced seeds adapted to local conditions; introduction of insect-repealing plants in consolidated crops; modification or abatement of inappropriate agricultural burning practices; measures to fight erosion; programs of low volume irrigation in slope agriculture practice; practices of biological control of pests and diseases; development of organic fertilization systems; and promotion of incentives for organic agricultural production, including tax and financial incentives.

iii. Law of Agro-forestry for Rural Development

Pending approval, it articulates the public policy in several paramount focuses oriented to a low-carbon development resistant to the effects of climate change promoting adaptation and bringing co-benefits to the population.

4. Nicaragua

i. Plan for Adaptation to Climate Variability and change in the Agricultural, Forestry and Fishing Sectors

Adaptation to climate change in agricultural, forestry and fishing sectors has been designed as a strategic instrument that will contribute to the strengthening of the production capacity of such sectors and of such producers with a 20-year horizon. Also, in light of the present-day drought scenario, it has been deemed convenient to have a strategic view in the short term focusing on providing answer to the family producer's requirements from 26 municipalities with greatest economic, social and environmental vulnerability, located in very dry areas on slope sides.

ii. National Environmental Climate Change Strategy (ENACC)

Since year 2010, Nicaragua has had the National Environmental Climate Change Strategy (ENACC) and its Plan of Action (2010-2015). This strategy, spearheaded by

the Ministry of Environment and Natural Resources (MARENA), constitutes the general framework for the adaptation to climate change and comprises five strategic lines, described below: 1-Environmental Education for Living; 2-Environmental Defense and Protection of Natural Resources; 3-Conservation, Recovery, Catchment and Harvesting of Water; 4 - Mitigation, Adaptation and Risk Management in the face of Climate Change; 5 - Land Sustainable Management.

iii. 2012-2016 National Human Development Plan

The plan is based upon 12 premises, 2 of which state the project's alignment with the national policy for Human Development. These are: 10. Strengthening of the production sector prioritizing family, community and cooperative economy and food sovereignty and security; 12. Protection of Mother Earth and adaptation to climate change.

5. Costa Rica

i. National Climate Change Strategy (ENCC) Action Plan.

The express objective of the ENCC, described herein below, matches the project's objectives, as it seeks to adapt human activities based on ecosystem services.

Reduce social, environmental and economic impacts of Climate Change (CC) and capitalize opportunities, while promoting sustainable development through the economic growth, social progress and the environmental protection via initiatives of mitigation and adaptive actions so that Costa Rica will improve the life quality of its inhabitants and its ecosystems, by moving towards a low carbon emission, and competitive, economy by 2021. This shared responsibility shall be performed through the development of capacities and the legitimacy to influence both the National and International Agenda.

The PA of the ENCC has two objectives, in terms of adaptation, which also show the consistency with the project's objectives.

Specific Objective 1: Enhance the adaptive capacity of the communities and ecosystems most vulnerable to the impacts of Climate Change on water resources.
Specific Objective 2: Reduce vulnerability of women and men agricultural producers in the face of the impacts of CC.

ii. Intended nationally determined contribution- September 2015

Costa Rica has included an Adaptation to Climate Change component in its National Contribution, with clear commitments for 2030. The country is currently designing a road map for its National Adaptation Plan, and is committed to develop it before 2018. The country will continue with its Green and Inclusive Development policy

through local actions in adaptation, such as, inter alia, the strengthening of conservation programs and expanding the environmental services payments program to include Ecosystem based Adaptation.

iii. 2015-2018 National Development Plan - November 2014

The purpose of this plan is to impact competitiveness, economic growth, production chains, strength qualified labor, and diversify sources capable of generating wealth at national and territorial levels. "*Such conditions, alongside environmental sustainability and risk management, equality and social inclusion would point us in the direction of a thriving and fair society*".

6. Panama

i. National Climate Change Strategy

Its mission is to *promote the transformation of Panama's development model addressing adverse climate change effects through policies, plans and projects of adaptation and mitigation.*

One of the lines of actions leading to meet this objective is to reduce vulnerability of the communities with the highest exposure to adverse climate change effects through financial instruments and specific national funds for adaptation to climate change.

ii. Nationally Determined Contribution to the Mitigation of Climate Change (NDC) of the Panama Republic before the United Nations Framework Convention on Climate Change (UNFCCC).

The country's lines of action in the face of the challenges posed by climate change center around institutional strengthening; diversification of energy matrix; management and restoration of drainage basins; biodiversity protection, conservation and management; the building of treatment plants for solid waste in order to do away with open dumps; the development of mass public transport systems that are energy efficient; and the reforestation of 1,000,000 hectares during the next 20 years. The working focus outlines a set of actions which, based on the national circumstances, will allow Panama to responsibly contribute to the achievement of the UNFCCC ultimate purpose and decrease its vulnerability in the face of the adverse effects of climate change, by prioritizing and implementing specific adaptation measures.

iii. Governmental Strategic Plan (PEG) for 2015-2019

Under the PEG economic and social strategy, we must stress the importance of giving a stronger support to sectors driving growth and inclusion, among which there is the forestry sector, currently lagging, but which, however, has huge potential to make a difference from the economic and social viewpoints.

Under the sphere of the PEG as regards the environmental sector, the loss of native woodland is deemed as one of the main problems affecting the country. Therefore, the PEG prescribes, among other measures, "to consider the battle against climate change and its effects as a fundamental focus of the governmental action, by stopping deforestation and restoring the vegetative cover to prevent desertification and by reducing the existing vulnerability through the development and application of adaptation and mitigation measures".

iv. Integrated Development Plan for Aboriginal Peoples of Panama.

Under this initiative, the following actions will take place: the formulation of human development plans for indigenous peoples with participation of political actors; the creation of a space for discussion of indigenous affairs capable of monitoring the progress made in the human development plans, and also operating as mechanism for conflict prevention in order to reduce poverty and close the inequality gap; the creation of political and technical capabilities for negotiation and political incidence; and the promotion of access to information by the indigenous communities to improve participation in decision-making processes.

7. Dominican Republic

i. National Strategy for Adaptation to Climate Change in the agricultural sector Dominican Republic 2014-2020

General Strategic Objective (precondition for change): Reducing vulnerability to climate change in the agricultural sector of the Dominican Republic, adopting policies and adaptation measures that support food security of the population and promote low carbon development. The strategic objectives are:

- Improve the capacity of the agricultural sector to adapt to climate change and establish a consistent policy framework at the national level.
- Build resilience and adaptive capacity within the sector.
- Help the Dominican Government on the establishment of a regulatory framework for small and medium producers that covers research and development, and promotes techniques of adaptation to climate change with a climate-smart agriculture approach.
- Raise awareness on adaptation techniques

ii. Nationally Determined Contribution to the Mitigation of Climate Change (NDC) of the Dominican Republic before the United Nations Framework Convention on Climate Change (UNFCCC).

In the Dominican Republic, adaptation is a constitutional-ranking priority. The sectors identified as the most vulnerable are: Water for Human Consumption, Power for the National System of Protected Areas, Human Settlements and Tourism.

To strengthen Human Resources and the capacity to move towards a green development, with low emissions and climatic resilience, the needs for financing are identified in excess of yearly USD 1.5 Billion for projects of Higher, Technical and Specialized Education.

iii. 2010-2020 Sectoral Strategic Plan of Agricultural Development

This plan encompasses the following four (4) strategic focuses and two (2) cross-cutting focuses.

Strategic focuses: 1) Institutionalization and/or consolidation of the reform and modernization process of the agricultural sector. 2) Productivity and competitiveness of the agricultural sector and promotion of agro-exports. 3) Strengthening of the production of items for domestic consumption and of the mechanisms of domestic trading. 4) Development of rural and service infrastructure, catalysts for poverty reduction, with a territorial approach.

Cross-cutting focuses: 1) Agro-ecological sustainability, 2) Social equality in the rural medium.

iv. Law 1-12. 2013 National development strategies

Section 10. Fourth Focus, seeking for an Environmentally Sustainable Production and Consumption Society Adaptive to Climate Change. "A society with a habit of producing and consuming in a sustainable manner, capable of managing risks fairly and successfully, of protecting the environment and natural resources, and of promoting an appropriate adaptation to climate change."

Section 11 Human Rights - All plans, programs, projects and public policies shall incorporate a human rights approach in their relevant spheres of actions in order to identify situations of rights vulnerability, of discrimination or of exclusion of vulnerable groups of the population and in order to adopt actions contributing to social equality and cohesion.

Section 12 Gender Approach - All plans, programs, projects and public policies shall incorporate a gender perspective in their relevant spheres of actions, in order to identify potential situations of sex-based discrimination and to adopt actions to guarantee gender equality.

Section 13 Environmental Sustainability - All plans, programs, projects and public policies shall incorporate criteria of environmental sustainability and appropriate integrated risk management

III. CABEI's Institutional Alignment.

To actually prioritize the investments anticipated by this initiative, it will be necessary to guarantee an institutional alignment. For this reason, the project at hand is directly connected to CABEI's Institutional Strategy and its Country's Strategy, which are planning instruments aligning each country's particular concerns with CABEI's concerns.

In this regard, from CABEI's strategy, it can be derived that environmental sustainability is a strategic objective and is a part to its development policies for the region. In countries less developed, this problem is more severe, as there is a direct relation between poverty levels and degradation of natural resources and the environment. That is why it is important to acknowledge the role the public and private sectors must play, as established in a genuine commitment to adopt measures and policies in benefit of the environment, being aware that long-term benefits will translate into a better life quality of the Central American population. Based on the above, the characteristics of the new development plans of the region's countries must be oriented to promote free trade, improve inclusion, develop sustainable public policies, prompt mechanisms to reduce the inherent vulnerability in the face of economic clashes and natural disasters, and promote greater economic growth and job creation.

CABEI carries out its activity based on the application of the Institutional Strategic Framework (MEI). The main purposes of MEI is to guarantee an integrated view of the region and country at the level of Bank's operations, and to strengthen the institutional evaluation framework. To such end, an appropriate alignment is sought for in the strategic and operational propositions deriving from the Institutional Strategy, the Country's Strategies, the sectoral intervention frameworks, and the Annual Operating Plan (POA). The Institutional Strategy is a proposal that defines the mission and priority objectives of the Bank for the region, executed through instruments oriented to assist the development needs and priorities. The sectoral intervention frameworks speed up understanding of and assistance to those areas of greater relevance for the region. Short-term operating plans propose interventions that will be conducted by the Institution within 1 year term. Such MEI is evaluated through a result-oriented management system to ensure alignment with the goals and priorities established.

CABEI's MEI has established a governance structure that reflects the Bank's alignment with the Central American Integration System (SICA), consolidates CABEI's preferential creditor treatment, strengthens CABEI's capital base and increases the diversification of its loan portfolio, enabling the possibility to provide financing to all non-regional member countries.

An equal treatment is applied to all SICA member countries: the category of Panama, the Dominican Republic and Belize has been changed to non-founding regional members, opening the possibility for them to have a permanent titular seat on CABEI's Board of Directors.

F. Describe how the project / programme meets relevant national technical standards, where applicable, such as standards for environmental assessment, building codes, etc., and complies with the Environmental and Social Policy of the Adaptation Fund.

All project activities must be compliant with each country's constitution, and local, national and international legislation, as required by the safeguards of the AF and the SIEMAS. Each activity will be analyzed specifically with the technical enabler, who is to verify whether it is necessary to meet any specific regulation, permitting, special licenses, and who is to ensure that the rights of any person or community are not infringed.

At this stage, CABEI has identified the most relevant national standards, including the ones related to EIAs and water/agricultural specific regulations that the project will comply with. This first identification of national standards has been included in **Annex B**.

A preliminary analysis (screening), of the characteristics of the project activities has been made. They are oriented at protecting natural habitats, preserving biodiversity, preventing contamination and favouring the efficient use of resources, preserving soil, among others. Also, through this project CABEI will attend MSMEs rural located in areas of high climatic irrigation to improve their resilience and their living conditions through innovative financial products established to attend this sector sometimes unattended by the traditional financial system. Since project activities are small in scale, and their impacts are reversible or easily mitigated, the project has been categorized as Category B.

However, in order to ensure compliance with the environmental and social principles of the Adaptation Fund and with national legislation, CABEI shall apply its Environmental and Social Risk Identification, Assessment and Mitigation System (known as SIEMAS). Through its tools, this system allows to determine, prevent and take actions in the face of project's environmental and social risks. CABEI will establish an Environmental and Social Management Plan (ESMP) for the project that will be included through the established management of the SIEMAS.

Additionally, as some Environmental Impact Assessments are likely to be prepared during the project implementation, due to the nature of activities, CABEI confirms that this ESMP will be commensurate with the risks identified and in accordance with the project ESMP categorization. This ESMP will be designed at the full proposal stage.

The SIEMAS is executed during the whole cycle of the projects, including monitoring and follow-up in order to assess and ensure the environmental and social sustainability during the execution and operation stages of the project, and the generation of lessons learned.

It is worth stressing that a significant challenge for the project is the social approach to be considered in the relevant ~~Plan of Action~~ESMP, according to SIEMAS. Such Plan of Action will detail the specific measures to be conducted during the project to guarantee the principles of gender equality, empowerment and equity, among others; thus ensuring that men and women, as well as young, have equal chances, they have fair and equitable access to the benefits, and any existing inequality is not made worse.

Further description of SIEMAS has been included in section L.

G. Describe if there is duplication of project / programme with other funding sources, if any.

The specific adaptation activities proposed in this project are not duplicated by other projects or initiatives. Nevertheless, there are several programs and projects with which the proposed project will seek complementarity.

a) CABEI's programs

Since 1985, the Central American Bank for Economic Integration (CABEI) has taken part in the support to the Central American small, medium and micro-sized enterprise sector (MSME), by increasing access to its credit lines through intermediate financial institutions.

The Bank's support to the sector has been through its own resources and with resources of cooperative partners, among which the following must be mentioned: the European Union (EU), the Danish International Development Agency (DANIDA), the International Cooperation and Development Fund of the Republic of China (Taiwan-ICDF), the Spanish Agency International Development Cooperation (AECID) and KfW Development Bank of Germany, with which the Bank has entered into cooperation agreements. Since year 2007, this cooperation has become stronger with contributions from the GEF or Global Environmental Fund, to establish a program of Investment in Biodiversity in the Central American region through Project CAMBio and its different components to strengthen MSMEs.

In view of the weight of the MSME sector in the countries' economic and social development, CABEI is a key actor for the short-term strengthened access of MSMEs to its financial services in order to direct its resources towards Central American population's more needy layers and through different approaches.

Please find below a list of the programs conducted by the CABEI as regards the MSMEs of the agricultural sector in the participating countries of this project.

FINANCIAL INTERMEDIATION PROGRAMS	
Small, Medium and Micro-sized Enterprise Support Program	The purpose of the program is to provide funding for urban and rural SMME through intermediary financial institutions. No duplication is found: this is a general program for MSMEs, from which investments are financed to promote business activity to continue contributing to job creation and business growth .
Support Program with an Energy Efficiency Approach	The purpose of these programs is to contribute to climate change through MSME in the region. No duplication is found, since these are climate change mitigation-related programs.
Support Program with a Renewable Energy Approach	
Support Program for MSMEs Affected by Natural Disasters	The purpose of this program is to stimulate business activity in areas that have been affected by natural disasters. No duplication is found, since this program is designed for responding to situations when disaster has already happened, as opposed to the project proposal, which deals with prevention.
Biodiversity SMME Support Program	The program aims to facilitate financing to MSMEs that incorporate the protection and conservation of biodiversity in their business, products and services. Synergy: this is the component of the credit that was used in the CAMBio project. this mechanism will be used in the future project, making the necessary changes.

As background for the topics related to this proposal, the following paragraphs introduces projects in which the CABEI was involved:

- PROARCA (Central American Regional Environmental Program) and ARECA (Accelerating Renewable Energy in Central America and Panama, end date December 2015), had CCAD and CABEI as partners in one or more of their components, with the intention of promoting green economies in vital areas of conservation.

- With regards to CAMBio, CABEI was eager to integrate the environment into its working areas with regional integration projects. One of the

distinctive aspects of CAMBio was the alliance with environmental institutions.

- The other project in CABEI that provided operative experience was ZONAF, financed by the EU.

- From PROARCA/CAPAS, the project strategy inherits the continuation of tourism and agro-forestry efforts in the peripheries of Protected Areas, and the promotion of green markets for organic coffee.

- SIGMA implemented a model that introduced financing and technical assistance to small and medium enterprises to reduce pollution. Working with FIs, this initiative provided risk guarantees for banks to catalyze investments on a commercial basis.

- A small GEF project, NITLAPAN and FDL developed a financial product known as Paquete Verde, targeting the introduction of sustainable practices on farms receiving microcredits.

Equally important was the transfer of experience that CATIE gained while implementing the Mesoamerican Agro-Environmental Program (MAP) funded by Scandinavian donors. In alliance with many regional partners, this initiative has been providing training and innovation in sustainable productive practices to Central American farmers, in coffee, cacao and other agroforestry commodities.

b) Projects and programs from other sources

Many projects are being implemented in the seven Central American countries, seeking to address problems of rural development and poverty while conserving the ecological base of the region.

These involve agricultural productivity and extension services including land administration, rural finance, forestry development, irrigation interventions and watershed management, many financed by the IDB and the World Bank.
Concentrated efforts have also been made in Central America to support biodiversity conservation through GEF-supported projects within the region. These countries have initiated a strategic approach to biodiversity conservation by beginning to coordinate development and conservation initiatives within the framework of the Mesoamerican Biological Corridor (MBC). The GEF-assisted MBC projects have concentrated on consolidating the protected areas system in Honduras, Panama, Guatemala, and Nicaragua. They have focused on implementing a people-oriented approach to conservation in the national parks and biosphere reserves and on developing sustainable use activities in the buffer zones that are culturally viable and recognize indigenous land and resource rights. The GEF portfolio also includes a regional World

Bank Mesoamerican Barrier Reef project and a Belize Barrier Reef project executed by UNDP.

IDB projects that have focused on community conservation and sustainable use include: the Darién Sustainable Development Program and Bocas del Toro Sustainable development Program in Panama, the Socio-Environmental and Forestry Program in Nicaragua, and the Rio Lempa Trinational Watershed Program in El Salvador, Guatemala, and Honduras. World Bank/GEF-MSP projects that have focused on community conservation and sustainable use include the Guatemala Bio-Itza Maya Indigenous Grassroots Community Management Project, El Salvador Coffee and Biodiversity Project, Costa Rica Organic Cacao Production Project, Costa Rica Eco-markets Project, and the Central America Indigenous Peoples Sustainable Development Project (TF ESSD).

IDB projects focused on Indigenous Peoples are: Natural Resource Management Project in priority Watersheds and Indigenous and Black Peoples Support Program (PAPIN) in Honduras, Social Environment for Forestry Development (POSAF) II in Nicaragua, the regional Ecotourism Projects (FONEMA), the Highland Watershed Program in Guatemala, and the Sustainable Development Program for the Darien in Panama.

World Bank projects focused on Indigenous Peoples are: Guatemala Bio-Itza Indigenous Biodiversity Conservation, Integrated Natural Resources Management in the Highlands in Guatemala, Indigenous Agroforestry Cocoa Biodiversity Conservation in Costa Rica, Sarstoon Temash Indigenous Biodiversity Conservation in Belize, and, at the regional level, the Indigenous Peoples Country Profiles Sector Work Analysis and the IDF Training Program for Strengthening Afro-Descendants Organizations.

These projects have no duplication with the proposed Project, since they do not contemplate activities that having as a primary objective the reduction of reducing vulnerability and increasing resilience of communities to Climate Change and its variability. Moreover, none of them work on reducing barriers to credit through an intermediary network, in a region where credit addressed to the agriculture sector is greatly limited. This project will raise awareness throughout the financial system in the region and will as well incentive this financial system to foray into new lines related to adaptation, for productive sectors of high-risk but high-impact development.

Regarding Adaptation projects, a preliminary assessment of ongoing initiatives granted by the AF has been performed. The objective is to avoid possible areas of duplication and to search for possible alliances and synergies between this Project and other initiatives and projects. However, it can be confirmed that no other adaptation project has been implemented to the level of this proposal, in an integrated regional approach and channeling resources through financial intermediation.

A list of ongoing Adaptation Fund projects can be found in the following table were a preliminary synergy and duplication assessment has been performed.

This identification will be further developed during full project proposal development.

Table No. 18.~~7:~~ Adaptation Fund projects in the Project area

Country	Project title	Grant amount in MMUSD	Approval date	Duration Years	Description	Synergy and/or Duplicity
Costa Rica	Reducing the Vulnerability by Focusing on Critical Sectors (Agriculture, Water resources, and Coastlines) in order to Reduce the Negative Impacts of Climate Change and Improve the Resilience of These Sectors	9,97	oct-14	5,0	The objective of this program is to reduce climate vulnerability by focusing on critical sectors (agriculture, water resources, and coastal zones) in order to reduce the negative impacts of climate change, and improve the resilience of those populations. This program seeks to increase climate resilience by working directly with local stakeholders and anticipated beneficiaries through the implementation of adaptation projects in each of the geographical areas selected. Projects submitted by local organizations have been screened and the preselected proposals went through an in-depth assessment of their potential for the enhancement of climate resilience, which involves an analysis of the actions' appropriateness, based on the local biophysical and socioeconomic context. The support consists on investment in interventions, technical assistance, and training.	Potential synergies have been identified, and will be deeply analyzed during full project design.
Guatemala	Climate change Resilient Productive Landscapes and Socio-Economic Networks Advanced in Guatemala	5,425	sep-13	3,5	The project aims to increase climate resilience of production landscapes and socio-economic systems in the target municipalities threatened by the impacts of climate change and climatic variability, in particular hydro meteorological events that are increasing in frequency and intensity. The key outcomes range from enhancement of institutional capabilities to support for building more resilient local	Potential synergies have been identified, and will be deeply analyzed during full project design.

Country	Project title	Grant amount in MMUSD	Approval date	Duration Years	Description	Synergy and/or Duplicity
					economies, and increasing the adaptive capacity of communities.	
Nicaragua	Reduction of Risks and Vulnerability Based on Flooding and Droughts in the Estero Real River Watershed	5,5	dic-10	4,0	The program relies upon a coordinated set of interventions designed to implement new public policies for addressing climate change. These include: investments in infrastructure for storing and using rain and surface water in eight micro-watersheds in the upper watershed of the Estero Real River; introducing more efficient use of water in all production processes, increasing infiltration, strengthening soil structure, and stabilizing slopes; institutional development and capacity building in micro-watersheds, municipalities, and participating national institutions; ongoing monitoring and analysis of climatic conditions and changes in land use, water flows and soil quality; and the dissemination of results and lessons learned about building climate change resilience in vulnerable communities.	There is no duplication. Potential synergies will be analyzed during full project design.

Country	Project title	Grant amount in MMUSD	Approval date	Duration Years	Description	Synergy and/or Duplicity
Honduras	Increased Systemic Resilience and Reduced Vulnerability of the Urban Poor	5,62	17/09/2010	5	The goal of the project is to increase resilience to climate change and water-related risks in the most vulnerable population in Honduras through pilot activities and an overarching intervention to mainstream climate change considerations into water sector policies. The project aims, for example, to integrate climate change risks and opportunities into the country's new water law and the new National Plan Law. Other goals include the strengthening of a national meteorological network; improving information on the scientific, technical, and socioeconomic aspects on impacts of climate change, vulnerability and adaptation; and increasing the availability of climate risk assessment tools and information to relevant institutions. In order to safeguard the water supplies of Tegucigalpa City and surrounding areas, the project will work to strengthen sustainable land use practices piloted in the highland watersheds and green belt around Tegucigalpa and instituting financial mechanisms that assist in managing water supply and demand. Training decision makers and resource users to better understand the projected impacts of climate change and providing them with the knowledge to identify effective options for reducing climatic risks and vulnerability is also an important facet of the project.	There is no duplication since this project involves a different target of vulnerable population. Potential synergies will be analyzed during full project design.

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H. If applicable, describe the learning and knowledge management component to capture and disseminate lessons learned.

It is mainly through Component 2, *Capacity Building for the Development of Production Models Resilient to Climate Change*, that learning activities will be provided, through training, awareness-raising and information activities that include: adaptation measures based on strengthening ecosystem resilience, and technical and commercial capacities of MSMEs.

A substantial portion of Lessons Learned will be based on monitoring and evaluation activities from CABEI, which will include within its main activities the definition of a methodology to systematize the institutional reporting thereof. To such end, experiences will be studied looking back and looking forward to document the learning process.

Systematization will enable to establish an orderly process to: i) re-build the experiences, ii) generate knowledge through critical reflection by the actors involved.

The stages defied to develop such process are three:

1.Planning: This stage pertains to the design of the systematization process. The output will be a document describing the Systematization Plan.

2.Retrieval, analysis and interpretation: This represents the unfolding of the experience itself. Its final output will be a document basically relating the systematized experience and the lessons learned. Such document will unfold 4 key aspects: a) the initial situation (before the intervention), b) the intervention process, c) the final or current situation, and d) the lessons learned.

3.Reporting of lessons learned: This last stage in the systematization process is the dissemination of the results. Its execution must allow obtaining the following outputs: i) a result communication strategy, ii) printed or audio-visual material, and iii) sharing of the systematization outputs.

To identify the lessons learned, generate knowledge and disseminate it, several mechanisms are proposed to feed the project's monitoring, evaluation and generation of project's lessons learned.

The system will have different methods to generate information, both qualitative and quantitative, which in turn will generate different products.

The main objective of gaining lessons learned is to identify successful cases in order to systematize information on the factors that got to promote best practices and be able to

replicate them. Similarly, it is also expected to know which the problems were during project execution and the experiences that did not turn out as intended in order to learn to overcome such problems and to avoid them in the future.

To such end, the actions described below are proposed to be added to the monitoring and evaluation system based on indicators and information search from CABEI:

1. Identification of at least **3 innovating practices by MSMEs in 3 different countries** which have been successful in the adaptation to climate change. Through the systematization of experiences, we can document and learn what the process of adoption and set-up of the practice was like, which factors enabled such experiences, and which lessons can be learned and possibly replicated in other experiences. Date of performance: last two years of project application.

   The output of this activity will be a study in hard copy. For its dissemination among the MSMEs, workshops of introduction and reflection on the three experiences are proposed to be held in each country, summoning potential clients and MSMEs already conducting their own projects for them to analyze their experiences, and reflect on how such experiences can improve their own practices.

2. For the activities conducted through component 2 aimed at MSMEs: *training, awareness-raising and information activities that include adaptation measures based on strengthening ecosystem resilience, and technical and commercial capacities of MSMEs*.

   Beneficiaries' perspective: evaluations from the beneficiaries' perspective: the most significant changes and impacts from their point of view: participatory workshops halfway through the project and upon project's end, and generation of outputs such as video recording with "stories of projects" to disseminate. Such workshops can be held using as input the systematization of innovating experiences from MSMEs adaptation projects, serving a twofold purpose: that of conducting a mid-term evaluation on the progress of generating capabilities; and the dissemination of successful experiences for the producers to know them.

3. Creation of an **exchange network** of experiences and practices among IFIs.
   a. Visits and exchange of experiences between IFIs with greater comparative development and those with less experience in the selection, administration and management of credits. This could be between IFIs from different countries or within the same country, among those with greater capacity and those with lesser capacity.
   b. Generation of a web platform for the IFIs network to provide the chance of exchanging experiences, material on the administration, management of

credits and program. Questions and answers between the participating IFIs and CABEI. FAQ Section, videos of "how to..." with most frequently asked questions, etc.

4. Also, a study is proposed to characterize the main production sectors and adaptation to Climate Change in order to identify the insertion of women/ young people in these processes and determine the strategic opportunities to strengthen and promote.

5. To share knowledge between the NIEs of the countries, the holding of an exchange meeting is proposed among countries once a year throughout project execution, mid-term and upon completion, between technicians participating of the implementation of activities under the three components, where they share the progress made at each country, the lessons learned up to the date.

6. CABEI shall conduct regular visits to a sample of projects per country, in order to gain better feedback on the implementation in each case, and know how the different countries are working in the territory.

The issuing of printed material for each one of the outputs proposed, and the generation of a web platform to realize the exchange of knowledge on adaptation loan management, as well as the experiences of the executing parties, CABEI and videos on successful projects will open up a space of ongoing exchange for consultation and enhancement of these activities.

Also, the IFIs are expected to continue promoting the strategy of financing "adaptation credits" amidst other producers' organizations, after observing and systematizing the results obtained when applying these types of strategies, which enhance resilience, adaptation capacity while achieving production improvements and natural resource sustainable management.

In the table below, these proposals have been organized by topic, purpose, output types, audience, need of human resources, approximate dates at which they would be performed, and form of dissemination.

Table No. 19. Log for Knowledge Management: Learning and Innovation

Topic	Purpose	Output type (how it will be presented)	Audience	Human Resources	Proposed date for output development	Form of dissemination
Systematization of best practices: a. Best adaptation practices to the effects of climate change b. Lessons learned on management and administration of project activities c. Study on insertion of women/youth in Climate Change adaptive projects	a. Share existing and recommended best practices to incorporate adaptive measures into the production systems b. Share existing and recommended best practices to improve efficiency c. Detailed characterization of main production sectors to identify strategic chances for women and youth in climate change adaptive projects	Study of systematization of experiences and insertion Manual / On-line videos - IFIs network - CABEI	Governments AF Future programs MSMEs CABEI	Local consultancy firm / local consultant individual accompanying exchange activities	Towards the end of the second year of implementation. From the beginning and regularly, include videos and support material for ongoing administration-development.	Printed material Videos Workshops with MSMEs in each country Web platform of online IFIs.
Capabilities on: CC approach/ resilience/ management of production systems with an ecosystem approach.	Promotion of natural resource sustainable management / Evaluation from the beneficiaries' perspective.	Systematization document Video on "stories of projects"	Government National Institutes for Agricultural Technology Beneficiaries	Local consultant firm	During the third year and upon project completion	Mid-term workshops (to adjust training) and final workshops
Meeting for project implementing / executing parties	Share experiences and lessons learned among executing parties	Workshop once a year (or twice a year throughout PY)	Governments AF NIEs IFIs	Enablers	Once a year	Annual meeting - systematization of experience exchanges

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Program's general dissemination

CABEI maintains a constant reporting activity related to monitoring, evaluation, workshops, CABEI's annual reports, and similar. This information will be shared with IFIs and with MSMEs through audio-visual material, sharing on social networks, and participation in forums and events.
Throughout the life of the Project, informative channels will be kept opened with the community as a whole, with the local authorities, and with managers, employees, and their families in order to promote their participation in the Project.

A web site, and informative material, will be created about the initiative to hand out in nearby areas. The web site and the material will be updated based on the concerns expressed by the stakeholders, as well as the Project's progress throughout its stages.

The municipal authorities will be informed of the Project's progress so that they can, in turn, inform the community via any such means as the authority deems pertinent.

As a rule of thumb, all communications from the Project to the stakeholders will be prepared in a culturally appropriate wording, accessible and in the language of the recipients, in order to ensure their efficacy.

As regards the inclusion of the existing indigenous communities in the region, the project proposed will develop dissemination and promotion strategies to ensure that the information on objectives, instruments, requirements and ways of access get to the indigenous communities, to promote their participation. Also, to ensure that these communities participate in an effective manner, and specially to ensure equal opportunities, consultation processes will be implemented and appropriate instruments pursuant to the policies of the Adaptation Fund will apply.

Mechanism to handle complaints and grievances.

The **mechanism of complaints and grievances** seeks to facilitate the interaction between the Project and the community, upon reception of all kinds of concerns, complaints or grievances, and upon trying to solve potentially controversial situations through dialog and negotiation.

Such mechanism applies across the entire area of influence of the project from the time the project begins, and up to its end. A person will be appointed to implement this

mechanism. It will instrument transparent means and mechanisms to facilitate the reception of concerns from the Project's stakeholders and to answer to such concerns in order to solve them and anticipate potential conflicts.
The mechanism will be implemented in an accessible manner for all members of the community, particularly those affected, and will provide fair, equitable and long-lasting results, within a reasonable time after filing the complaint.

CABEI's mechanism for environmental and social reporting is worth stressing as it allows logging, analyzing and curing any irregularities related to environmental and social risks deemed critical by the Bank. The workings and roles thereof are clearly defined to ensure that the stages of report reception, its analysis by the Chairperson, environmental and social expert, and technical work team; implementation of the Environmental and Social Plan of Action; and monitoring of the actions contained therein are fully met.

I. Describe the consultative process, including the list of stakeholders consulted, undertaken during project / programme preparation, with particular reference to vulnerable groups, including gender considerations, in compliance with the Environmental and Social Policy and Gender Policy of the Adaptation Fund.

a) Initial consultation process

a.1 With CAMBio beneficiaries

A series of interviews to CAMBio beneficiaries were performed during the design of the first version of the concept ~~stage~~note: 8 MSMEs, 1 IFI and 2 Technical Assistance Providers. They were asked about the functioning of their organizations/ MSMEs, their production, their experience with ~~CAMBio~~ the program (when applicable), the impacts of climate variability they are already enduring, and the adaptation needs they identify.

With regards to climate variability that is affecting them most, the majority identifiedy the change in precipitation patterns, that have many consequences: apart from the natural lower productivity and the different agricultural cycles, these changes are among the causes of epidemics like rust (please refer to background/ context section); very strong droughts are causing water shortages.

Those who have participated in ~~–~~CAMBio project, highlight the~~at~~ experience as very satisfactory. They worked on agroecological practices and green certifications, which allowed them to enter new markets.

Table below shows a record of MSMEs interviewed and a summary of the adaptation needs they have identified. For more details, please refer to **Annex A**.

Table No. ~~18~~ 20. Record of interviews during initial consultation process

Date	*Producer/ Organization name*	*Activities*	*Number of producers*	*Country*	*Adaptation needs posed*
24/08/2016	Regional Agricultural Cooperative Union Chinacla Limitada	Coffee	386 producers (142 are women)	Honduras	Irrigation systems, equipment to process coffee, workshops for women entrepreneurs ~~women~~.
24/08/2016	Agricultural cooperative union in San Juan de Río Coco.	Certified organic coffee. From coffee production to export	8 grassroots cooperatives, gathering 420 people (99 women)	Nicaragua	Reforestation, recovery of water sources, improve soils, dam-type catchment
24/08/2016	Individual producer associated with Agroexport	Organic indigo	35 people working. Fixed, 8	El Salvador	Technical Assistance: irrigation systems. Crops that need less water and have good added value due to exhausted soil
25/08/2016	ADOBANANO (Banana producers' association)	Bananas	Sector 1851 producers. About 60 individuals and members of associations About 25-26 associations. Between 50 and 150 per association.	Dominican Republic	Technical Assistance. Organization. Pressurized irrigation. Solar technology for packaging machines and pumps. Agricultural insurance against winds. Increase in organic production. Training for the population to stop contaminating water and take care of the resource, system of water channeling farm-wide and drainage of sewage towards channels.
25/08/2016	Avocado Producers' Association Los Arroyos	Avocado Type A	54 producers, 3 women that own their own lands.	Dominican Republic	They need TA to export avocado. TA for water management, irrigation. TA in techniques and methodologies. Recovery of basins, change to perennial crops, sustainable and adaptive agriculture. Packaging facility.

Date	Producer/ Organization name	Activities	Number of producers	Country	Adaptation needs posed
25/08/2016	CAFEL cooperative	Coffee	230 producers (30% women and 20% young population).	Honduras	Keep improving organic quality. Certifications and TA. Investment in technology. Set up biodigestor to generate gas.
25/08/2016	ADOBANANO (mango producers' association)	Mango	32 active members	Dominican Republic	Reforestation TA and technology
26/08/2016	CONACADO (National Confederation of Dominican Cocoa Producers)	Cacao	44 members, 15% women	Dominican Republic	Renewal of plantations. At least 4,000 hectares to be renewed. Organic production and good environmental practices. Drip irrigation. Applying soil recovery techniques with natural fertilizers.

One **IFI** was interviewed: BANCAFÉ from Honduras. Their experience with CAMBio was focused in working with two cooperatives. They observed that difficulties for the payments were due to the impacts of rust and also for the changing agricultural patterns. The livestock sector suffers from droughts that provoke pasture deficit.

They received Technical Assistance from ~~CAMBio, that~~CAMBio, which they used mainly for training and for socializing the project.

Improvements suggested: amount of documents that must be handled, improving follow-up, visits from CABEI.

As for the **Technical Assistance Providers** (TASPs), two were interviewed, from Dominican Republic and Nicaragua. Transcriptions of the interviews can be found in **Annex A**. A summary of their comments is summarized here below.

Experience with CAMBio:

- They emphasize the impact of CAMBio for having introduced environmental aspects in the financial sector, and having found the way to capitalize synergies between the financial and the technical parts.

- A large number of small and medium-sized producers was reached contributing to create biological corridors that did not existent up until then. The impacts of the

investments made are maintained even in the absence of access to financing. All the experience gained remained there upon completion of the project.

Recommendations for a new project:

- Need of access to financing, which is a very serious problem for the small-scale agricultural sector: in the Dominican Republic in 2014, only 8% of the credits went for the agricultural sector.
- Technical Assistance is key to make changes more effective, credits more advantageous and for the award to drive and foster producers to follow the path of the project.
- The TA should continue to play its role, trying to solve the problems that producers cannot sometimes see, such as climate change.
- Establish payments according to ~~farmers~~farmers' cash flow (crop cycles).
- Forge stronger bonds with the markets.
- Alliances with commercial firms that were willing to get involved in the production chain. Quality standards.
- Encourage producers to diversify their economic activities with a more sustainable ~~production of~~production of the resources.
- Establish concrete measures, indicators, minimum quantities in terms of biodiversity and environment.
- Special attention to protected areas.
- Promote collective efforts, work in coordination with different actors.

Adaptation to Climate change considerations:

- Necessary and urgent approach. Depending on the sectors, but water, forest coverage, and diversification topics are key regardless of the area: deal with food security and reduction of disaster risks.
- Agricultural insurance.
- Resistance species, shades, windbreaks, improved grasses.
- Emergency response to hurricanes.

Role of women and young population:

- Rural women have a prevailing role. They should have a more leading position. Need to implement Gender approach, reduce social exclusion and gender-based gaps. Women are better at meeting due dates and at implementing business plans.
- Main obstacle for women: ownership. Need of more flexibility in the financial part, more inclusive policies.

a.2 With beneficiaries from other CABEI's programs

In parallel, CABEI has taken the opportunity of making consultations about vulnerability to climate change, barriers for the access to credit, and needs of a potential new initiative focused on adaptation measures, during workshops organized by other programs that work with IFIs and MSMEs. The detail of the outputs received, as well as pictures and attendance lists have been included in **Annex A**. Below, the main conclusions have been summarized.

Workshops with IFIs

Under the **Training on Financial Intermediation Programs** held with representatives from 5 Financial Institutions from Honduras and El Salvador on October 19, 2016, interviews were held aimed at evaluating the needs of the IFIs and their perception of MSMEs' needs, as regards climate change and variability impacts. This, in view of the formulation of a new initiative aiming at investments in adaptation to climate change.

The main conclusions were:

- Capacity building is necessary to quantify the environmental risks of investments to finance, as well as the weighting-in of the environmental benefits of investments in the analysis.
- The main issues upon granting credit to MSMEs are: lack of real estate as collateral to grant credit; high indebtedness of the MSMEs; market.
- There should be other mechanisms to mitigate the investment risks (for example, programs of partial guarantee, agricultural insurance, etc.) as well as incentives or rewards to remain motivated to grant financing to environmental investments.
- MSMEs' biggest difficulties: lack of formal structure; not having real estate as collateral; not keeping a formal accounting process; succession cannot be proven.
- MSMEs need to strengthen the process of development of business plans, market, sales strategy, micro-finances, development of managerial and administrative skills.

Workshops with MSMEs

1. HONDURAS: Training by the Local Development Unit in Danlí, El Paraíso~~, Honduras~~. With approximately 50 assistants, training was related to the use of agricultural waste to produce energy. The main conclusions were:

- Climate impacts: rain distribution not optimal; increase in pests in crops; crop losses due to floods/droughts.
- Solutions applied: greenhouses, irrigation systems, slope conservation works.

- Training needed: best agricultural and farming, pest control practices, cost structure, accounting, post-harvesting management, food processing.
- Difficulties with credit access: paperwork, high commission fees.

2. EL SALVADOR: Training within the project Biodiversity-friendly MSMEs ~~in El Salvador~~. The majority of farmers interviewed expressed the need of technical assistance and problems with their productions that are increased by climate variability. CABEI obtained a good diagnosis of used management systems, mail field problems faced, areas of greater activity, which will enable the planning of Technical Assistance activities and a better critical analysis of the financing proposals by MSMEs.

3. GUATEMALA: Indigenous communities.

The conclusions of two training cycles carried out under the CAMBio project with these communities, as well as from a diagnosis of productive chains are presented with detail in Annex A. These are:

- Capacity building on issues of agroecological production of coffee and Maxan leaf, Project CAMBio. Sololá, Guatemala, November 2013. Comprehensive Development Association Lake Atitlán Basin - ADICLA.
- FONDESOL - Strengthening the technical-productive, business and environmental capacities of producers of shaded coffee and cardamom. Project CAMBio, December 2013.
- Diagnosis on productive chains. Project CAMBio, Guatemala, May 2014.

The main difficulties that are endured by these communities are related to environmental degradation, loss of soil nutrients due in part to wind and water erosion, lack of technical assistance associated with diversification, with good agricultural practices and with credit management. The main impacts associated to climate are the incidence of diseases that affect crops, such as coffee rust; large impacts of hurricanes, storms and droughts.

a.3 How consultations have been taken into account for project design

Some of the main aspects upon which this initiative has incorporated stakeholders' opinions are summarized below:

- Need of capacity building has been expressed by all respondents. A large spectrum of options related to reinforcing understanding of climate change impacts and credit management is offered in this project.

- Most of the adaptation measures identified initially have been confirmed to respond to the threats raised by the respondents. However, climate change impacts such

as hurricane damages affecting producers in the Dominican Republic had not been explicitly taken into account in the first version of the project design; these activities have been included within the possible adaptation measures.

- Other requested mechanisms to mitigate the investment risks such as programs of partial guarantee, agricultural insurance, etc., are out of the scope and capacities of the proposed scheme; however, requested incentives or rewards to remain motivated to grant financing to environmental investments.

- Indigenous communities have highlighted the importance of training activities being provided in their language. This will be ensured within the project.

- Particular attention to environmental and social issues has been requested by many of the respondents. This aspect will be guaranteed by the environmental and social management of the project.

b) Consultation considerations for full ~~the~~ project formulation~~.~~

During project formulation, consultation processes will be completed in the seven countries in order to address the real needs of small-scale producers and to improve

In the implementation of the full project, a multi-stakeholder approach will be pursued to create conditions for project ownership from its start to the final evaluation. The following will be considered: concrete responses to community needs, lining with national policies and strategies to combat climate change, priorities of development partners captured in formulating the objectives, the components, the expected results and the activities.

The active participation principles by the different public and private stakeholders will be guaranteed, together with criteria of social inclusion, gender and generation equality. Also, for the collective building of the Project, a constant, transparent and open dialog is required in order to listen to the opinions of all actors involved when incorporating adaptive measures based on ecosystem measures through the innovating financial proposals.

This way, it is intended is to improve the decision-making process, and to build a bridge between the project and those groups and organizations related to the project, by providing timely information to any stakeholders, and by promoting an active participation thereof to receiver their feedback, suggestions, recommendations, and to answer to any

concerns so that the project may be executed in a context of mutual understanding and respect.

Among the initial project's participants the direct and indirect participation of the following actors, among others, ~~is necessary~~ are to be considered:

National governments: Ministries of Environment, Agriculture, Development, Finances and/or any other as may apply.	Traders associations (MSMEs)
Local governments: department/municipal	Regional Center for the promotion of MSMEs (CEMPROPYME)~~Technical Assistance Service Providers~~
National Institutes for Agricultural Technology	Intermediate Financial Institutions
Universities	Technical Assistance Service Providers
Central American Commission on Environment and Development (CCAD)	United Nations Environment Programme (UNEP)
The Tropical Agriculture Research and Higher Education Center (CATIE)	Food and Agriculture Organization of the United Nations (FAO)
Associations of local producers, organizations and cooperatives of rural producers.	United Nations Office for Disaster Risk Reduction (UNISDR)

J. Provide justification for funding requested, focusing on the full cost of adaptation reasoning.

The ecosystems and productive systems require an integrated set of solutions provided on the one hand access to financing to allow implementing activities, and on the other hand technical assistance to ensure the actual execution thereof. The adaptation of the production system in scenarios of water constraints, accelerated soil erosion, shortage of supplies and assets for production, thin vegetative cover and lack of knowledge on the implementation of agroforestry and agrosilvopastoral systems (the Quesungual agroforestry system, among others) cause loss of biodiversity and impoverished families' livelihoods.

The total cost of this project is SD 30 million, from which only 5 million are requested to the Adaptation Fund (AF). These 5 million will be directed to ~~Bio-bonus~~Adapt-award and Technical Assistance Components. This shows that from this very first point, that AF resources will be used for incentivizing successful adoption of EbA measures and to enhance knowledge about Climate Change, EbA and other building capacities needed for MSMEs to reach a comprehensive adaptation strategy.

However, as described in Section A, the three components are fully interlinked and thus they would all contribute to the adaptation objectives of the project. No credit granting would be possible without the existence of Adapt-awards and Technical Assistance. Thus, AF results are equivalent to the results of the whole project.

Communities in Central America and Dominican Republic are highly dependent on natural resources. Their adaptive capacity is low. Without this project, loss of food production for not having supported strengthening of ecosystems and production systems' resilience would be significantly greater than the cost of the funding requested. Without project intervention, losses due to climate impacts are likely to keep on being dependent on governmental emergency responses, with the commonly known variety of government response effectiveness. These potential losses and increased costs of inaction associated with climate change, indicate the need of immediate action.

With regards to mechanisms, it is important to stress that today, loans based on adoption of EbA measures do not exist in the region. This shows clearly the additionally this project brings: not only this kind of credits do not exist; additionally is even more evident if we consider that MSMEs are usually seen as high risk investments by financial institutions. This experience is expected to generate knowledge and trust in both financial institutions and MSMEs and thus contribute to future replication.

Knowledge about climate change and EbA: there is currently limited understanding of climate change and how production units can increase their adaptive capacity by adopting environmentally-friendly practices. By enhancing knowledge on these issues, the project will contribute to reduce the rate of deforestation and degradation of biodiversity and, at the same time, improving the socio-economic conditions of beneficiaries. The project has the challenge of mainstreaming a cultural transformation that involves the modification of practices that have been for long implemented in the production units.

Without project intervention, those MSMEs that understand the benefits of preserving ecosystem services, will likely not take the risk of investing in transitional strategies from traditional agriculture practices to agro-ecological practices. One of the solutions is to ensure that the products will meet a market demand. Therefore, the project will help in building their commercial and organizational capacities through technical assistance and

participation in sectorial events (component 2) and will provide incentives (Adapt-Award under Component 3).

The aim of the project is to up-scale adaptation measures to the rest of the region. In the long term, enhanced MSMEs capacities will enable them to effectively respond to climate change impacts and show example of the success of having adopted these practices. The knowledge and experience gained will be disseminated with all the levels of stakeholders to encourage their replication.

K. Describe how the sustainability of the project / programme outcomes has been taken into account when designing the project / programme.

To achieve sustainability and alignment with similar policies and projects, a matrix for stakeholder identification has been generated, to analyze their engagement, and flow of required information for each stage of the project (see Table No. 21).

This strategy pursues the following objectives:

- To ensure the appropriate engagement at each stage of the project of the key institutional actors of each country
- To ensure the alignment of the project with the national and regional strategies
- To keep governments aware of the project activities, through the systematization, analysis and logging of results and impacts of the project to promote the adoption of evidence-based policies.
- To promote the institutionalization of certain practices at a government level and generation of agreements that would allow actions to become sustainable.

Table No. 21 Matrix of stakeholder participation per project stage

Stakeholder	Participation per project stage		
	Design	Information upon Implementation / supervision /monitoring	Evaluation
National governments: Ministries of Environment, Agriculture, Development, Finances and/or	Consultation process	Delivery of information on project progress/ Systematization of experiences/	Sharing the results of the Mid-Term and Final Evaluation / Impact/ Project results

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Stakeholder	Participation per project stage		
	Design	Information upon Implementation / supervision /monitoring	Evaluation
any other as may apply.			
Local governments: department/municipal	Consultation process	Delivery of information on the project progress: coverage indicators / Study **chances of collaboration upon implementation** (TASP or as recipient of training to technicians working in the matter / Agreements to ensure installed capacity and action sustainability	Sharing the results of the Mid-Term and Final Evaluation
National Institutes for Agricultural Technology	Consultation process	Delivery of information on the project progress / Study **chances of collaboration upon implementation** (TASP or as recipient of training to technicians working in the matter / Agreements to ensure installed capacity and action sustainability	Sharing the results of the Mid-Term and Final Evaluation
Field technicians (institutions working with TA and Training for producers	Consultation process	implementation/ supervision / monitoring	Participation at Mid-term and Final evaluation
Associations of local producers, organizations and cooperatives of rural producers.	Participatory diagnosis	Informative campaign on the project // Control of the resources (loans) and decision-making // Training workshops	Participation at Mid-term and Final evaluation
Traders associations (MSMEs)	Participatory diagnosis	Informative campaign on the project // Control of the resources (loans) and decision-making // Training workshops	Participation at Mid-term and Final evaluation
Intermediary Financial Institutions	Consultation process	Informative campaign on the project // Exchange network // information platform for IFIs / training	Participation at Mid-term and Final evaluation
Technical Assistance Service Providers	Consultation process	Implement component 2 / monitoring	Participation at Mid-term and Final evaluation

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Stakeholder	Participation per project stage		
	Design	Information upon Implementation / supervision /monitoring	Evaluation
Regional Center for the promotion of MSMEs (CEMPROPYME)	Consultation process	Delivery of information on the project / outcomes/ impact / studies/ systematizations	Delivery of evaluation information
Universities	-	Delivery of information on the project / outcomes/ impact / studies/ systematizations	-
NGOs working in rural finances / projects in the region	-	Collaboration upon implementation. Articulation of activities.	-

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The main sustainability outcomes of the proposed project are summarized below.

- The strengthening of **ecosystem services** is a long-term wager on the resilience of production systems. The participatory co-management and monitoring– evaluation system involving all stakeholders in the various phases from the design to the implementation of activity and the evaluation of results also contribute to its sustainability.
- **Participation processes** ensure more effectively project's ownership. It is proposed that training conducted under component 2 is always conducted with the participatory-learning-for-action methodology, which includes collective diagnosis and participatory project selection. Thus, work is done with the support of facilitators to carry the project forward while ensuring the organization or group empowerment.
- Work in an **associative** manner will be promoted by the project; this aproach has always greater chances of enduring in time and of mitigating environmental, social and economic risks. The project proposes to prioritize investments promoted by cooperatives and producers' associations.
- In order to ensure the success and sustainability of activities, the project proposes to factor in both **local conditions and cultural traditions** so that actions truly respond to the need of the **natural environment and of the community** that lives in it.
- The project aims to **institutionalize the provision of financial and technical assistance** to the banking and MSME sector across the seven countries so the

likelihood of the sustainability of the piloted activities will be increased. The project will serve, first as a demonstration platform to prove that this kind of investments and business can attract financing from both commercial banks as well as non-banking financial institutions, previously not experienced in environmental/adaptation projects.

As **strategy to attain institutionalization of the rendering of these services** it is proposed that, in the case the local or national governments lack the technical capacity, technicians from each institution and country be engaged to participate of the project trainings. This way, the generation and installation of capacities during execution is ensured in these topics in the technical staff of local and national governments, with the commitment to continue providing technical assistance and replicate knowledge after the project's funding comes to an end.

- **New credit line** related to adaptation measures for resilient systems, will be open. This way, it will be possible for any other donor or funder to provide financing through this mechanism. The credit line will continue operating and will remain operational to the extent that there will be demand from the FIs.
- **Institutional capacity developed** by CABEI to implement this kind of programs will be installed.
- With the **revolving nature of the GCL**, the IFI may keep channeling resources granted by the CABEI to cover its demand and thus reach sustainability by promoting adaptation measures, since revolving credits would be re-invested in adaptation activities under the same credit line. For example, a financial institution of the region has disbursed over a period of 15 years a total sum of US$ 54 million using a line approved for US$ 9.0 million. This entails a GCL revolving 6 times, thus contributing in its own way to its sustainability. The allocation of resources thus revolved entails the performance of new disbursements. That is why the same requirements to use the GCL are applied.
- The proposed intermediary scheme is a novelty in adaptation to climate change strategies; success of t**his initiative can be taken by other regional or multilateral agencies** for effectively enable adaptation solutions by reducing barriers to financing from the most vulnerable.
- Technical Assistance activities, will seek to **build and install local and regional technical capacities,** in addition to national capacities, which are conscious and trained in Climate Change issues and sustainable small-scale agricultural production. These acquired capacities will empower over time the activities of the participating institutions, strengthening the existing ones and creating new ones, on the understanding that the relationship between climate change and small-scale agricultural production is still a neglected area.

- Finally, improving the quality of life of farmers through adaptive actions in their production systems is a guarantee of the **permanence** of families in the rural environment and preventing their migration to the poverty belts in the urban outskirts.

L. Provide an overview of the environmental and social impacts and risks identified as being relevant to the project / programme.

CABEI's strategic guidelines established in its Environmental and Social Policy provide for the integration of the environmental considerations in the context of sustainable development in the analysis of all projects and internal practices of the Institution. As part of the Institutional Strategic Framework the cross-cutting focus of Environmental Sustainability is included in order to ensure that any institutional efforts for the development, competitiveness and integration are environmentally viable in the long run.

To such end, CABEI has an Environmental and Social Risk Identification, Evaluation and Mitigation System (SIEMAS, in Spanish) in place. This system is defined as the instrument that will allow ~~to identify and protect~~identifying and protecting against any environmental and social risks as well as taking any mitigation measure established in the projects' environmental and social assessments, integrated into CABEI's project cycle.

CABEI has been implementing SIEMAS since year 2010. In 2015, SIEMAS was updated with the purpose of reinforcing monitoring and follow-up during the execution and operation stages, as well as the generation of lessons learned and a grievance mechanism. As part of the institutional strengthening process, during 2016 an update was conducted of CABEI's Environmental and Social Policy. Such update required in turn the review of the elements comprising such policy, bearing in mind the general principles and guidelines set forth in CABEI's Environmental and Social Policy. The new Manual, sanctioned in November 2016 will be effective as from May 2017, incorporating changes related to environmental and social standards applicable to the operations funded by the Bank through the Project Cycle, and to the processes of disclosure, consultation and citizen participation regarding Groups of Interest.

SIEMAS is based on environmental and social standards according to best practices. In this regard, it guarantees compliance with the environmental and social legislation of the applicable countries and the minimization, mitigation or compensation included in the environmental and social action plans of the projects and monitoring instruments in order to carry out an efficient monitoring thereof.

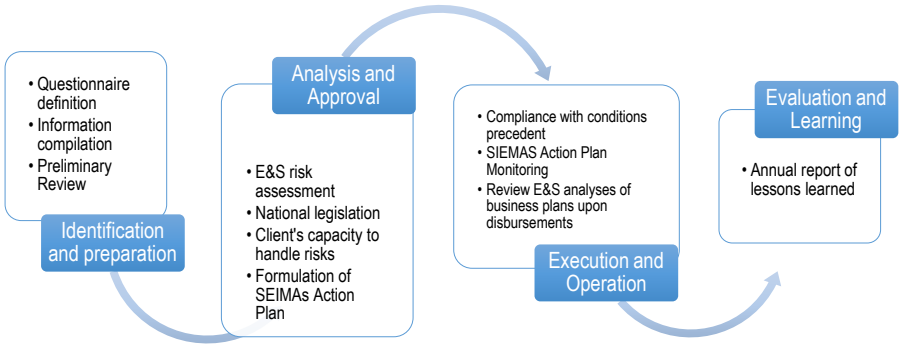
To such end, SIEMAS includes ~~in part~~ the Equator Principles ~~according to the following matrix~~:

- Review and categorization
- Environmental and Social Assessment
- Applicable environmental and social standards
- Environmental and social management system, and Plan of Action
- Participation of any stakeholders
- Grievance mechanism
- Independent review
- Covenants
- Independent monitoring and reporting
- Reporting and Transparency

Equator Principles	SIEMAS
Review and categorization	X
Environmental and Social Assessment	X
Applicable environmental and social standards	X
Environmental and social management system and Plan of Action	X
Participation of any stakeholders	Only for projects Category A
Grievance mechanism	X
Independent review	X
Covenants	X
Independent monitoring and reporting	X
Reporting and Transparency	Partial Report

SIEMAS is included in CABEI's Project Cycle according to the detail presented in the following figure.

Figure No. 25.~~18~~ CABEI's Project Cycle



The implementation of the analysis process and the monitoring of environmental and social risks of the intermediated credit are included in CABEI's project cycle, considering the following stages:

- At the **Preparation Stage**, CABEI defines the SIEMAS questionnaire to use and collect the information required for the analysis in order to preliminary review the environmental and social risks.

- At the **Analysis Stage**, CABEI completes the environmental and social risk analysis, as may arise from the operation of the Financial Institution, and determines the capacity the IFI has to manage such risks. This with the purpose of preparing the IFI's Environmental and Social Action Plan establishing mitigation measures to be fulfilled by such IFI and frequency thereof.

  At this stage, CABEI identifies the initial environmental and social risks of the loan portfolio of the Financial Institution, analyzes the size and probability of its direct and indirect impacts, defines the category of environmental and social risks, checks compliance with environmental and social legislation, determines the existing controls, and recommends any measures pertaining to the minimization, mitigation or compensation in case the impacts come into being. All of the above

with the purpose of valuating the residual risk of the operation after applying all controls and thus defining the level of intensity of the action plan.

The determination of the portfolio risk stems from the following three indicators:

- Size of the portfolio and/or investments of the Financial Institution.
- Size of the loan per employee: current loan portfolio or estimated investments of the IFI divided by the number of employees.
- Portfolio categorization: three categories of environmental and social risk are defined according to ~~the sectors financed~~IFC Performance Standards:
    - o Category SA: If the current or proposed portfolio includes, or is expected to include, substantial financial exposure to activities with potentially adverse environmental or social risks or impacts of a considerable nature, which are diverse, irreversible or without precedents~~sectors where most of the projects have adverse or irreversible environmental/social impacts. Such impacts may affect an area outside the site of the project or are difficult to manage~~.
    - o Category SB: If the current or proposed portfolio includes, or is expected to include, activities that pose potentially adverse environmental or social risks or impacts of a limited nature, scarce in number, typically located in specific sites, mostly reversible and easily addressed through mitigation measures, or includes a very reduced number of business activities with potentially adverse environmental and social risks or impacts of a substantial nature which are diverse, irreversible or without precedents~~sectors where most of the projects have adverse environmental/social impacts, but which could be successfully managed by subscribing to certain predefined performance standards, guides or design criteria~~.
    - o Category SC: If the current or proposed portfolio includes financial exposure to activities with predominantly minimal or no adverse environmental or social impacts~~These are sectors where most of the projects will have very little adverse environmental/social impact~~.

To protect against the materialization of the risks associated with the Financial Institution's portfolio, CABEI includes at least the following as part of the existing controls: 1) Policies or formal plans for the client's environmental and social management; 2) Institutional Environmental and Social Management System; 3) In-house or external staff entrusted with the environmental and social management; 4) Training received by the staff 4) Level of implementation of the Environmental and Social Management System. 5) Other environmental and/or social plans of the client~~2) Other environmental and/or social plans of the client; 3) In-house or external staff entrusted with the environmental and social~~

~~management; 4) Institutional Environmental and Social Management System; and 5) Level of implementation of the Environmental and Social Management System~~.

In general terms, in the case of financial intermediation operations, with a current or proposed portfolio categorized in 75% or more as Category SA, CABEI must ensure the client develops and implements an Environmental and Social Management System, in order to mitigate the risks associated with the portfolio.

In the case of this initiative, where projects are expected to reach as maximum Category B, the IFIs will be required to meet the ESP guidelines of the Adaptation Fund so they cascade down to the MSMEs for fulfillment thereof. It shall be guaranteed that these IFIs that will use the resources of this initiative have a system of environmental and social management applying to the selection of MSMEs and to the projects they submit.

The level of the action plan is defined considering two factors: i) Risk category of the portfolio of the Financial Institution and ii) client's capacity to manage environmental and social risks. This level is classified into intense, medium or slight.

In order to mitigate the risks identified, CABEI is responsible for communicating and reaching consensus with the client on the environmental and social required conditions as well as on the time periods to implement the mitigation measures.

- At the **Approval and Signing Stage**, the Environmental and Social Action Plan is guaranteed to be an integral part to the agreement, and it is also ensured at this point that if any conditions should be established, then they be mandatory in nature. Failure to meet the Environmental and Social Action Plan shall constitute grounds for early termination when such non compliance is not healed by the borrower in the terms set forth in the agreement.

- At the **Monitoring and Supervision Stage**, CABEI reviews to what extent the Financial Institution has incorporated the recommendations to minimize the environmental and social risks identified at the analysis stage subject to the frequency provided in the plan of action.

  Also, in the disbursement process for intermediation programs, the business plans of the final beneficiaries must include the environmental and social analysis of each project. Prior to granting any disbursement, there must be guaranteed compliance with environmental and social standards, as well as projects' environmental and social risk mitigation, including as part of the business plans any measures that

might allow to ensure compliance with the SIEMAS and with the Environmental and Social Policy of the financing source.

With the purpose of reviewing and/or validating the extent to which the financial institution has incorporated the conditions and/or recommendations to minimize environmental and social risks identified during the monitoring and supervision stages, CABEI shall be responsible for:
a. Following up implementation of the conditions of strict compliance and the recommendations set forth in the Environmental and Social Action Plan.

b. Validating the environmental and social conditions of strict compliance according to the term set forth in the Environmental and Social Action Plan.

c. Reporting and verifying compliance with the Environmental and Social Action Plan for financial intermediation operations with the monitoring frequency defined in the Plan. Also, verifying the actions and terms of implementation in the Environmental and Social Action Plan in force in order to request the CABEI to determine, if necessary, any amendments to the Plan.

CABEI must ensure that the monitoring frequency is related to the credit term of the financial intermediation operation to guard against the risks during the term of the loan.

The frequency, as well as the monitoring reporting methods, shall be fixed in the Environmental and Social Action Plan considering the type and state of intervention. However, typically for operations concerning financial institutions under analysis CABEI shall establish an initial frequency upon loan instrumentation of:

- Two years, for the operations of financial intermediation with a current or proposed portfolio categorized 75% or more thereof as Category SA.
- Three years for the rest of the operations of financial intermediation (this is the condition that applies to this project, which has been categorized prima facie as category B).

In order to verify the effectiveness of the system and keep it updated according to best practices, CABEI may:

a. Conduct independent annual reviews on compliance with the environmental and social standards established in the Environmental and Social Action Plans, and submit a report with the findings and recommendations to the Board of Directors.

b. Conduct an independent review on SIEMAS every two years. Review may be accompanied by an external specialist in management of environmental and social risks, and must cover at least the following:

i. The review of a selection of files to validate compliance with SIEMAS requirements and provide recommendations to improve the process.

ii. The alignment of SIEMAS with best international practices applicable to the subject-matter.

c. Generate lessons learned about the implementation of SIEMAS along Project Cycle.

A Preliminary Analysis of Project's Environmental and Social Impacts has been performed:

Checklist of environmental and social principles	No further assessment required for compliance	Potential impacts and risks – further assessment and management required for compliance
Compliance with the Law		To be reviewed during E&S Analysis
Access and Equity		To be reviewed during E&S Analysis
Marginalized and Vulnerable Groups		To be reviewed during E&S Analysis
Human Rights	Not Applicable	
Gender Equity and Women's Empowerment		To be reviewed during E&S Analysis
Core Labour Rights		To be reviewed during E&S Analysis
Indigenous Peoples		To be reviewed during E&S Analysis
Involuntary Resettlement	Not Applicable	
Protection of Natural Habitats		To be reviewed during E&S Analysis
Conservation of Biological Diversity		To be reviewed during E&S Analysis

Climate Change		To be reviewed during E&S Analysis
Pollution Prevention and Resource Efficiency		To be reviewed during E&S Analysis
Public Health	Not Applicable	
Physical and Cultural Heritage	Not Applicable	
Lands and Soil Conservation		To be reviewed during E&S Analysis

The impacts of the project activities are expected to be very low, and the project has been categorized as B in order to verify this assumption. Following, a list of minimal environmental impacts is shown, just to demonstrate that the impacts have been reviewed and why they are considered minor impacts.

1. Compliance with the Law: All project activities must be compliant with each country's constitution, and local, national and international legislation, as required by the safeguards of the AF and the SIEMAS. Each activity will be analyzed specifically with the technical enabler, who is to verify whether it is necessary to meet any specific regulation, permitting, special licenses, and who is to ensure that the rights of any person or community are not infringed.

2. Access and Equity: the selection processes of the beneficiaries will be transparent and ensure an equitable access to the benefits. The procedure will provide for measures of action necessary to fulfil~~l~~ such principle. The communication policies and procedures of CABEI and the IFIs will ensure equitable access of the potentially beneficiary population. For further details on communication guidelines, please refer to section I. At the time of preparing the operating manuals of each component, the mechanisms that ensure the equitable access to benefits will be specified. To be verified during the evaluation & analysis process.

3. Marginalized and vulnerable: given the nature of the project, it will not generate disproportionate adverse impacts to vulnerable or marginalized groups. On the contrary, this Project focuses on the most vulnerable micro, small and medium enterprises in order to adapt their productive systems to climate change by environmentally-friendly measures increasing ecosystem resilience. However, to ensure this principle and avoid any involuntary adverse impact, training and workshops of social sensitization with the technical enablers of the Financial Entities will be conducted. Also, eligibility forms of the beneficiaries will contemplate variables related to their vulnerability, which will be a part of the MSME selection criteria. To be reviewed during E&S Analysis

4. Human Rights: Not applicable

5. Gender Equity and Women's Empowerment: the project is intended to prevent any existing inequalities from increasing, and to generate specific mechanisms to ensure a gender equitable access to benefits. Indicators will be available that show the generation of employment for women and their access to the project's benefits, as well as the proportion of women-led enterprises participating from the Initiative. Considering the necessary precautions, the project's impact will be highly positive in terms of empowerment of rural women. In no case may the project's activities increase or create new gender gaps. To ensure this principle, gaps will be detected as well as specific situations where special attention must be paid by providing specific training in this topic to technicians in contact with producers. The forms will be the instruments that will enable technicians to initially survey information. Based on the accompaniment needs detected, work may also be conducted through workshops with producer men and women at the level of the production chain, organizations, etc. Gender issues to be verified during the evaluation & analysis.

6. Core Labor Rights: The rural setting typically features precarious and informal working conditions. The project will provide for measures in the plan of action leading to make the problem visible and try to bring solutions for the rural workers in an employment relationship. In all cases, ILO's work rights will be guarded.

7. Indigenous Peoples. The project does not foresee negative effects upon aboriginal communities. On the contrary, given their extended presence throughout the territory, there will be communities that will benefit from the project. Given that the indigenous population constitutes a substantial fraction of the population in the project's countries, a high participation is expected of rural indigenous population in the activities, being used to work in an associative manner. Special attention will be paid to communications. For further details on communication guidelines, please refer to section H. In the cases of projects located in territories of indigenous populations, as part of the environmental and social analysis of the Business Plans, consultation processes will be required pursuant to international agreements such as the ILO 169, as well as their results. Projects will only be conducted with the consent of the community. The risk of negative effects upon indigenous communities shall be included in the eligibility questionnaire as part of the selection criteria. To be reviewed during E&S Analysis

8. Involuntary Resettlement: Not applicable

9. Protection of Natural Habitats: The project does not provide for habitat disturbance. In this regard, the activities to be developed are related to habitat preservation. All technical enablers will receive specific training in the topic of Protection of Natural Habitats in order to detect any departure from and avoid any negative impact in protected areas, critical habitats, or areas known to be protected by local traditional or indigenous communities. This aspect will be included as critical in the form of eligibility as part of MSME selection criteria. To be reviewed during E&S Analysis

10. Conservation of Biological Diversity: As part of the project, the advance of the agricultural frontier will not be encouraged in detriment of native forests or other areas for

conservation of biological diversity. The promotion of diversified agro-ecological production systems enhances biodiversity and, in the mid-term, it turns production systems into more stable and sustainable systems in the long run. . All technical enablers will be specially trained in Conservation of Biological Diversity to detect any departures and avoid any activity infringing this principle. To be reviewed during E&S Analysis

11. Climate Change: No special concern, beyond adaptation activities. The project will not generate large amounts of greenhouse gas (GHG). Conversely, in some cases (always, at a small scale), it may reduce them through the incorporation of technology that improves energy efficiency of some of the premises, and the transition to agro-ecological production gradually eliminating the use of chemicals or the conservation of woods preventing deforestation effects. To be reviewed during E&S Analysis

12. Pollution Prevention and Resource Efficiency: In theory, no activity of the project will generate contamination. On the contrary, this project promotes, among its activities, the treatment of effluents and residue recycling. Based on the scale of the projects, large energy consumption is not foreseeable. However, during the monitoring and follow-up procedure, the necessary mitigation measures will be considered to guard against the materialization of this risk. To be reviewed during E&S Analysis

13. Public Health: Not applicable

14. Physical and Cultural Heritage: Not applicable

15. Lands and Soil Conservation: The project does not anticipate the execution of large works that would require earthworks or the use of agrochemicals. Rather, it promotes agro-ecological production and application of organic fertilizers nourishing and preserving the soil. However, in the stages of agro-ecological transition or upon facing critical levels of pests and diseases that need the use of pesticides, as part of the environmental and social action plan it wil be required to ensure the appropriate and responsible use and disposal of agricultural supplies. To be reviewed during E&S Analysis.

PART III: IMPLEMENTATION ARRANGEMENTS

A. Describe the arrangements for project / programme management at the regional and national level, including coordination arrangements within countries and among them. Describe how the potential to partner with national institutions, and when possible, national implementing entities (NIEs), has been considered, and included in the management arrangements.

CABEI will implement and execute the project based on its experience of successfully carrying out similar program activities involving financial intermediation, in the whole

region. Although some governments have been executing adaptation programs, they have not the regional scope to manage credit intermediation; and although there are some NGOs and foundations providing financial services, they are all local and with limited capacity. It can be affirmed that no other entity has the capacity, resources and experience CABEI has to deliver quick and effective results for the objectives of this project, and especially, with a regional scope.

The key of this project, is the possibility of providing financial services focused on adaptation, that are currently not available for MSMEs. CABEI has the technical capacity to ensure transversality, coordination and the provision of Technical Assistance and incentives (Adapt-award).

Furthermore, the Project has a regional scope, involving 7 countries. The existence of a central unit, within the sphere of CABEI, monitoring the project's overall progress is deemed highly important to guarantee compliance with technical standards and promote actions across all 7 countries such as those regarding the monitoring, evaluation and information systematization formats. In this context, strong overall coordination of the project is required through a central unit supervising project progress while promoting execution to move forward at a steady pace and pursuant to the same technical standards for the different countries.

This way, a close monitoring and follow-up by CABEI is required to ensure consistent levels of progress in a unified manner across all 7 countries as well as a regular flow of information where progress of activities can be contrasted against the plan adjusting any discrepancies per country from a central unit, the purpose of which is to ensure compliance with the project objectives at a global level. This allows to take corrective actions if necessary during project execution, ensuring it is cost-effective.

This system also promotes a better process for learning, by identifying cases that may have succeeded, in order to systematize information on the factors that helped promote best practices and in order to replicate them. Similarly, the search for problems faced during project execution will be promoted across all 7 countries, as well as the experiences that did not turn out as intended in order to learn to overcome such problems and to avoid them in the future.

In turn, evaluations will be conducted by independent evaluators. Evaluative feedback will be obtained from the above on the main strengths and weaknesses in the project's progress. Recommendations from independent evaluations will be implemented by the PAU, external unit hired specifically for this project to ensure the appropriate execution. This way, the follow-up and monitoring system of the project is deemed to ensure consistent results across the different countries and executing units, and to ensure the appropriate evaluation through the hiring of independent external evaluators to conduct

the appropriate valuations on the project on the mid-term and at each stage of systematization of experiences or specific case studies.

No conflict of interest is deemed to exist, since the external auditing and the incorporation of observations and lessons learned arising from such studies by the PAU is guaranteed. All execution will be conducted based on an Operative Manual arising from any such agreement as the Bank may enter into with the Adaptation Fund, which will respect all understandings reached.

Finally, it is important to emphasize that the seven participant countries have agreed to the institutional arrangements including the PMU being located in CABEI, as confirmed by the endorsement letters.

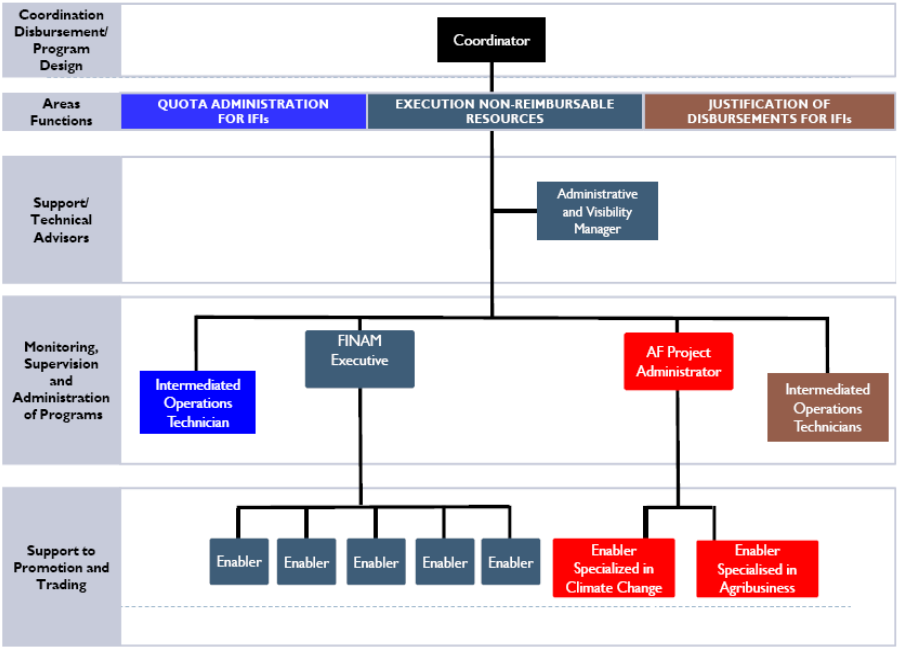
The following key institutional actors and structures will be involved in project management:

- CABEI will be the project's implementing entity;
- A Project Administration Unit (PAU) within CABEI will be responsible for day-to-day project co-ordination, management and execution; which would include within its functions the provision of monitoring and evaluation services. ~~Funding for this unit and its functions is yet to be defined.~~
- A number of Technical Assistance Service Providers (TASPs) will be sub-contracted by the project to provide technical support and outreach.

CABEI will use the funding requested for administrative costs in a cost-effective manner. Execution costs will cover salary and insurance of one Initiative Coordinator and one Project Manager (Adaptation Expert), as well as operative costs. The fee charged as implementing entity, will cover salary and insurance of a consultant charged of direct monitoring of the project activities (expert in agribusiness), the cost of the External Evaluations (mid-term and final), rent and maintenance of the project office's space, and operative costs (travel, among others).

Specific roles of each of the above institutional actors and structures are outlined below. It is important to highlight that this scheme will be further developed during the formulation of the full proposal.

Figure No. 2619. Operational Scheme including Project Administration Unit



Project implementation

CABEI will maintain day-to-day oversight responsibility for project implementation and have direct responsibility for fulfilling the duties and obligations of an Adaptation Fund Implementing Entity. It will be responsible for financial management and accountable for the use of AF resources under the project. It will provide technical and administrative backstopping to the Project Administration Unit (see below) to ensure results-oriented management and proper administration of funds. It will maintain project accounts, facilitate staff recruitment and procurement processes and monitor resource mobilization of baseline and co-finance. Financial transactions will be subject to annual audits undertaken by internationally certified auditors.

CABEI will have permanent coordination with project staff; perform site visits; and dialogue with project stakeholders. As an Implementing entity, CABEI will as well be in charge of Monitoring and Evaluation activities of the Project, of ensuring the transparent access to information and of disseminating results and lessons learned.

Project Execution

The **Project Administration Unit (PAU)** will be in charge of the execution of the project activities~~the executing entity~~. It will be established in Tegucigalpa within the Headquarters of CABEI and will have general project administration functions. It is proposed that the unit be located within the Financing for the Majorities (FINAM) Area in CABEI. FINAM will be responsible for assisting to link the PAU to the rest of CABEI's departments, offices and programmes. PAU will work under the FINAM structure to coordinate specific activities to be agreed during the project inception phase.

The PAU will ensure that project implementation proceeds smoothly through well-written work plans, Terms of Reference and carefully designed administrative arrangements that meet CABEI's requirements.

The responsibilities of the PAU will include the following:

- Achievements of the project outcomes and objectives;
- To manage day-to-day implementation of the project, coordinating project activities in accordance with the rules and procedures of CABEI/Adaptation Fund.
- To provide overall project administration, while acting as an independent and unbiased guarantor of cooperation and information exchange;
- To provide technical input as appropriate into the outcomes;
- To ensure, together with CABEI, to coordinate with the project stakeholders and regional programmes of relevance to the project;
- To ensure, together with CABEI, to convene quarterly Project Implementation Meetings (PIMs) in order to review progress in implementing project work plans;
- To ensure, together with CABEI, that specified tasks are outsourced to suitable sub-contracted Technical Assistance Service Providers or national and international consultants through competitive bidding processes. PAU responsibilities in this regard include development of bidding documents and terms of reference;
- To organize project-level meetings and workshops, e.g., inception workshop, Project Steering Committee (PSC) meetings, etc.;
- To prepare overall project reporting.
- Planning for and monitoring the technical aspects of the project, including regular field visits and periodic reporting.
- Ensuring to separate project accounts for the accountability of project funds.
- Ensuring advanced funds are used in accordance with agreed work plans and project budget.

- Preparing, and adjusting commitments and expenditures to be authorized by CABEI; ensuring timely disbursements, financial recording and reporting against budgets and work plans.
- Managing and maintaining budgets, including tracking commitments, expenditures and planned expenditures against budget and work plan;
- Maintaining productive, regular and professional communication with other project stakeholders to ensure the smooth progress of project implementation.

Technical Assistance Providers (TASPs): The preparation phase of this project will identify a number of organizations in the region which are qualified to provide technical assistance to the FIs and MSMEs. It is expected that a number of these organizations will play a key role in project implementation particularly in providing technical services to the FIs and the MSMEs. Many of these organizations are already active in the region supported by donor-financed activities. It should be noted that these organizations have not yet been selected to be engaged as specific technical assistance service providers (TASPs).

B. Describe the measures for financial and project / programme risk management.

To be developed in the course of the detailed project preparation.

C. Describe the measures for environmental and social risk management, in line with the Environmental and Social Policy and Gender Policy of the Adaptation Fund.

To be developed in the course of the detailed project preparation.

D. Describe the monitoring and evaluation arrangements and provide a budgeted M&E plan, in compliance with the ESP and the Gender Policy of the Adaptation Fund.

The project will follow CABEI's standard monitoring, reporting and evaluation processes and procedures. These include an inception report, quarterly and annual financial and activity-based reports; annual financial audits, independent mid-term and terminal evaluations and a final report. During preparation of the full project proposal, a Project Results Framework and a costed M&E plan will be developed.

E. Include a results framework for the project / programme proposal, including milestones, targets and indicators, including one or more core outcome indicators of the Adaptation Fund Results Framework, and in compliance with the Gender Policy of the Adaptation Fund.

A full Results Framework, will be developed in the course of the detailed project preparation to serve as the basis for monitoring the project impact and results

F. Demonstrate how the project / programme aligns with the Results Framework of the Adaptation Fund

To be developed in the course of the detailed project preparation.

Project Objective(s)[43]	Project Objective Indicator(s)	Fund Outcome	Fund Outcome Indicator	Grant Amount (USD)
To build Capacity for the Development of Production Models Resilient to Climate Change	Number of farmers with strengthened capacities to respond to climate change impacts	Outcome 3: Strengthened awareness and ownership of adaptation and climate risk reduction processes at local level	3.2. Percentage of targeted population applying appropriate adaptation responses	~~2,000,000~~1,668,203
To build resilience to climate change of micro, small and medium agricultural enterprises from Guatemala, El Salvador, Honduras, Nicaragua,	Number of MSMEs that have implemented adaptation measures by having accessed to adaptation loans and incentives.	Outcome 6: Diversified and strengthened livelihoods and sources of income for vulnerable people in targeted areas.	6.2. Percentage of targeted population with sustained climate-resilient alternative livelihoods	~~3,000,000~~2,502,304

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[43] The AF utilized OECD/DAC terminology for its results framework. Project proponents may use different terminology but the overall principle should still apply

Costa Rica, Panama and Dominican Republic, by reducing barriers to adaptation finance.				
Project Outcome(s)	**Project Outcome Indicator(s)**	**Fund Output**	**Fund Output Indicator**	**Grant Amount (USD)**
Activities and results of the project are visible to beneficiaries, stakeholders, general public.	No. of MSMEs having accessed to training / participated in adaptation events.	***Output 3***: Targeted population groups participating in adaptation and risk reduction awareness activities	3.1 No. of news outlets in the local press and media that have covered the topic	~~2,000,000~~1,668,203
Barriers to credit for MSMEs adopting EbA measures are reduced and MSMEs' resilience is strengthened.	Number and type of MSMEs adopted adaptation measures (adaptation strategies).	***Output 6:*** Targeted individual and community livelihood strategies strengthened in relation to climate change impacts, including variability	6.1.1.No. and type of adaptation assets (tangible and intangible) created or strengthened in support of individual or community livelihood strategies	~~3,000,000~~2,502,304

G. Include a detailed budget with budget notes, broken down by country as applicable, a budget on the Implementing Entity management fee use, and an explanation and a breakdown of the execution costs.

To be developed in the course of the detailed project preparation.

H. Include a disbursement schedule with time-bound milestones.

To be developed in the course of the detailed project preparation.

PART IV: ENDORSEMENT BY GOVERNMENTS AND CERTIFICATION BY THE IMPLEMENTING ENTITY

A. Record of endorsement on behalf of the government[44] *Provide the name and position of the government official and indicate date of endorsement for each country participating in the proposed project / programme. Add more lines as necessary. The endorsement letters should be attached as an annex to the project/programme proposal. Please attach the endorsement letters with this template; add as many participating governments if a regional project/programme:*

Sydney Samuels Milson, Minister, Ministry of Environment and Natural Resources of Guatemala	Date*: ~~08/22/2016~~February 2nd, 2017*
Lina Pohl, Minister, Ministry of Environment and Natural Resources of El Salvador	Date: ~~08/18/2016~~February 1st, 2017
Jose Antonio Galdames, Minister, Ministry of Energy, Natural Resources, Environment and Mines of Honduras	Date*: ~~08/16/2016~~*
Juana Argeñal, Minister, Ministry of Environment and Natural Resources of Nicaragua	Date: ~~08/31/2016~~
Edgar Gutierrez Espeleta, Minister, Ministry of Environment and Energy of Costa Rica *Andrea Meza Murillo, Climate Change Director, Ministry of Environment and Energy of Costa Rica*	Date: ~~08/09/2016~~
Emilio Sempris	Date: ~~09/02/2016~~

6. Each Party shall designate and communicate to the secretariat the authority that will endorse on behalf of the national government the projects and programmes proposed by the implementing entities.

Deputy Minister, Ministry of Environment of Panama	
Pedro Garcia Britos, Climate Change Director, Ministry of Environment and Natural Resources of the Dominican Republic	Date*: ~~08/09/2016~~February 2nd, 2017*

B. Implementing Entity certification *Provide the name and signature of the Implementing Entity Coordinator and the date of signature. Provide also the project/programme contact person's name, telephone number and email address*

<table>
<tr><td colspan="2">I certify that this proposal has been prepared in accordance with guidelines provided by the Adaptation Fund Board, and prevailing National Development and Adaptation Plans Guatemala, El Salvador, Honduras, Nicaragua, Costa Rica, Panama and Dominican Republic and subject to the approval by the Adaptation Fund Board, commit to implementing the project/programme in compliance with the Environmental and Social Policy of the Adaptation Fund and on the understanding that the Implementing Entity will be fully (legally and financially) responsible for the implementation of this project/programme.</td></tr>
<tr><td colspan="2">

Dr. Nick Rischbieth
Executive President of CABEI
Implementing Entity Coordinator</td></tr>
<tr><td>Date: <s>August 31, 2016</s>February 6th, 2017</td><td>Tel. and email: (504) 22402243
nrischbi@bcie.org</td></tr>
<tr><td colspan="2">Project Contact Person: Otto Gutierrez</td></tr>
<tr><td colspan="2">Tel. And Email: 504) 22402243
ogutierrez@bcie.org</td></tr>
</table>

ANNEX A - Initial consultation process

A.1 CAMBio Beneficiaries Consultation

Date	*Contact*	*Producer/ Organization name*	*Activities*	*Number of producers*	*Location*	*Country*	*Experience with CAMBio*	*CC Impact*	*Needs posed*
24/08/2016	Elías Ramírez and Rosario Pineda	Regional Agricultural Cooperative Union Chinacla Limitada	Coffee	386 producers (142 are women)	Department La Paz, near Corredor Seco	Honduras	The experience has helped them improve productivity and quality. Improved facilities of the cooperatives, to wit warehouses and coffee for preparation, export, participation in shows. Thanks to the project, they began to export.	Rust plus weevils are drying the country's forests, cause low productivity. Stronger rains.	Irrigation system, equipment to process coffee, workshop for entrepreneur women.
24/08/2016	Griselda Ponce	Agricultural cooperative union in San Juan de Río Coco.	Certified organic coffee. From coffee production to export	8 grassroots cooperatives, gathering 420 people (99 women)		Nicaragua	With the CAMBio project, they sold certified organic coffee and bird friendly certification, maintenance of coffee areas, received bio-award and used it to strengthen certification processes and the area's processes.	Increasingly less winter; less coffee quality. Rust increase = 40% less production	Reforestation, recovery of water sources, improve soils, dam-type catchment
24/08/2016	Rhina Yolanda Flamenco de Rehmann	Individual producer associated with Agroexport	Organic indigo	35 people working. Fixed, 8		El Salvador	Obtained financing, which is very difficult for small companies. Bio-award to deduct its debt. Before CAMBio, 200 kg were sold and now 500 kg, organic certifications, new markets	longer droughts, dry wells. In 2010, 12 ha were lost due to flooding.	TA to know what is best for them to adapt to the changes. Specialization in irrigation systems. Seek crops that need less water and have good added value due to exhausted soil
25/08/2016	Dario Vargas	ADOBANANO (Banana producers' association)	Bananas	Sector 1851 producers. About 60 individuals and members of associations About 25-26 associations. Between 50 and 150 per association.		Dominican Republic	Organic production started. They have learned to collect and administer common property	It is the world's fourth region in level of risk due to climate change. Huge exposure to tornadoes more and more frequent plus cyclones. Soil erosion and salinization. Water shortage.	They need to keep on growing as an organization. Pressurized irrigation. Solar technology for packaging machines and pumps, and TA. Agricultural insurance against winds. Increase in organic production. Training for the population to stop contaminating water and take care of the resource, system of water channeling farm-wide and drainage of sewage towards channels.
25/08/2016	Dalvin Espinal, Vladimir Valdez	Avocado Producers' Association Los Arroyos	Avocado Type A	54 producers, 3 women that own their own lands.	Pedernales (settlement Los Arroyos) bordering with Haiti	Dominican Republic	None	Temperature is changing, it is less cold and it rains less. The long agricultural cycle is changing due to climate change.	They need TA to export avocado. TA for water management, irrigation. TA in techniques and methodologies. Recovery of basins, change to perennial crops, sustainable and adaptive agriculture. Packaging facility.

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25/08/2016	Héctor Oliva	CAFEL cooperative	Coffee	230 producers (30% women and 20% young population The remaining 50% are men).		Honduras	Good experience because it was not only about soft funds (they used to pay rates of 18-20% and with the project, the rates lowered to 10%). Incentive and award helped a lot. They had 2 certifications and now 5. When the project ended, they decided to build a financial division of the cooperative, a non-banking financial entity, to support producers with small sums. Bio-award was used for certifications. Organic and fair trade and TA	very long summers and very high temperatures They have two problems when the winter comes: dissemination of fungi diseases due to excess of moisture and pest proliferation.	Keep improving organic quality. Certifications and TA. Investment in technology. Set up biodigestor to generate gas.
25/08/2016	Antonio Navarro	ADOBANANO (mango producers' association)	Mango	32 active members	Azua	Dominican Republic	None	Losses due to water stress	Reforestation TA and technology
26/08/2016	Franklin Gómez Burdier	CONACADO (National Confederation of Dominican Cocoa Producers)	Cacao	44 members, 15% women	North and East	Dominican Republic	None	There is drought when it has to rain and viceversa. This affects productivity. Droughts are very strong: heavy losses. They have been renewing the plantations, thus they have lost in lesser proportion: 10% of the production versus 30% estimated loss if they hadn't renewed plantations. Before, they used to produce 1.5 quintals per hectare and now 0.6.	They would need to work on the renewal of plantations. At least 4,000 hectares to be renewed. Organic production and good environmental practices. Drip irrigation. Applying soil recovery techniques with natural fertilizers.

A.2 Technical Assistance Providers Consultation

CONSULTATION - NITLAPLAN (Silvopastoral and Agro-forestry Systems)
Date: **August 24, 2016**
Contact: **ELIAS RAMIREZ Head of Technical Assistance**
Country: **Nicaragua**

Experience with CAMBio
It is a Central American Research Institute adhered to the University. TA was provided to the beneficiaries of funds from Productive Alliances under CAMBio project.
They participated from the very first stages of CAMBio project and during the 4-5 years that the project lasted, providing ~~advise~~advice to coffee producers, the agricultural and tourism sectors. There were there in the 6 or 7 agreements. They assisted near 2000 producers.
Advice to answer to environmental indicators. They also accompanied the delivery of the bio-award (5 or 6). They coordinated the technical part, bringing transparency to the entire process.
Impacts achieved: coffee and livestock producers could make investments in their farms. Increased tree coverage, silvopastoral systems, natural regeneration, protection and restoration of water sources. Windbreaks, special arrangements of tree coverage, water treatment. The approach of landscape connectivity has been incorporated. With credit, it is difficult to expect that they combine.
Having seen the results allowed to introduce environmental aspects in the financial sector, and find and capitalize synergies between the financial and the technical parts. They supported the presentation of the technical proposals and coordination in general between the northern and central portions of the country where most of the projects took place.
A large number of small and medium-sized producers was reached contributing to create biological corridors that did not existent up until then. The impacts of the investments made are maintained even in the absence of access to financing. All the experience gained remained there upon completion of the project. As from the project, a historical alliance with SDL was forged existing to this day, and TA is still provided in such topics, although these are credits taken by the producers. Impacts on biodiversity are still visible.

Which TA would you propose in a new project?
Inputs that with CAMBio came into being. The TA component, key to make changes more effective, credits more advantageous and for the bio-award to drive and foster producers to follow the path of this project.
Forge stronger bonds with the markets.
Alliances with commercial firms that were willing to get involved in the production chain.
Quality standards.
Encourage producers to diversify their economic activities with a more sustainable production of the resources.
More demands. Establish concrete measures, indicators, minimum quantities in terms of biodiversity and environment. Ex. Livestock No minimum number of live fences was required by the project. See how to dose and demand volume/quantity to attain the expected results. There are producers who made very substantial transformations, but in some other cases, the investment was unrelated to the credit taken.
TA frequency/modality. The TA should continue to play its role, trying to solve the problems that producers cannot sometimes see, such as CC.
Avoid making things complicated, without leaving all doors open. Access must have a minimum demand level. Stricter prohibitions regarding areas. Indicators that should not be acceptable. Review this part and adjust it.

Something I would not discard would be the issue of protected areas. Increasing pressure of individual producers over productive areas. Same as landscape connectivity. This is a problem of regional size.

Community investments
Collective efforts are required. Other important actors: cooperatives, municipalities. It is important to connect these actors with a more holistic reflection over the project. Work in coordination with the different actors, with a community-based vision, reflect on a community level on the collective actions. Condition not proposed in the first stage. Important to foster it, it may generate important demands.
Sector that was not prioritized: sustainable tourism sector. Many areas of Nicaragua, once the project ended. The second part of the project, tourism was treated as in integrating economic activity in environmental terms, resulting in more income community-wide.

Climate Change
Necessary and urgent approach. Depending on the sectors. But the water, tree coverage, and diversification topics are key regardless of the area: deal with food security and reduction of disaster risks. The region really needs this.

Role of women and young population
Rural women have a prevailing role. They should have a more leading position. Gender approach and participation, reduce social exclusion and gender-based gaps. Women are better at meeting due dates and at implementing business plans.
Obstacle for women: ownership. The guarantee always falls on the men side. Lower guarantee burden for women. More flexible financial part, more inclusive policies.

CONSULTATION - CODESPA (Technical Assistance Provider)
Date: **August 26, 2016**
Contact: **Manuel Sena**
Country: **Dominican Republic**

International Cooperation and Development. Born in Spain, and operating in Asia, Africa and Latin America International missions. Part of the Caribbean delegation. Centered in the Dominican Republic and moved to Haiti. Have a line of work of microfinances for development - Base of the Pyramid. Work promotion and insertion, access to markets aimed at the agricultural sector, community tourism.
They work with Dominican local banks with microfinances.

They handle cooperation funds from Spain, the European Union and private funds.
Access to financing by the small-scale agricultural sector is a very serious problem. In the Dominican Republic, the sector has lost the relevance it used to have in previous years. Up to 2014, only 8% went for the agricultural sector - see reports by the Central Bank. A large part of this credit is aimed at mid-sized and large producers. Furthermore, there is a lot of informal economy. In the Dominican Republic, there have sprung up microfinance organizations. Trade and service companies, but they are not designed for the agricultural sector but for micro-sized enterprises of producers who have moved to the urban medium.
Payments according to cash flow (crop cycles)

Climate change and adaptation
Adaptation needs:
- Agricultural insurance

- Water shortage: increasingly longer droughts. As of 2016 there have 3 years of drought
- Application of techniques and measures such as resistant species, soil management, shade, windbreaks. Improved grasses
- Hurricane course.

A.3 IFIs Consultation

CONSULTATION - BANHCAFÉ (Intermediary Financial Institution)
Date: August 24, 2016
Contact: Juventino
Country: Honduras

Experience with CAMBio
BANCAFÉ thought it important to support customers this way, mainly two cooperatives to which loans were granted.
The experience they have had with COMISUYL (mixed Cooperative Subiraa Yoro Limitada) who have 1 year left to complete payments (it has been arranged for a 7 year term). They have had some delays on account of the coffee sustaining rust. They could not sell the coffee harvested as they could not export.
For such cases, alternatives [were provided] when the producer could not cope with any situation beyond its control. They supported them as a bank. It is at those times where the partner needs it. They helped them with funds of their own so that they could continue operating. They continued with their activities, got back on their feet and resumed payments.
COPROCAMOL (coffee producers' cooperative Mujiman Limitada) loan cooperative for coffee production and trading. 812,000 Honduran lempiras. They also had issues with payments due to rust problems. The same operation was followed.
BANCAFÉ received TA from the project. It helped them pretty well to prepare their managers in the area. They also capitalize the bio-award. They used it for training their agents. They went down there to socialize the project of the COMISUYL to explain the basics.
Payment method changed due to their suggestion: coffee production is annual and payment was annual. They changed that.
Climate Change
Areas where the change is affecting a lot the livestock, agricultural sector. Deficit in fodder production. In absence of rain, there are no pastures. People have no irrigation system. To take into account: milk and livestock fattening: to produce, there must be food, and to such end, there must be enough water.
What would you improve?
For the CAMBio program, they were affected by the amount of documents that must be handled for only one credit, administration. Improving follow-up was suggested, visits conducted by the CABEI for supervision.
Even though rates are variable, the other funds are virtually fixed, more stable.

A4. Consultations made within other programs' workshops

In parallel, CABEI has taken the opportunity of making consultations about vulnerability to climate change, barriers for the access to credit, and needs of a

potential new initiative focused on adaptation measures, during workshops organized by other programs that work with IFIs and MSMEs.

1) Workshop with IFIs

Under the **Training on Financial Intermediation Programs held with representatives from 5 Financial Institutions** from Honduras and El Salvador on October 19, 2016, interviews were held aimed at evaluating the needs of the IFIs and their perception of MSMEs' needs, as regards climate change and variability impacts. This, in view of the formulation of a new initiative aiming at investments in adaptation to climate change.

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Next, there follows a summary of the answers to the main questions posed. Also, the listing of attendants is attached.

- ✓ Adaptation to Climate Change. Are they acquainted with the approach? Based on the extent of their knowledge, what do you think your needs are in terms of training?

  They know about the climate change issue due to the training supported by CABEI and other entities. They mentioned that in spite of having been funding different types of investments concerning climate change (fixed assets, work capital, and pre-export revolving facility) they were not aware of the environmental benefit of financing

these types of investments, since they used to classify them as agricultural, corporate, investment, work capital loans.

As of this day, capacity building is necessary to quantify the environmental risks of investments to finance, as well as the weighting-in of the environmental benefits of investments in the analysis, and the identification of indicators in order to quantify environmental benefits (biodiversity and climate change) in order to keep a record of the work conducted.

- ✓ Capacity to manage credits with environmental issues: Which are the main problems today when granting credit to MSMEs? Based on the above, what would require supplementing, whether in specific instruments or training?

  Based on what was informed, the main issues upon granting credit to MSMEs are:

  - **Lack of real estate as collateral to grant credit**
  - **High indebtedness of the MSMEs**
  - **Market**

  To supplement the financing they said they think there should be other mechanisms to mitigate the investment risks (for example, programs of partial guarantee, agricultural insurance, etc.) as well as incentives or rewards to remain motivated to grant financing to environmental investments. Another issue that is necessary is to promote training not only for business executives but also for risk officers so that they can understand the nature of this type of business.

- ✓ MSMEs: What are their biggest difficulties, according to you?

  - **The MSMEs do not have a formal structure since most credits are applied for by individuals.**
  - **Not having real estate as collateral.**
  - **Not keeping a formal accounting process.**
  - **In most MSMEs the issue of succession cannot be proven.**

- ✓ Do you think the MSMEs have enough capacity to formulate projects and manage credits? What are the instruments or training that you think should be promoted for the MSMEs?

  Medium-sized enterprises do, Small and Micro-sized enterprises do not.

  The MSMEs need to strengthen the process of development of business plans, market, sales strategy, micro-finances, development

of managerial and administrative skills.

✓ The new initiative was explained noting that it is undergoing the design phase. They showed a preliminary interest in the initiative.

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1. Interviews with MSMEs

A. Honduras

Training by the Local Development Unit in Danlí, El Paraíso, Honduras. With approximately 50 assistants, training was related to the use of agricultural waste to produce energy.

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Climate Change:

✓ Which climate impacts are affecting you the most?

- **Rain distribution is not optimal. Some years it rains a lot in very short time periods, and some other years it is dry.**
- **Increase in pests in crops.**
- **Crop losses due to floods/droughts.**

✓ Which solutions have you found to cope with such difficulties?

- **Building of greenhouses**
- **Provision of irrigation systems**
- **Slope conservation works**

✓ Which instruments or training do you feel it is necessary for you to know more about adaptation solutions, capacity to manage credit, project formulation?

- **For adaptation: Training on best organic agricultural and farming, and pest control practices**
- **For management: cost structure, accounting, post-harvesting management, food processing.**

MSMEs/organization:

- ✓ What is your organization like? Producers' associations, **Cooperatives, solidarity groups, individuals**, etc.
- ✓ What are the main difficulties you have as an organization? **Administrative management, cost definition, orienting products in terms of the market, and financial management.**
- ✓ Which technologies have you to receive information or potential at-distance training? **There are cell phones, the conventional ones.**

If access to credit were offered to you with the mentioned characteristics:

- ✓ Would you take part in it? **Yes**
- ✓ Which difficulties would you find? **The paperwork frequently takes time.**
- ✓ Which difficulties have you had in the past? **High commission fees.**

B. El Salvador

The project Biodiversity-friendly MSMEs (MIPYMES-AB) is intended to foster financing to MSMEs that incorporate biodiversity protection and conservation into their operations, products and services.

In this context, CLUSA El Salvador has been developing for Loan Associations of Sonsonate financial intermediary, which has provided support in the form of credit to small-scale producers of *Zona Alta de Chalatenango* (districts in the municipalities of La Palma and San Ignacio), by granting financing for the production of environmentally friendly horticulture.

Under the "Project for Strengthening Technical and Entrepreneurial Capabilities of Producers from *Zona Alta de Chalatenango*, Customers from Sonsonate's Loan Association", a series of training took place between July and November 2016. Customers from Sonsonate's loan associations are located in the area of Districts Los Planes, Las Pilas and Las Granadillas, Municipality of San Ignacio, Department of Chalatenango, Republic of El Salvador.

A list of producers (both men and women) provided by the CAMBIO Project through Sonsonate's Loan Association was taken as corner stone for direct intervention in the field. Of this list, 100% of the people involved or responsible

for families when the loan holder was not around or available was visited and/or contacted. In this process direct contact was held with 65 producers whether at household technical calls or visits to the field parcel and/or participation at meetings/ trainings.

Some of the outputs of the interviews were:

- 81% states the need to receive technical assistance and take part in training.
- The main problems identified by tomato producers include: wilt (bacteria and fusarium), "yellow ice", whitefly, and tomato psyllid (the latter in open field). The main problems for cabbage are: Moth (Plutella) bacterial disease (called “Trueno”) and “Taba de Jolote”. Some of these problems have been identified by bibliography to have worsened as a result of climate variability. For example, the increase in whitefly and Plutella moth after the passing of hurricanes, and of whitefly as a result of a prolonged drought. [45] In the case of mycotoxines, it has already been observed that climate change may cause the change of microbial communities existing in a specific place, giving rise to the displacement of native micro-biota by other which may endure better the new climate conditions.[46]
- Surplus of rainfall: The high workload of production activity of agricultural producers at this time of the year and the climate situations (rain surplus) comprise a factor that hinders the actual participation of the project beneficiaries. Bearing in mind the scenario of heavy rains and the high levels of ambient humidity, fungicides allowed in organic agriculture had to be applied, including copper sulfate pentahydrate, Bordeaux mixture, and lime sulfur.

The trainers' viewpoint: a constraining factor which has not allowed a fluid work process with producers is their scattered location and the lack of an organizational bond and of shared interest to make group work easier.

CABEI: Thanks to a participatory diagnosis, CABEI has specific information about significant lines, ~~most used~~most used management systems, main field problems faced, projections of crops and areas of greater activity, which will enable the planning of activities of Technical Assistance and a better critical analysis of the financing proposals by MSMEs.

The list of training attendance is found in the next section of this annex.

C. Guatemala

CABEI has a long history of working with financial intermediation in rural areas,

[45] For example, in Vazquez, L.L. "Cambio Climático, Incidencia de Plagas y Prácticas Agroecológicas Resilientes", in: Innovación agroecológica, adaptación y mitigación del cambio climático. Compiladores: Ríos, Vargas y Funes- Monzote. Instituto Nacional de Ciencias Agrícolas (INCA). La Habana. 2011. 242p. ISBN 978- 959- 7023- 53- 1

[46] Magan, N.; Medina, A.; Aldred, D. (2011). Possible climate-change effects on mycotoxin contamination of food crops pre- and postharvest. Plant Pathology, Special Issue: Climate Change and Plant Diseases 60: 150-163.

including working with indigenous peoples. Next, the conclusions of two training cycles carried out under the CAMBio project with these communities, as well as from a diagnosis of productive chains are presented.

ADICLA - Capacity building on issues of agroecological production of coffee and Maxan leaf, Project CAMBio. Sololá, Guatemala, November 2013. Comprehensive Development Association Lake Atitlán Basin - ADICLA. Following a previous capacity building experience of 179 small producers of the association in 2012, a second training was conducted for another 216 partners in January 2013.

These indigenous communities are vulnerable from the socio-economic point of view, aggravated by high environmental degradation. The loss of soil nutrients is due in large part to wind and water erosion, which causes a decrease in the development of the crop. Technical assistance associated with credit was based on the agroecological approach. In the execution of this technical assistance, it was necessary to carry out a process based on technical internships, workshops and establishment of agroecological plots, to let them know the importance of each learning process. The funds were executed on dates proposed by the beneficiaries.

The solutions that the members highlighted as most relevant to the response to their needs were:
- The importance of the conservation of native seeds
- The importance of managing a diversified parcel
- New ideas of production using native seeds as medicinal plants
- Management and processing of organic fertilizers
- The contents of workshops and internships in Quiché language
- Use of waste to make fertilizers
- Knowledge in agroecology and soil conservation

FONDESOL - Strengthening the technical-productive, business and environmental capacities of producers of shaded coffee and cardamom. Project CAMBio, December 2013.

With the support of the Technical Assistance associated with the credit granted

in 2012, FONDESOL was able to provide technical assistance to 408 MSMEs benefiting from CAMBio resources, which enabled them to improve their capacities in the management of shaded coffee and cardamom, by implementing environmentally friendly farming techniques and business development of MSMEs, improving their productivity and profitability.

The needs of these producers are related to the adoption of sustainable techniques for the production of cardamom and coffee, renovation of shade trees for these crops, best practices to reduce the incidence of diseases that affect crops and are accentuated by Climate Change and its variability, such as rust on coffee and trips on cardamom. Communities expressed the need for technical assistance to further strengthen values and attitudes to reduce environmental threats. The recommendations of the trainers were: to increase the duration of projects of this type, to follow up on these practices initiated with the CAMBio project in order to ensure the sustainability of the changes achieved, and to have new strategies to train the communities, taking into account that each population is different.


Diagnosis on productive chains. Project CAMBio, Guatemala, May 2014.

Next, some conclusions of a diagnosis on productive chains carried out within the framework of the CAMBio project are presented. The CRECER Association studied the issue of promoting productive linkages and access to markets for coffee and cardamom producers.

The groups that received the training are beneficiaries of the CAMBio project, managed through the foundation *Genesis Empresarial*. According to the diagnosis of this institution, these beneficiary producers of the CAMBio project operate in a productive chain, with undifferentiated products, with little added value (without processing and without certifications) to informal local intermediaries, with very low levels of production, income and schooling. Moreover, they do not belong to any cooperative or association legally constituted. The only form of organization that exists is solidarity groups (informal groups of less than 15 producers). None of the producers meets the requirements to receive the credit service on an individual basis with fiduciary, pledge or mortgage guarantee and therefore the maximum amount granted in credit does

not exceed Q8,000 per producer (USD1,000), credit that is used, partly to solve family needs of education and consumption, and the other part for the purchase of agricultural inputs, mainly fertilizers.

The majority (75%) are small subsistence producers, whose income from the sale of their crops does not cover the basic food basket. This is a limitation for the chains, since these producers have limited investment capacity.

The objective of this survey was to find the best way to promote the development of value chains with a focus on rural development and fight against poverty, through good practices for sustainability.

Some of the main needs identified were:

- Market Access
- Improvement of financial management
- Improvement of production processes that favor the protection of the environment and ecosystems by means of soil, water and biodiversity protection, as well as promoting energy efficiency and reducing CO_2 emissions.
- Implementation of good agricultural practices and sustainability that improve income, increase productivity and reduce unit costs of production.
- Permanent access to technical assistance and structured training
- Sustainable production and productive processes better prepared to face climate change.
- Pests and diseases below critical levels of economic damage.
- Diversification for the reduction of risks of family income and guarantee of adequate food and nutritional intake.
- Greater ability to generate quantity and quality of employment.
- Improvement in poverty indicators.

Among the main critical risks identified for the performance of the cardamom and coffee value chains are:

- Climate change: According to the climate of the last 10 years, where the Central American region has been affected by hurricanes and storms (Mitch and Stan) and droughts (child phenomenon), for the next 10 years we should expect three other climatic phenomena Which could strongly affect production, quality and infrastructure
- Pests and diseases: High incidence and severity of Roya in coffee cultivation, and Trips in cardamom, among other diseases.

In addition, risks of high price volatility, market competitiveness, technical assistance, access to financing, among others, were highlighted.

ASSISTANCE RECORDS

a) Training on Financial Intermediation Programs held with

representatives from 5 Financial Institutions from Honduras and El Salvador on October 19, 2016

Capacitación de la Iniciativa MIPYMES Verdes y los Programas de Intermediación Financiera del BCIE
Salón de Usos Múltiples, 19 de octubre de 2016

No.	Nombre	Institución	Cargo	Correo Electrónico	Teléfono	Firma
1.	Claudia Padilla	Bco. Ficensa	Of. Créditos Corporativo	cpadilla@ficensa.com	87403279	
2.	Yury Dubón	Bco. Banhcafe	Ejec. Banca Corporativa	ydubon@banhcafe.hn	95778303	
3.	Elena Miles	Banco Ficohsa	Ej. Banca PYME	elenamiles@ficohsa.com	9885-1128	
4.	Milton Rivera	Ficensa	Banca Corp.	MRivera@Ficensa.com	8779-3120	
5.	Edgardo Guevara	Banco Promerica	Ejecutivo PYME	eguevara@bancopromerica.com	3390-1016	
6.	Víctor Manuel Barahona	Promerica	Ejecutivo	vbarahona@bancopromerica.com	31845162	
7.	Ivonne Luna	Bco Promerica	Ejec. Negocios	iluna@bancopromerica.com	31464271	
8.	Edgar Rodríguez	BAC Honduras	Coordinador Nego.	ecruz@bachonduras.hn	31917735	
9.	Susan Moreno M.	BANHCAFE	NEGOCIOS	smoreno@banhcafe.hn	9459-8360	
10.	Antonio Ocampo	Banhcafe	Ejecutivo Neg.	aocampo@banhcafe.hn	3291-9516	
11.	Carlos F. Aguirre	Banco Promerica	Ej. Neg. Internacionales	caguirre@bancopromerica.com	2765-1818	
12.	Karol Aguilar	BAC	Sup.	Kaguilar@bachonduras.hn	31418549	
13.	Sarai Aparicio	Banco Ficohsa	Ejecutivo Técnica	saparicio@ficohsa.com	2221-3671	
14.	José Francisco Reyes	BCIE	Técnico FINAM	reyesj@bcie.org	2240 2162 E.7119	
15.	Pedro Emilio Banegas	BCIE	Gerente de País	pbanegas@bcie.org	22402241	
16.	Alejandro Verhelst	BCI	ejec. Proyecto	averhelst@bcie.org	22402263	

b) MSMEs from the project Biodiversity-friendly MSMEs (MIPYMES-AB), in El Salvador

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PROYECTO CAMBIO - CLUSA EL SALVADOR Y CAJA DE CREDITO DE SONSONATE

LISTADO DE ASISTENCIA A REUNIONES Y EVENTOS DE CAPACITACION

Evento: Capacitación Sobre Agricultura Orgánica "Reproducción de Microorganismos"

Objetivo: Proporcionar información sobre como reproducir microorganismos de forma artesanal

Lugar: C/ Los Planes, La Palma Fecha: 4 de julio/2013 Facilitador: Jesús A. Constanza

#	NOMBRE COMPLETO DEL PARTICIPANTE	A QUIEN REPRESENTA (en caso de no ser el titular invitado)	PROCEDENCIA (Caserío y Cantón)	TELEFONO	FIRMA
1	Luis Rolando Castro Díaz	Champa Ulloa	Crío Los Hernández C/ Los Planes		X L.R.C.D.
2	Pedro Hernández	—	Crío Cruz Calle C/ Los Planes		X [illegible]
3	Ana Marcelina Rodríguez Rivera	—	Crío Bellavista C/ Los Planes		Ana marselina RR
4	Enoc Esaú Hernández	—	Crío Cruz Calle C/ Los Planes		X [illegible]
5	Joel Vargas	Marcos Vargas	Crío [illegible] Los [illegible]		X [illegible]
6	José Antonio Alvarenga Ríos		Crío [illegible] C/ Los Planes		X J A A
7	José Abisaí Lemus	—	Crío. Cruz Calle C/ Los Planes		X [illegible]
8	Marcos Salvador Hernández	—	Crío Bellavista C/ Los Planes		X [illegible]
9	Nelson David Alonzo López	[illegible]	C. El Chile Los Planes		[illegible]
10	José Cidelino Chacón Salguero		Cruz Calle	75819948	[illegible]
11	Juan Alberto Hernández		Cruz Calle	72917167	[illegible]
12	Eusebio Ramos	—	—	—	[illegible]
13	Gloria Elizabeth Flores			76716564	(no firmó)
14	José Rodolfo Pacheco			72694587	[illegible]
15	José Marcelo Hernández				[illegible]

PROYECTO CAMBIO - CLUSA EL SALVADOR Y CAJA DE CREDITO DE SONSONATE

LISTADO DE ASISTENCIA A REUNIONES Y EVENTOS DE CAPACITACION

Evento: Capacitacion sobra Practicas básicas a implementar en la producción de hortalizas

Objetivo: Exponer a los participantes en la capacitación, las practicas básicas a considerar, para la planificación y fase de desarrollo en la producción de hortalizas.

Lugar: Crio Cruz Calle, Cantón Los Planes Fecha: 21 de septiembre de 2013, Facilitador: Jesús Constanza

#	NOMBRE COMPLETO DEL PARTICIPANTE	A QUIEN REPRESENTA (en caso de no ser el titular invitado)	PROCEDENCIA (Caserío y Cantón)	TELEFONO	FIRMA
1	ana marselina	Rodrígues	Caserío Cruz Calle		ana marselina
2	José Cidelino Chacón		Caserío Cruz Calle	75819948	[illegible]
3	Eliazar Hernández	Titular	Caserío Cruz Calle	79473264	[illegible]
4	Luis Rolando Castro	Titular	Caserío Los H.	75514569	L.R.C.D.
5	José Geovani Guevara		Caserío Los Villalta	74899717	[illegible]
6	José Antonio Flores	El chile	Caserío El Chile		J.A.F
7	Agustín Wenceslao Díaz	ACPA Altos del Sompal	Los pilas	7732 2629	[illegible]
8	José Antonio Alvarenga	—	C/ Los Planes Crío [illegible]	7223-9448	J.A.A.
9	[illegible]				
10	José Rodolfo Pacheco	Titular	Crío El [illegible] C/ Los Planes	7769-4887	[illegible]
11	José Edgardo Salguero	Lissette Amily d Salguero	Crío La Loma C/ Los Gonzalez	7671-1647	J.S.E.S.F.
12	Gloria Elizabeth Flores	titular	Crío El Chile C/ Los Planes	7671-6564	(no firmó)
13	José Antonio Hernández F.	Titular	Crío Bellavista C/ Los Planes	7215-1334	J.A.H.
14	José Abisaí Lemus Tejada	titular	Crío Cruz Calle C/ Los Planes	—	[illegible]
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PROYECTO CAMBIO - CLUSA EL SALVADOR Y CAJA DE CREDITO DE SONSONATE

LISTADO DE ASISTENCIA A REUNIONES Y EVENTOS DE CAPACITACION

Evento: Dia demostraivo de produccion de tomate bajo invernadero, aplicando prácticas orgánicas

Objetivo: Exponer a las participantes en el dia demostrativo, el plan de manejo de tomate en invernadero, integrando prácticas de producción orgánica

Lugar: Cantón Los Planes, **Fecha:** 13 de septiembre de 2013, **Responsable CLUSA:** Jesús Constanza

#	NOMBRE COMPLETO DEL PARTICIPANTE	A QUIEN REPRESENTA (en caso de no ser el titular invitado)	PROCEDENCIA (Caserio y Cantón)	TELEFONO	FIRMA
1	Rigoberto Hernandez Gallin	[illegible] Hernández	Cno Bellavista	7723-5077	X [illegible]
2	José Antonio Hernandez	titular	Cno Bellavista	7215-1329	X J.A.H.
3	Juan Alberto Hernandez	Titular	Cno Cruz calle		X [illegible]
4	José [illegible] Salguero		Cno Cruz Calle	75819948	[illegible]
5	Eliazar Hernández Tejada	Titular	caserio cruz calle	7°473204	[illegible]
6	Abisai [illegible]	titular	cno Cruz calle		X [illegible]
7	José Hector [illegible]		Cruz Calle		[illegible]
8	Carlos Danilo Shul Ramos		Caluco		[illegible]
9	Miguel Angel Shul Ramos		Caluco		[illegible]
10	Victor Manuel Gonzalez		Caluco		[illegible]
11	Regina Angelica Cruz C.	San Julian	Guacoco	77349655	[illegible]
12	José María Cruz Cruz	San Julian	Guacoco	7390-7282	[illegible]
13	Jonathan Alexander Cruz		Caluco	73179976	[illegible]
14	José Luis Barrientos		Caluco	70001401	[illegible]
15	Edgardo Guerrero		Sn Julian	78693316	[illegible]

PROYECTO CAMBIO - CLUSA EL SALVADORY CAJA DE CREDITO DE SONSONATE

LISTADO DE ASISTENCIA A REUNIONES Y EVENTOS DE CAPACITACION

Evento: Día demostrativo de produccion de tomate bajo invernadero, aplicando prácticas orgánicas

Objetivo: Exponer a os participantes en el día demostrativo, el plan de manejo de tomate en invernadero, integrando prácticas de producción orgánica

Lugar: Cantón Los Planes, **Fecha:** 13 de septiembre de 2013, **Responsable CLUSA:** Jesús Constanza

#	NOMBRE COMPLETO DEL PARTICIPANTE	A QUIEN REPRESENTA (en caso de no ser el titular invitado)	PROCEDENCIA (Caserio y Cantón)	TELEFONO	FIRMA
1	José Balmore Mancia		San Julian	7697-6991	[illegible]
2	Jesus Aguillon	CLUSA/SETEFE	Caluco	78026614	[illegible]
3	Hugo Ricardo Rivas		San Julian	7635610	[illegible]
4	Julio Cesar Lemus		San Julian	7736/4621	[illegible]
5	Juan Francisco Avalos	CLUSA/SJDK		78026619	[illegible]
6	Wilson Antonio Molina		Caluco		[illegible]
7	Raúl Alfonso Alvarado Aviles		Caluco	7518-4799	[illegible]
8	Millon Bladimir Molina		Caluco	7081-4182	[illegible]
9	José Alexander Trigueros C		Caluco	78812422	[illegible]
10	José Isai [illegible]		Los Planes	7106 4077	[illegible]
11	Mario Esterony Acevedo		San Julian	7305-0067	[illegible]
12	José Antonio Constanza	CLUSA	S.S.	7802-2260	[illegible]
13	[illegible] Salvador Hernandez	—	Cno Bellavista / Planes	778 6361	[illegible]
14	Morelia Rodriguez	—	Bellavista / Planes	7733 8881	ana m. felipa R
15	Antonio Alvarenga	—	c/ El Matazano / Planes	7223-7448	J.A.A.
	ENoc Hernandez Nuño	—	c/Cruz calle/Planes	7725 8409	[illegible]

PROYECTO CAMBIO - CLUSA EL SALVADOR Y CAJA DE CREDITO DE SONSONATE

LISTADO DE ASISTENCIA A REUNIONES Y EVENTOS DE CAPACITACION

Evento: Capacitación sobre elaboración de Insumos orgánicos: Biofermentos, caldos minerales y fertilizantes orgánicos

Objetivo: Que los productores conozcan de manera práctica elementos para la producción de insumos orgánicos

Lugar: Cserío Cruz calle, C/ Los Planes. Fecha: 18/octubre/2013 Facilitador: Jesús A. Castaneda

#	NOMBRE COMPLETO DEL PARTICIPANTE	A QUIEN REPRESENTA (en caso de no ser el titular invitado)	PROCEDENCIA (Caserío y Cantón)	TELEFONO	FIRMA
1	Alcaí Lemus Tejada	—	Crío Cruz calle C/ Los Planes	7231-1874	[illegible]
2	Elayer Hernández	—	Crío Cruz calle C/ Los Planes	7947-3204	[illegible]
3	José Antonio Hernández A.	—	Crío Bellavista C/ Los Planes	7215-1329	J.A.H
4	Ana Merceditas Rodríguez Alas	Titular	Crío Bellavista C/ Los Planes	7233-8881	Ana mercedes Rodríguez
5	Eusebia Flores de Torres	Titular	Crío El Pilarcito, C/ Los Planes	7934-9213	Eusebia Flores Torres
6	José Adelmo Chacón Salguero	Titular	Crío Cruz calle, C/ Los Planes	7581-9948	[illegible]
7	Alonso Oval Hernández	—	Crío Cruz calle C/ Los Planes	7530-7158	[illegible]
8	José Héctor Landaverde	Socio Alcaí Lemus	Crío Cruz calle C/ Los Planes	—	[illegible]
9	Marcos Salvador Hernández	Titular	Crío Bellavista C/ Los Planes	7211-5561	[illegible]
10	José Edgardo Salguero	Jisseth Marily Salguero	Crío La Joya C/ Los Granadillos	7671-4644	J.E.S.E
11	Francisco Humberto Moreira	Titular	Crío Bellavista C/ Los Planes	7738-6974	Francisco Humberto Moreira

PROYECTO CAMBIO - CLUSA EL SALVADOR Y CAJA DE CREDITO DE SONSONATE

LISTADO DE ASISTENCIA A REUNIONES Y EVENTOS DE CAPACITACION

Evento: Capacitación sobre Buenas Prácticas Agrícolas, en fase Productiva y Post-cosecha.

Objetivo: Que los Productores conozcan o refuercen el concepto de BPA y su aplicabilidad en la fase productiva.

Lugar: Crío Cruz calle, C/ Los Planes Fecha: 2 de octubre /2013. Facilitador: Jesús Antonio Castaneda.

#	NOMBRE COMPLETO DEL PARTICIPANTE	A QUIEN REPRESENTA (en caso de no ser el titular invitado)	PROCEDENCIA (Caserío y Cantón)	TELEFONO	FIRMA
1	José Adelmo Chacón Salguero	Titular	Cruz Calle	75819948	[illegible]
2	José Alcaí Lemus	Titular	Cruz Calle	72311874	[illegible]
3	Marcos Salvador Hernández	Titular	candelbuista	72119361	MSH
4	Moisés [illegible] Hernández	Titular	barrio San [illegible]	72204886	[illegible]
5	Luis Rolando Castro	Titular	Los Hernández	7551-4563	LRCD
6	José Antonio Alvarenga	Titular	el [illegible]	72239445	JAA
7	Mario Ochoa	Titular	caserío Los Flores	72707760	
8	José Giovanni Guevara	Titular	caserío Los [illegible]	71822117	[illegible]
9	José Ángel González / Gloria Elizabeth Torres	Titular	caserío el chile	76716564	[illegible]
10	José Antonio Flores	Titular	caserío el chile	75816818	J.A.F.
11	José Wilfredo Flores	Titular	caserío el chile	72965429	J.W.F.
12	Eusebia – Flores de Torres		" El pilarcito	6004-2443	Eusebia Flores.
13					
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PROYECTO CAMBIO - CLUSA EL SALVADOR Y CAJA DE CREDITO DE SONSONATE

LISTADO DE ASISTENCIA A REUNIONES Y EVENTOS DE CAPACITACION

Evento: Capacitación sobre Gestión financiera y Buen manejo del Credito.

Objetivo: Que los participantes conozcan los elementos y posibles consecuencias a considerar en el manejo de un credito

Lugar: cño Cruz calle, c/los Planes Fecha: 28 / Noviembre / 2013 Facilitador: Ricardo Goday

#	NOMBRE COMPLETO DEL PARTICIPANTE	A QUIEN REPRESENTA (en caso de no ser el titular invitado)	PROCEDENCIA (Caserío y Cantón)	TELEFONO	FIRMA
1	Sigfredo Vasquez		El centro	75457554	[illegible]
2	Jose Adelmo Chacón Salgcaro		Cruz Calle	75819948	[illegible]
3	Nelson David Alonzo López	Carolina Esmeralda Villalta de Alonzo	Caserio El Chile	72531865	[illegible]
4	José Giovanni Guevara		Caserio el chile	74892177	[illegible]
5	Jose Wilfredo flores		Caserio los flores	78965124	J. W. F. C
6	José Antonio flores		Caserio los flores		
7	Abner Ebel Hernández		Cruz Calle	75307758	[illegible]
8	Eliazar Hernández	Titular	Cruz Calle	79473204	[illegible]
9	Jose Antonio Hernández		Caserio Vellavista	72157399	J.A.H
10	Juan Pablo Hernandez		Caserio Cruz calle		R. M. t
11	Rosa Margarita Tabora.		Caserio El Chile.		9.H.
12	Leon Bonilla		Clusa	78026023	[illegible]
13	Esmeralda Alfaro				[illegible]
14	José Andres Alvarenga		cño el Mitaseño/L-Planes		x E AA
15	Jesus Antonio Castro		Clusa		[illegible]

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PROYECTO CAMBIO - CLUSA EL SALVADOR Y CAJA DE CREDITO DE SONSONATE

LISTADO DE ASISTENCIA A REUNIONES Y EVENTOS DE CAPACITACION

Evento: Capacitación sobre Gestión Financiera y Buen Manejo del Credito

Objetivo: Que los participantes conozcan los elementos y posibles consecuencias a considerar en el manejo de un crédito

Lugar: cño Cruz calle c/los Planes Fecha: 28/ Noviembre/ 2013 Facilitador: Ricardo Goday.

#	NOMBRE COMPLETO DEL PARTICIPANTE	A QUIEN REPRESENTA (en caso de no ser el titular invitado)	PROCEDENCIA (Caserío y Cantón)	TELEFONO	FIRMA
1	mardoqueo Hernandez	—	los planes	72464433	X [illegible]
2	Marcos Salvador Hernandez	—	cño Bellavista c/los Planes	7211-5361	X MSH
3	Juan Albert Hernandez	—	cño Cruz calle c/los Planes	7297-7161	X [illegible]
4	Eusebia Flores de Gomes	Titular	cño El Flamon c/los Planes	—	Eusebia Flores.
5	Ana Marcelina Rodriguez	—	cño Vellavista c/los Planes	—	ana marselina rodriguez.
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ANNEX B - Screening of relevant technical standards

B1. GUATEMALA

Area	Administrative act - Scale of application	Legal requirements of the project	Project applied
General	Law of environment protection and improvement (decree number 68-86).	The protection, conservation and improvement of the country's natural (soil, fauna, flora, air, biodiversity, lithic) and cultural resources, as well as prevention from degradation, misuse or destruction thereof, and restoration of the environment in general.	
Water		There is no specific law on waters or any specific authority in the matter. The legal system on water is scattered across regulations of different rank.	
Forestry	National Forestry Law EXECUTIVE ORDER 101/-96	This executive order compiles the requirements related to concessions and licenses for sustainable utilization of forestry resources, a Management Plan in place, definition of beneficiary subjects, constitution of bonds, recording of concessions, prohibitions to cut protected or endangered species, use of fire, burns and related penalties. The prohibition of clearing woods in the upper sections of river basins covered with forests, especially those located in areas of water recharge supplying water sources is also regulated. In this context, it is a must having sustainable forest management, or regeneration or reclaim in the case of degraded areas.	High-density planting Provision of agro-forestry and agro-silvopastoral systems (grasses and fodder)
Flora and Fauna	LAW OF PROTECTED AREAS EXECUTIVE ORDER No. 4-89	This law compiles the requirements related to the utilization and management of forests, collection of fauna and flora legally authorized by DIEGOS and CONAP. Anyone conducting any of these activities without any granted license shall be punished with five to ten years imprisonment and a fine of ten to twenty thousand Quetzals. Also, they must restore those associations or ecosystems patently transformed and/or contaminated, whether directly or indirectly.	Use of forest by-products. Sustainable forestry management and design of forest management plans Reforestation with native species. Consolidation of agro-forestry and agro-silvopastoral systems (grasses and fodder)
Sanitation	RULES OF VEGETAL AND ANIMAL SANITATION LAW. GOVERNMENT RESOLUTION No. (1999)	The sanitation law requires that the introduction of plants, animals, products and byproducts, and supplies for agricultural and animal use should be subject to the fulfillment of phyto-sanitary or zoo-sanitary requirements provided by the Unit. This will be conducted on a weekly basis through department coordination and promptly, if the situation so warrants. Also, the MAGA shall be informed in the case of occurrence of pests, diseases, contaminants,	Promotion of local seed banks and varieties resilient to droughts, pests and diseases. Reforestation with native species. Land use conversion by species of medicinal use or

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Area	Administrative act - Scale of application	Legal requirements of the project	Project applied
		products or byproducts capable of causing harm. To import these products, the permit or license granted by MAGA is required. The ingress of plants, animals, any of their products and byproducts, and supplies for agricultural and animal use shall not be authorized where the above should have been unloaded, handled or transported through areas or countries where there exist pests warranting guarantines. The introduction to the country of soil and seeds, plant parts and plants accompanied by soil is also prohibited.	edible (fruit trees and others) Use of forest by-products.
		Any individual, business or corporation interested in manufacturing, producing, formulating, and bottling supplies for agricultural and animal use shall register with the Unit. The effectiveness of such registration shall be of ten years. In the case supplies should be imported, permit must be requested from the Unit annotated upon product's arrival at the country.	Preparation and use of organic fertilizers.
		In order for premises and centers devoted to production of animals, where unprocessed animal products and byproducts are handled, to conduct business, they must have a Sanitary Operation License, granted by the Unit. Such license shall be effective for one year, renewable for an equal term upon compliance with the legal and technical requirements provided by MAGA in the relevant Ministry Resolution. Best practices according to the relevant Manual of Procedures provided by MAGA must be followed.	Provision of agro-forestry and agro-silvopastoral systems (grasses and fodder)
Environmental Impact Assessment	GOVERNMENT RESOLUTION No. 431-2007	For all projects rated as Category C in the Exhaustive Listing, or for all projects whose nature is of low environmental impact, the environmental assessment procedure will follow the next steps: Submittal of Initial Environmental Assessment, accompanied by the documents required by the MARN, which may be delivered before the relevant Department Delegation, depending on the location of the project, or in its case, to the DIGARN. This procedure will have a maximum term of ten (10) business days, after which, the relevant Resolution and, if applicable, the environmental assessment license, will be issued. In the case the project falls within a Protected Area formally established by the legislation in force, and when the DIGARN deems it relevant, or it is required by law, the relevant entity may be requested to issue an opinion within 15 days.	Construction of water reservoirs (water harvesting), drainage and efficient irrigation systems (drip) Rain water catchment in water reservoirs or cisterns connected with production.

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Area	Administrative act - Scale of application	Legal requirements of the project	Project applied
		Once the previous term has elapsed, the DIGARN shall issue the relevant resolution.	

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B2. HONDURAS

Area	Administrative act - Scale of application	Legal requirements of the project	Project applied
Water	National Congress Resolution ["decreto"] No. 181-2009, Gazette No. 32088 dated Monday, December 14, 2009, GENERAL WATER LAW.	This resolution compiles the requirements regarding concessions and licenses for water management and planning. The Municipalities shall grant water use rights to meet needs of family subsistence or for surface areas not larger than 1 ha. with a consumption under 0.06 liter per second. Rights shall not be granted when the balance between recharge and drawing of surface water, groundwater, or aquifers are affected or when such rights limit the use of water for human consumption. For the development of renewable energy projects or projects with irrigation volumes of more than ten hectares, the Water Authority shall grant use rights through agreements of concessions based on the Law of Concession and any applicable administrative laws. The agreement for granting water use rights shall contain information on the following: Holder of use right; Source, quantity, quality of the water over which use rights are granted, and the natural assets associated with it; Type of water use; Type of concession granted; Any relevant rights-of-way; When use is for human consumption, a study of contaminant shall be also included; Other specifications related to the nature of the concession.	Construction of water reservoirs (water harvesting), drainage and efficient irrigation systems (drip) Rain water catchment in water reservoirs or cisterns connected with production.
Forestry	**Law on Forestry, Protected Areas and Wildlife, Resolution ["decreto"] 98-2007**	This law governs utilization and other private activities to promote an efficient and sustainable management and use of the resource. It is a prerequisite to have a Forestry Management Plan in place, which shall include an environmental impact assessment. The holder of the Forestry land shall be responsible for preparing the above, which shall be drafted by a Professional in Forestry, to be submitted before the National Institute for Forestry Conservation and Development, Protected Areas and Wildlife (ICF) and approved and registered in the relevant municipality.	Provision of agro-forestry and agro-silvopastoral systems (grasses and fodder). Sustainable forestry management and design of forest management plans

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		The National Forest Management Plan shall provide for a criterion of multiple uses, equity, profitability, sustainability, and it shall include among its objectives, the protection and improvement of the forest and the use of products such as: Seeds, resins, latex, wood, scenery, and other forest by-products. In the case of small surface areas - one to one hundred (100) hectares - the regulations of the management plan may be simplified:	
		In forest areas where there are grazing activities, the Management Plans shall provide for practices compatible with forestry management, in order to favor natural regeneration and protect the forested areas. For the purposes of the paragraph above, in forested natural areas without Management Plans and used as "potrero" [land for horse grazing and breeding], their owners shall apply for technical assistance from the nearest forestry office.	agro-silvpastoral (grasses and fodder)
Biodiversity		No specific law has been identified on biodiversity	Sustainable forestry management and design of forest management plans Use of forest by-products.
			Promotion of local seed banks and varieties resilient to droughts, pests and diseases. Greenhouses of mixed uses.
Sanitation	RESOLUTION ["decreto"] No. 157-94 ANIMAL AND PLANTS HEALTH LAW	This resolution compiles the obligations by which all agricultural producers are bound to promptly report before the SAG the outbreak of any pests, disease, occurrence of toxic waste and contaminants that may affect animals, plants, their products and the environment, besides taking part in the warning or emergency actions provided if necessary. Furthermore, anyone conducting activities governed by this Law shall be subject to the regulations and procedures regarding animal and plant health as provided, with the purpose of ensuring safety and quality of the agricultural services, supplies and products.	Promotion of local seed banks and varieties resilient to droughts, pests and diseases. Preparation and use of organic fertilizers. Integrated pest management. Storage structures (silos, warehouses, stockpiling centers)

Environmental Impact Assessment		The Secretariat of Natural Resources shall be responsible for issuing any environmental license. The procedure provided in the Rules of the SINEIA can be summarized as follows. 1. Registration and application for Environmental License by the project's applicant. 2. Project rating and preparation of terms of reference by the DECA. 3. Preparation of the Environmental Impact Study by the applicant. 4 Assessment and preparation of Technical Opinion by DECA. 5 Legal resolution and signing of the Agreement of Performance of Mitigation Measures. 6 Granting of the Environmental License.	Eco-tourism projects Construction of water reservoirs (water harvesting), drainage and efficient irrigation systems (drip) Rain water catchment in water reservoirs or cisterns connected with production. Eco-tourism and sustainable tourism
	RESOLUTION ["acuerdo"] No. 455-2004 (PROCEDURE FOR ENVIRONMENTAL AUTHORIZATION OF PROJECTS OF CATEGORY I)	This resolution provides that an Environmental Record Proof will be issued for such projects which cause minimum environmental impact and rated as category I. To obtain this record, documents shall be submitted to the General Secretariat, and which shall be delivered to the General Directorate of Environmental Assessment and Control to issue the relevant opinion.	
	Amendment of section 2 of resolution ["acuerdo"] No. 1152-2002 dated October 24, 2002, issued by this Secretariat.	According to this amendment, the applicant shall publish a notice once at its own expense in a newspaper of wide circulation in the country whereby it informs the public in general of its intent to request before SERNA the environmental authorization for the project it intends to develop, stating name, project's name and location.	

B3. NICARAGUA

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Area	Administrative act - Scale of application	Legal requirements of the project	Project applied
Water	GENERAL LAW OF NATIONAL WATER LAW No. 620	Such law compiles the requirements for a sustainable utilization of national waters. It is prerequisite to have a special license for the case of supply of potable water and for the generation of hydro-electric energy, or hold a Concession for purposes other than those of the License, both being granted by the Water National Authority (ANA, Spanish acronym). The applications for concessions shall be submitted in writing and shall include the	Construction of water reservoirs (water harvesting), drainage and efficient irrigation systems (drip) Rain water catchment in water reservoirs

		applicant's ID, site location and body of water from where the resource is to be drawn, ownership title or Right issued by the land owner, Environmental Impact study, required water discharge, specifications on the initial use, requested duration of the authorization, permit for the performance of works. In no case shall the term of such permit be less than five years or more than thirty years, with the possibility of extending its duration (with a six months' term) for similar uses. Water availability and condition of the sources shall also be taken into account. The rights covered by the licenses or authorizations may not be the subject-matter of change of water uses. The water rights shall be suspended where the owner should fail to pay the concession fees required by this Law. Suspension shall subsist until the infringer sets its situation right. In the case of agricultural use, concessions shall be granted for areas larger than twenty hectares within the same property or in an irrigation district board.	or cisterns connected with production.
Forestry	**LAW No. 462 ON CONSERVATION, PROMOTION AND SUSTAINABLE DEVELOPMENT OF THE FORESTRY SECTOR**	This law compiles the requirements regarding concessions and licenses for the sustainable utilization of the forestry resources. For forestry utilization in lands with agro-silvopastoral production systems in areas of natural woods, the following is required: a forest replacement plan (INAFOR methodological guide), designation of the manager ["regente"], property's ownership title, authorization from the General Directorate of Protected Areas of the MARENA when the property is located within any such protected area. The forestry management and utilization activities conducted within protected areas shall meet any technical regulations depending on their management category. Such shall be authorized by MARENA.	Provision of agro-forestry and agro-silvopastoral systems (grasses and fodder). Sustainable forestry management and design of forest management plans
Biodiversity	LAW No. 807 LAW ON CONSERVATION AND SUSTAINABLE UTILIZATION OF BIODIVERSITY	This Law compiles the requirements regarding Environmental Permits for the utilization of any component of biological diversity which may pose a risk in terms of biodiversity. The competent entity authorized to issue this Environmental Permit shall take into account, before issuance thereof, any national environmental laws, and any international conventions and treaties signed and ratified by Nicaragua.	Sustainable forestry management and design of forest management plans Use of forest by-products.

		This law compiles the requirements regarding concessions and licenses for the sustainable utilization of biodiversity. The license and access permit shall be granted by the Biodiversity Directorate together with any territorial delegations of the relevant jurisdiction, with the endorsement of the indigenous and Afro-descendants authorities; provided, however, that their traditional organization is respected. Furthermore, the law regulates the prohibition of freely introducing any exotic or invasive species, including wild, domestic and genetically modified varieties, which may endanger the existence of native flora and fauna existing in the country.	Promotion of local seed banks and varieties resilient to droughts, pests and diseases. Greenhouses of mixed uses.
Sanitation	BASIC LAW ON ANIMAL AND PLANTS HEALTH Law No. 291 dated April 16, 1998	According to this law, anyone registering, importing, manufacturing, formulating, storing, for commercial purposes, for agricultural/aquaculture uses, shall be entered in the records of the Registry kept for such end by the Ministry of Agriculture and Livestock. This ministry shall be responsible for issuing animal and plants health certificates, proving the absence of pests and diseases in animals and plants, as well as in products and by-products thereof. Furthermore, it is the duty of every citizen to inform the General Directorate of Agricultural Protection and Sanitation the outbreak of any pest or disease.	Promotion of local seed banks and varieties resilient to droughts, pests and diseases. Preparation and use of organic fertilizers. Integrated pest management. Storage structures (silos, warehouses, stockpiling centers)
Environmental Impact Assessment	ENVIRONMENTAL ASSESSMENT SYSTEM RESOLUTION ["decreto"] No. 76-2006, as appearing in Gazette No. 248 dated December 22, 2006.	This Law classifies projects into various Categories depending on the environmental impact of thereof. Projects of low environmental impact are not subject to an Environmental Impact Study. Applicants shall submit the environmental form before the relevant municipal authority for the processing of the application for permits, according to the procedures established. Projects with Moderate Environmental Impacts which may generate cumulative effects shall be subject to Environmental Valuation as prerequisite to grant the relevant authorization. The Environmental Valuation process and issuance of environmental authorization shall be in the care of MARENA's Territorial Delegations. The following projects fall into the above category: generation of hydro-electric power of less than 10 MW; dams of less than one hundred hectares (100 ha), micro-dams and reservoirs; rain water catchment and channeling projects for basins with surface areas of 10 to 20 km2; potable water supply works; eco-tourism projects.	Eco-tourism projects Construction of water reservoirs (water harvesting), drainage and efficient irrigation systems (drip) Rain water catchment in water reservoirs or cisterns connected with production. Eco-tourism and sustainable tourism

B4. COSTA RICA

Area	Administrative act - Scale of application	Legal requirements of the project	Project applied
Water	LAW ON WATERS No. 276 Publicada en La Gaceta No. 190 de 28 de agosto de 1942	This resolution compiles the requirements regarding concessions and licenses for sustainable water use. In the case of household and subsistence uses, owners are allowed to open up water wells without the need for any concession. However, well-to-well distance shall be kept of two meters, as well as a fifteen-meter clearance with the neighbor's well. If groundwater is to be used for other purposes, a concession is required. For the case of use of public water, an authorization by the Ministry of Environment and Energy is required in the way stipulated by this law. If water has been used for over 20 years, no such authorization is required. The nature of the use of public water shall be established in the concession, as well as quantity in liters per second, and if it were for irrigation, the tract of land to be irrigated, and the kinds of crops to be watered. Any such use may not be applied to a different use without the relevant authorization.	Construction of water reservoirs (water harvesting), drainage and efficient irrigation systems (drip) Rain water catchment in water reservoirs or cisterns connected with production. production.
Soils	Ley 7779 USO, MANEJO Y CONSERVACIÓN DE SUELOS	This law is fundamentally intended to protect, conserve and improve soils under sustainable and integrated management with all other natural resources, through appropriate environmental promotion and planning. Therefore, it is mandatory to cooperate and abide by such measures as may be issued by the Ministry of Agriculture and Livestock, in coordination with the Ministry of Environment and Energy, in order to manage, conserve and reclaim the soil resource. In addition, agricultural producers are required and entitled to prevent soil degradation as caused by water. To such end, all such practices that enhance infiltration in their lands or evacuation of surplus water into natural channels shall be applied.	Crop rotation Soil conservation (zero tillage, coverage)
Forestry	**LEY FORESTAL 7575 LA ASAMBLEA LEGISLATIVA DE LA REPÚBLICA DE COSTA RICA DECRETA**	This law regulates the prohibition to conduct activities in woodlands, and the land use may not be changed. Neither shall forest plantations be established. In the case infrastructure should be built for eco-tourism purposes, a permit shall be requested from the Forest Administration. Such permit may also be requested to prevent wood fires or other similar causes or their consequences. In the above cases, the cutting of woods will be limited, proportional to, and reasonable for the purposes above mentioned. Previously, a pre-selection questionnaire must be filled in before the State's Forest Administration in order to determine the potential for the requirement of an environmental impact assessment, according the rules of this law.	Sustainable forestry management and design of forest management plans Eco-tourism and sustainable tourism

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Area	Administrative act - Scale of application	Legal requirements of the project	Project applied
		Agro-forestry and silvopastoral systems shall only gain authorization to cut trees in tracts of land of agricultural use and without any woods in them, having previously obtained authorization from the Environmental Regional Board or the relevant municipality and up to a maximum five trees per hectare per year. To cut more than twenty trees per property, the authorization of the State's Forest Administration shall be required. An exception is made in permits for cutting. Forest plantations, including agro-forestry systems, and trees planted individually, and their products, shall not require a cutting permit. Also, it regulates the prohibition to remove woods in areas adjoining permanent headwaters, defined in a 100-m radius measured horizontally. A fifteen-m strip in rural areas and a ten-m strip in urban areas, around any source of natural water, in flat relief, and of horizontal fifty meters, if the relief is rolling. Projects declared by the Executive Branch of Government of national concern shall be exempted.	Provision of agro-forestry and agro-silvopastoral systems (grasses and fodder).
Biodiversity	**LAW 7788 April 23, 1998** **Biodiversity Law**	This law provides rules in order to preserve biodiversity and its sustainable use. Permit from the plant health protection service shall be obtained before any genetically modified organism in terms of agricultural production, whether created within or outside Costa Rica, may be released into the environment. It is mandatory to request the Biosafety National Technical Commission for a binding opinion to determine the necessary measures to evaluate and manage risk. Furthermore, any human activity shall conform to scientific-technical standards issued by the Ministry and other competent public entities, so that vital ecological processes can continue without and outside protected areas. For the case of access to seed banks, the requirements are the consent of the local representatives from the place of access; registration with and authorization of the Technical Office of the Commission (maximum three years); the terms of transfer of technology and distribution of benefits; territory where they will be used; and ways in which said activities will contribute to the conservation of species and ecosystems.	Promotion of local seed banks and varieties resilient to droughts, pests and diseases. Greenhouses of mixed uses.

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Area	Administrative act - Scale of application	Legal requirements of the project	Project applied
Sanitation	LEY N° 7664 LEY DE PROTECCION FITOSANITARIA LA ASAMBLEA LEGISLATIVA DE LA REPÚBLICA DE COSTA RICA	This law compiles the requirements related to the introduction and dissemination of pests threatening food security. For the tagging of organic agriculture, and registration of substances for agricultural use, the State's Plant Health Service shall be responsible for granting certificates and keeping a record of producers and processors of organic vegetal material and supplies. This same service shall supervise compliance with the procedures established. On the other hand, anyone can report before the Ministry of Agriculture and Livestock the presence of pests with economic or quarantine significance. In addition, the owners are bound to treat or destroy dry crop residue and waste, according to the technical measures issued by the State's Plant Health Service.	Promotion of local seed banks and varieties resilient to droughts, pests and diseases. Preparation and use of organic fertilizers. Integrated pest management. Storage structures (silos, warehouses, stockpiling centers)
		For the specific case of manufacturing or formulating chemical or biological substances, the professional shall be a chemist or a micro-biologist, as the case may be. Also, they shall register with the Register of agricultural units of the Professional Association of Agricultural Engineers and pay the annual fee fixed by the Executive Branch of Government via the Ministry of Agriculture and Livestock. .	Preparation and use of organic fertilizers.
Environmental Impact Assessment	Reglamento General sobre los Procedimientos de Evaluación de Impacto Ambiental (EIA) Nº 31849 - MINAE-S-MOPT-MAG-MEIC	These rules are intended to define the requirements and general procedures by means of which the environmental viability (license) of the activities shall be determined. A general categorization of projects was conducted according to their potential environmental impact (IAP, Spanish acronym). Based on the results of the evaluation, a listing was prepared ranking such projects into three categories of IAP: Category A: High Potential of Environmental Impact Category B: Moderate Potential of Environmental Impact This category is in turn subdivided into two lesser categories, to wit: Subcategory B1: Moderate-High Potential of Environmental Impact, and Subcategory B2: Moderate -Low Potential of Environmental Impact Category C: Low Potential of Environmental Impact Small-scale producers and small-sized enterprises according to the CNP of 14.08.2002 belong to categories B2 and C; therefore, they shall submit Environmental Assessment Document (D2). As defined by these Rules, it includes: description of the process the project entails, and of the potential generation of waste including the environmental measures to prevent, correct, and mitigate any potential environmental	Eco-tourism projects Construction of water reservoirs (water harvesting), drainage and efficient irrigation systems (drip) Rain water catchment in water reservoirs or cisterns connected with production. Eco-tourism and sustainable tourism

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Area	Administrative act - Scale of application	Legal requirements of the project	Project applied
		impacts. Similarly, the developer shall submit the following documents: a copy of the identity card, a notarily recorded certificate of legal status, a certified copy of the cadastre plat. All such documents shall be submitted before officers of the SETENA.	

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B5. EL SALVADOR

Area	Administrative act - Scale of application	Legal requirements of the project	Project applied
Water	IRRIGATION AND DRAINAGE LAW - DECRETO Nº 153	This law meets requirements and permits related to the sustainable use of water resources for irrigation purposes. The permits must be registered in the Register of Waters that for this purpose the Ministry of Agriculture and Livestock will carry out in accordance with this Law and its Regulations. In the event that the projects are financed partially or totally by the state, an application will be submitted to the Registrar of the Property and Mortgage for the inscription of the right-of-way (e.g: works for irrigation), which will include the description of the area of land on which the right-of-way is to be exercised, as well as the name/names of the owners. Other conditions to take into account for the extraction of water are the structures that allow their regulation (gates, landfills, etc.). It also regulates the prohibition to use water supplied for purposes other than agriculture, unless authorized, alter existing works, the course and distribution of water or affect the quality of them.	Construction of water reservoirs (water harvesting), drainage and efficient irrigation systems (drip) Rain water catchment in water reservoirs or cisterns connected with production.
Soil		No specific rules were found.	
Forest	FOREST LAW - DECRETO No 268	This law regulates the prohibition of activities in land covered by forest and will not allow changing the use of the soil, nor to establish forest plantations. In the case of deforestation to open new land for agricultural or livestock, the authorization for clearing in order to open new to the farm or livestock, is only granted by The Service. Previously, a study and a work plan shall be submitted, in order to determine whether the circumstances described are present in the respective area. Then, the proper execution of the forest utilization plan must be based on technical studies. In addition, the maintenance of the quality and quantity of the forest is regulated through control	Sustainable forestry management and design of forest management plans Provision of agro-forestry and agro-silvopastoral systems (grasses and fodder). Eco-tourism and sustainable tourism. Reforestation with native species.

Area	Administrative act - Scale of application	Legal requirements of the project	Project applied
		and limitation of overgrazing, prohibition of grazing of certain species of livestock, exploitation of hydro halophytic forests for cultivation, burning practices in forest lands and their vicinity. In the case of afforestation and reforestation, these will be executed according to the General Forest Management Plan elaborated by the Service, based on the respective technical and economic studies.	
Biodiversity	WILDLIFE CONSERVATION LAW - CHAPTER I PRELIMINARY PROVISIONS DECRETO Nº 844	This Law establishes regulations in order to conserve biodiversity and its sustainable use. In the case of introduction, reproduction, collection, import and export of wildlife to the country, prior authorization must be obtained by the Ministry of Environment and Natural Resources, which requires studies or published experiences that clearly indicate that said Introduction does not pose a threat to human life or other wildlife species in the country; In addition that all the provisions have been complied with by the regulations for such introductions.	Promotion of local seed banks and varieties resilient to droughts, pests and diseases. Greenhouses of mixed uses.
Health	ANIMAL AND PLANT HEALTH LAW DECRETO Nº 524.-	This decree meets the requirements related to the regulation of introduction and dissemination of pests that threaten food safety. For this compliance, it is established the obligation of every person to allow the entry of the MAG Inspectors, to any commercial establishment of inputs for agricultural use and to report in case of pests that damage the crop.	Promotion of local seed banks and varieties resilient to droughts, pests and diseases. Preparation and use of organic fertilizers. Integrated pest management. Storage structures (silos, warehouses, stockpiling centers)
Seeds	SEEDS LAW DECRETO Nº 530	Requirements and phytosanitary controls for the importation, investigation, production and trade of seeds. Those interested in engaging in any of the aforementioned activities must first apply in writing to the Ministry, in compliance with the requirements established in the corresponding specific regulations.	Promotion of local seed banks and varieties resilient to droughts, pests and diseases.
Environmental Impact Assessment	GENERAL REGULATIONS OF THE ENVIRONMENTAL LAW DECRETO Nº 17	The purpose of these regulations is to define the general requirements and procedures by which the environmental feasibility (license) will be determined for the activities. The Environmental Impact Assessment process comprises the following stages: 1. Presentation of the Environmental Form, by the owner. 2. Inspection of the project site, if necessary. 3. Categorization of the project by the Ministry, and can be determined based on technical	Construction of water reservoirs (water harvesting), drainage and efficient irrigation systems (drip) Rain water catchment in water reservoirs or cisterns connected with production.

Area	Administrative act - Scale of application	Legal requirements of the project	Project applied
		criteria. Whether or not it requires the preparation of an Environmental Impact Assessment. 4. If the preparation of an Environmental Impact Assessment is considered relevant, the Ministry will provide the Terms of Reference for its elaboration. 5. Elaboration and presentation of the Environmental Impact Study, by the Holder. 6. Evaluation of the Environmental Impact Study, by the Ministry. 7. Technical Report on the Environmental Impact Study. 8. Public consultation of the Environmental Impact Study, as appropriate 9. Report of the public consultation of the Environmental Impact Study by the Ministry. 10. Approval opinion of the environmental impact study and bond requirement. 11. Presentation of the Environmental Compliance Bond, by the Holder. 12. Issuance of the Environmental Permit by the Ministry. 13. Monitoring, control and Environmental Assessment Audits, during the life cycle of the project, understood from the submission of the form by the Holder, until the closure of operations or rehabilitation. According to the scale and nature of the environmental impact, it is believed that these projects may belong to the Group A whose potential environmental impacts are low and therefore, the Holder should not submit environmental documentation to the Ministry. They may also belong to category 1 of Group B where they are expected to generate slight environmental impacts, where the Ministry will issue a resolution stating that no environmental impact study is required.	Eco-tourism and sustainable tourism.

B6. PANAMA

Area	Administrative act - Scale of application	Legal requirements of the project	Project applied
Water	Decree Law No. 35 of September 22, 1966, which regulates the use of Waters	This law describes the requirements and permits related to the sustainable use of water resources for irrigation purposes. The condition for its use is to have a permit or concession issued by the Executive Body for different uses. The request to obtain a permit or concession must contain the name and address of the applicant, the source of the water supply, the nature of the use, the amount of water to be required, the	Construction of water reservoirs (water harvesting), drainage and efficient irrigation systems (drip) Rain water catchment in water reservoirs or

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		description of the work being attempted. In addition you must include maps, diagrams, specifications needed to describe the project to be carried out. In the case of farms of less than ten (10) hectares, the costs of the services to which the article refers will be borne by the Commission. Permission for use of water will be valid for a period of one year and for the use of a determined flow, the latter can be renewed in the opinion of the Commission.	cisterns connected with production. production.
Soil		No specific regulations have been found.	Crop rotation Soil conservation (zero tillage, coverage)
Forestal	LAW No. 1, (FEBRUARY 1994) "BY WHICH THE FOREST LEGISLATION IS ESTABLISHED IN THE REPUBLIC OF PANAMA AND OTHER PROVISIONS ".	This decree describes the requirements related to concessions for the sustainable use of forest resources. These are related to inventories, regional localization plans, reforestation plans, forest management plans, and cases in which environmental impact studies are to be submitted to the institute of Renewable Natural Resources (INRENARE). It must also be published for three (3) consecutive days in a period of national circulation and once only in the Official Gazette. Once the concession is obtained, it is the concessionaire's obligation to inform INRENARE periodically (every four months), on all forest operations, including protection measures, total volume extracted by species, etc. In addition, this law regulates the prohibition of changes in land use, establishing forest plantations, destroying trees or shrubs in the areas surrounding the birth of any natural watercourse and its adjacent areas.	Sustainable forestry management and design of forest management plans. Provision of agro-forestry and agro-silvopastoral systems (grasses and fodder). Certification for forest plantations and natural woodlands. Eco-tourism and sustainable tourism
		In the case of the use of forest by-products, authorization must also be obtained from INRENARE.	Use of forest by-products
		In the case of reforestation or collection and sale of forest seeds, registration in the Forest Registration Book authorized by INREMARE is required.	Reforestation with native species. Promotion of local seed banks and varieties resilient to droughts, pests, and diseases
Biodiversity	Legislative Assembly Law Nº 24 (June 7, 1995) "By which the legislation of wildlife is established in the Republic of Panama, and other provisions "	This Act establishes regulations in order to conserve biodiversity, rare species, promote the development of genetic resources and their sustainable use. The condition for the utilization and collection of the wildlife and its derived products or the in situ conservation is the authorization of the National Direction of Protected Areas and wildlife of the INRENARE. In addition, they must deposit a sample or a specimen in the herbarium or in the museum of the University of Panama. In the case of wanting to import exotic species, technical studies must be carried	Promotion of local seed banks and varieties resilient to droughts, pests, and diseases. Mix-use greenhouses Provision of agro-forestry and agro-silvopastoral systems (grasses and fodder). Conversion of land use through species

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		out in order to prevent damage to native ecosystems and submitted to INERENARE. This study should contain the objectives of the introduction, resource demand in the country, feasibility study, species condition at world level, life cycle of the species in its original environment, behavior, reproductive potential, predators, potential of the species as a predator, potential of the species as a pest, potential of the species as a competitor for resources or space, with native species, hybridization potential with native species, dispersion potential, population control methods for the species, population Minimum viable and sex ratio of the introduced species and experiences of introduction of the species in other countries.	for medicinal and edible use. Integrated pest management.
Health	Law Nº 47 (dated 9 July 1996) "IN WHICH PHYTOSANITARY PROTECTION MEASURES AND OTHER PROVISIONS ARE ADOPTED"	This decree describes the requirements related to the regulation of all actions relating to plant protection of the national agricultural heritage, with the aim of preventing and controlling phytosanitary and pest problems. The corresponding authorization of the National Direction of Plant Health is required to import, to mobilize, to release to the environment, to multiply and to reproduce and to commercialize seeds, transgenic plants or their products, agents of biological control. Requirements published in the Official Gazette will need to be met in order to undergo the phytosanitary control of the National Direction of Plant Health.	Promotion of local seed banks and varieties resilient to droughts, pests, and diseases. Preparation and use of organic fertilizers. Integrated pest management. Storage structures (silos, warehouses, stockpiling centers)
		In the case of fertilizer for agricultural use, the registration process at the National Plant Protection Authority must have been undergone.	Preparation and use of organic fertilizers.
Seeds	Law No. 23 of July 15, 1997, Title V, Rules for the Protection of New Varieties of Plants	No articles were found in this regulation that would apply to the project.	Promotion of local seed banks and varieties resilient to droughts, pests, and diseases
Environmental Impact Assessment	REPUBLIC OF PANAMA - MINISTRY OF ECONOMY AND FINANCE. EXECUTIVE DECREE 123 (August 14, 2009)	The present regulation establishes the dispositions by which the Process of Evaluation of Environmental Impact will be governed. According to the characteristics and size of the eligible projects, these will likely not need to undertake an EIA, or they will at most belong to category 1. This category is applicable to the projects, works or activities included in the exhaustive list provided for in Article 16 of this Regulation that generate non-significant negative environmental impacts and that do not entail significant negative environmental risks. The Environmental Impact Assessment Category I shall be constituted in a duly notarized affidavit.	Construction of water reservoirs (water harvesting), drainage and efficient irrigation systems (drip). Rainwater catchment in water reservoirs or cisterns connected with agricultural production. Eco-tourism and sustainable tourism. Fishfarming Mix-use greenhouses Provision of agro-forestry and agro-silvopastoral

			systems (grasses and fodder).
		When referring to reforestation projects, the Environmental Impact Assessment must be accompanied by a Reforestation plan for the evaluation process. The ANAM will regulate with respect to this Plan through Administrative Resolution, for which it will have the term of one year from the entry into force of this Executive Decree.	Reforestación con especies nativas.

B7. DOMINICAN REPUBLIC

Area	Administrative act - Scale of application	Legal requirements of the project	Project applied
General Law of Environment and Natural Resources, No. 64-00	General	General law that establishes basic principles and precepts for the protection of the environment and natural resources. In its article 17, the law establishes the creation of the Secretary of State for Environment and Natural Resources as a Governing Body. Sectorial or special laws, decrees and other legal provisions relating to the environment and natural resources should be framed within the principles and provisions of this law and are considered complementary to it.	Generality of the project
Water	Law No. 5852 on Terrestrial Domain and Distribution of Public Waters. This law is amended by: Ley Nº 487 Ley N° 436 Ley N° 134	Law No. 5852 provides that the Secretary of State for Agriculture, through the Directorate General of Water Resources, may grant authorizations for the use of public waters. Law No. 487: defines the regime for ordinary wells, establishes that the National Institute of Hydraulic Resources will keep a record of existing works and to perform; They establish the closures; Illegal works, those under construction, expropriation, priorities, easements, powers and permits are regulated. Law No. 436: establishes the percentages of quotas to be paid by landowners who use or are able to use the water channels constructed by the State. Law No. 134: specifies a percentage for the quota when it comes to uncultivated land.	Construction of water reservoirs (water harvesting), drainage and efficient irrigation systems (drip) Rain water catchment in water reservoirs or cisterns connected with production.
Soil		No specific regulations have been found.	Crop rotation

			Soil conservation (zero tillage, coverage)
Forestry	Forest Regulation, 2004 Law No. 118 - Forestry Code, 1999 Resolution No. 1/06 - Formats of forest management plans and annual operational plans	The purpose of the Forest Regulations is to establish the necessary guidelines for the proper application of the Law on the Environment and Natural Resources, with the specific purpose of conservation, promotion and development of forest resources, their protection and sustainable use, as well as their conservation and Recovery. Law No. 118 aims to: a) establish a legal framework and institutional structure for the forestry sector; B) promote and regulate the protection and sustainable use of forest resources by establishing rules that allow the necessary incorporation of civil society; C) ensure the management, conservation and sustainable development of existing forests and the recovery of areas currently devoid of vegetation; (D) to promote the recovery and development of forests on forest-prone lands, so that they fulfill the function of conserving soils, waters and biological diversity, and to boost rural development by generating jobs that contribute to income, the reduction of poverty and the improvement of the quality of life of the Nation. Resolution No. 1/106 approves the formats for the presentation and guideline of the forest management plans and annual operational plans for areas subject to forest management for timber purposes.	Sustainable forestry management and design of forest management plans. Provision of agro-forestry and agro-silvopastoral systems (grasses and fodder). Certification for forest plantations and natural woodlands. Eco-tourism and sustainable tourism. Use of forest by-products Reforestation with native species. Promotion of local seed banks and varieties resilient to droughts, pests, and diseases
Agroecology	Resolution No. 15/08 - Regulation for organic agriculture	This Resolution approves the Regulation for organic agriculture, which refers only to foods that may carry a reference to organic production methods.	Organic certification.
Biodiversity	Nagoya Protocol Decree No. 1.288 / 04 - Regulations for Trade in Wild Fauna and Flora	The Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization to the Convention on Biological Diversity, was ratified by the Dominican Republic in November 2014; the protocol entered into force in February 2015. Adopts the Regulations on Trade in Wild Fauna and Flora, which regulates the national implementation of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).	Promotion of local seed banks and varieties resilient to droughts, pests, and diseases. Mix-use greenhouses Provision of agro-forestry and agro-silvopastoral systems

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			(grasses and fodder). Conversion of land use through species for medicinal and edible use. Integrated pest management.
Sanidad	Laws No. 1161, 4990, 180-01, 278, 311, 259, 4030, 62, 218.	There is a significant number of regulations establishing the requirements related to animal and plant health: apart from the mentioned laws, a large number of decrees and resolutions are added to the legislation that shall be considered in the eligible projects. In all cases, the Ministry of Agriculture is the reference institution for these topics.	Promotion of local seed banks and varieties resilient to droughts, pests, and diseases. Preparation and use of organic fertilizers. Integrated pest management. Storage structures (silos, warehouses, stockpiling centers). Beekeeping, fish farming.
Environmental Impact Assessment	Regulation of the environmental assessment process Environmental assessment procedure Regulation for the process of thematic authorizations Procedure for thematic authorizations	The current environmental regulations of the Dominican Republic state that any project, work or activity that due to its characteristics may affect, in one way or another, the environment and natural resources, must obtain from the Ministry of Environment and Natural Resources, prior to Its execution, the corresponding environmental authorization, according to the magnitude of the effects it may cause. The Compendium of Regulations and Procedures for Environmental Authorizations establishes the following classification with respect to environmental authorizations: - Environmental License: It is granted to projects with high potential impacts that require an environmental impact study and correspond to category A. - Environmental Permit: It is granted to projects with moderate potential impacts, which require an environmental impact statement and correspond to category B. Likewise, for projects with a lower environmental impact, the following types of authorizations are considered within environmental permits: - Environmental Record: It is granted to projects of low environmental impact for the	All projects shall review this legislation.

		execution of which only is required to guarantee the compliance with the current environmental regulations and correspond to category C. - Minimum Impact Certificate ("CRIM"): it is granted to projects with minimum environmental impact subject to compliance with applicable environmental regulations and correspond to category D. Depending on the characteristics and dimensions of eligible projects, it is most likely that they will, at most, be awarded the Minimum Impact Certificate or the Environmental Record.	