Climate Resilience for Tourism in Honduras

Private Models for Agricultural Climate Adaptation in Honduras and Nicaragua

Concept Note, July 2016
This Concept Note is one of several technical reports prepared for the Proadapt Project at the Multilateral Investment Fund (MIF), member of the Inter-American Development Bank Group. The project developed stylized investment models for the private sector in Honduras and Nicaragua for cocoa, honey, and milk as agricultural commodities, and for the small-scale tourism sector. The report ProAdapt Nicaragua Honduras Overview Adaptation Initiatives contains more details on the project. A Monitoring, Learning and Evaluation (MLE) framework and prototype platform shows how climate resilience can be embedded in existing project monitoring and evaluation (M&E) requirements.

This Concept Note follows a review of the climate risks in the region and takes stock of existing initiatives, research efforts, and investment funds already in place or planned. Initial surveys with key stakeholders led to an initial set of potential opportunities. Intensive, interactive workshops with stakeholders in the sector identified potential steps businesses could take to increase climate resilience and set priorities for investment.

The authors are solely responsible for any errors or omissions in this Concept Note.

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About the Multilateral Investment Fund

The Multilateral Investment Fund is the innovation lab for the Inter-American Development Bank Group. It conducts high-risk experiments to test new models for engaging and inspiring the private sector to solve economic development problems in Latin America and the Caribbean. The MIF addresses poverty and vulnerability by focusing on emerging businesses and smallholder farmers with the capacity to grow and create economic opportunities.

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<th>Description</th>
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<tr>
<td>B*Resilient</td>
<td>Business Climate-Resilient Process Methodology</td>
</tr>
<tr>
<td>BCIE</td>
<td>Banco Centroamericano de Integración Económica</td>
</tr>
<tr>
<td>CANATURH</td>
<td>Cámara Nacional de Turismo de Honduras</td>
</tr>
<tr>
<td>CATA</td>
<td>Central America Tourism Agency</td>
</tr>
<tr>
<td>CATIE</td>
<td>Centro Agronómico Tropical de Investigación y Enseñanza</td>
</tr>
<tr>
<td>CREDIA</td>
<td>Centro Regional de Documentación e Interpretación Ambiental</td>
</tr>
<tr>
<td>CURLA</td>
<td>Centro Universitario Regional del Litoral Atlántico</td>
</tr>
<tr>
<td>EPAM</td>
<td>Enterprise Process Adaptation Model</td>
</tr>
<tr>
<td>FICOHSA</td>
<td>Financiera Comercial Hondureña Sociedad Anónima</td>
</tr>
<tr>
<td>FUCSA</td>
<td>Fundación Cuero y Salado</td>
</tr>
<tr>
<td>FUPNAPIB</td>
<td>Fundación Parque Nacional Pico Bonito</td>
</tr>
<tr>
<td>GCAP</td>
<td>Global Climate Adaptation Partnership</td>
</tr>
<tr>
<td>IHT</td>
<td>Instituto Hondureño de Turismo</td>
</tr>
<tr>
<td>LARECOTURH</td>
<td>La Red de Comunidades Turísticas de Honduras</td>
</tr>
<tr>
<td>M&amp;E</td>
<td>Monitoring and Evaluation</td>
</tr>
<tr>
<td>MIF</td>
<td>Multilateral Investment Fund</td>
</tr>
<tr>
<td>MLE</td>
<td>Monitoring, Learning, and Evaluation</td>
</tr>
<tr>
<td>MOCAPH</td>
<td>Mesa de Organizaciones Co Manejadoras de Áreas Protegidas</td>
</tr>
<tr>
<td>MSME</td>
<td>Micro, Small, and Medium Enterprises</td>
</tr>
<tr>
<td>OTSCC</td>
<td>Observatorio Turismo Sostenible y Cambio Climático</td>
</tr>
<tr>
<td>REHNAP</td>
<td>Red Hondureña de Reservas Naturales Privadas</td>
</tr>
<tr>
<td>SAVE</td>
<td>Scientific, Academic, Volunteer, Educational</td>
</tr>
<tr>
<td>SME</td>
<td>Small and Medium-Sized Enterprises</td>
</tr>
<tr>
<td>UNAH</td>
<td>Universidad Nacional Autónoma de Honduras</td>
</tr>
<tr>
<td>UNWTO</td>
<td>World Tourism Organization</td>
</tr>
<tr>
<td>ZOLITUR</td>
<td>Zona Libre Turístico</td>
</tr>
</tbody>
</table>
Executive Summary

Aiming to increase climate resilience among small producers and small business in Latin America and the Caribbean, the ProAdapt facility entrusted GCAP and Grupo Laera with the identification of project entry points in Nicaragua and Honduras. The process originally focused on the agriculture sector and selected three products for analysis—cocoa, honey, and milk. Later, it was expanded to include micro-, small-, and medium-sized enterprises (MSMEs) providing services and/or products within the tourism sector.

Once these four sectors were identified, the local teams visited MSMEs in each sector, technical agencies providing assistance to producers, government institutions in charge of designing and implementing policies, sectoral associations, and other stakeholders with knowledge or interest in each sector. These visits and the related interviews, together with a literature review, were used to build the Enterprise Process Adaptation Model (EPAM) reports. These reports included a summary of the relevance of each sector for the country’s economy, the impacts of climate risks on the sector, and the stakeholders and their roles at different stages of the value chains. They also analyzed the role of MSMEs in each sector. This method allowed the entry points to be identified and later presented and modified during the consultations, using the Business Climate-Resilient Process Methodology (B*Resilient) approach.

This CN, also available in the form of summary documents for all four sectors, aims to serve as a tool for the ProAdapt team and the country offices to help them identify partners and beneficiaries for project development and implementation in each country. Section 1 presents the project’s context and objectives. Section 2 summarizes climate risks identified during the interview, analysis, and consultation processes associated with the tourism sector at La Ceiba. Section 3 presents the potential entry points for a ProAdapt project development and identifies stakeholders who could be partners and/or project beneficiaries. Section 4 includes 13 Factsheets for adaptation options identified for the sector. The expected outcomes once the project has been successfully implemented have been identified and listed as resilience outcomes in Section 5. It is assumed that successful implementation of a ProAdapt project will lead to improved climate resilience among tourism services provided at La Ceiba region in Honduras. Section 6 introduces the relevance of monitoring, learning, and evaluation tools and processes for the successful implementation of ProAdapt and its replicability in other parts of the country and region. The CN concludes with a summary of key messages.

This CN has six annexes: Annex 1 lists the stakeholders and their strengths and knowledge about climate, finance, and the MIF. Annex 2 lists the stakeholders interviewed during the field work. Annex 3 contains the adaptation strategy factsheets, with more detailed information on stakeholders and leading actors, the climate impacts addressed, investment and maintenance needs, examples of good practices, implementation requirements, potential financial mechanisms, and benefits for small businesses. Annex 4 is an infographic which has been included as a communication tool (not part of the analysis). Annex 5 is a project development summary. Annex 6 summarizes the structure of the Tourism Competitiveness Monitor.

Despite the various reports on tourism and on investment projects in and around La Ceiba, not all stakeholders and tourism service providers are ready to implement a ProAdapt project. Careful consideration of the institutional context and the readiness of the sector will be essential to ensure the success of the project.
This CN is the result of the analysis, conversations, interviews, workshops, and consultation sessions between the team and stakeholders in the region. It should not be seen as a summary of the Project led by the Global Climate Adaptation Partnership (GCAP) and Grupo Laera, but rather as a product of the process. The B*Resilient analysis and the ProAdapt Nicaragua Honduras Overview Adaptation Initiatives discuss the project in greater detail.
Climate Resilience for Tourism in Honduras

1. ProAdapt Project Objectives and Context

This section identifies the ProAdapt project objective that would lead to increasing climate resilience among small tourism service providers in Honduras.

1.1 ProAdapt Project Objective

The objective of this ProAdapt project is to establish the basis for a successful tourism destination by strengthening the climate resilience of small businesses that are providing tourism services and products in La Ceiba, Honduras. The project aims to achieve this objective by:

- identifying actions to reduce vulnerability to climate change and increase their capacity to cope with climate-related events; and
- strengthening the cohesiveness of existing associations of small and medium-sized enterprises (SMEs) in the sector.

To reduce the vulnerability of SMEs in the tourism sector to climate change, the following crucial steps have been identified:

- Improve communication between the private and the public sector to provide quality services;
- Identify actions that allow the sustainable growth of tourism services, including appropriate management of natural resources
- Strengthen, promote, and consolidate current tourism areas and services
- Improve business management, including marketing strategies, to target new markets

Most of those actions require strong partnership between the government and current tourism service providers. This CN focuses on those activities that could directly reduce SMEs’ vulnerability to climate change, with the aim of contribute to the project already funded by the MIF and currently being implemented in La Ceiba.

1.2 Context of the Proposed Project

Honduras’ geographical location and its history offer a wide range of possibilities for tourists, including archaeological sites, beaches along the Pacific and Caribbean shorelines, natural tropical ecosystems, coral reefs, and colonial cities, among others. Conducting a climate-change vulnerability assessment for all of these services could benefit local tourism operators whose services might not appear in a national level study. However, no such assessment has yet been conducted.

Since 2005, Honduras has had a National Sustainable Tourism Strategy, which established the framework and baseline for the sustainable development of the sector. The strategy, which covers the period up to 2021, is based in four principal routes (Figure 1): (i) center, (ii) Copan ruins, (iii) Atlantic shoreline, and (iv) the Bay Islands. A rise in the sea level could potentially affect the latter two. The strategy promotes activities and services provided by MSMEs operating in areas valued for their natural resources, history, and cultural heritage.
All business operators, policymakers, and other stakeholders consulted during this project believe that climate conditions affect tourism both positively and negatively. This project identifies potential climate-risk adaptation project actions and strategies for the municipality of La Ceiba, Department of Atlántida. It is important to recognize that while tourism is a growing sector in the region, agriculture, industry, commerce, and mining generate more revenue.

The literature review, which included documentation on previous and current MIF project in La Ceiba and Tela, revealed that:

- The population of the Department of Atlántida is 600,000.
- There is a discrepancy between the degree of formality and the organization of the tourism sector in the department.
- The cities of La Ceiba and Tela are not working on the development of an integrated tourism sector strategy.
- The infrastructure for receiving tourists—airports, local transportation, accommodation, and leisure activities—is inadequate.
- The impacts of climate change and natural disasters do not appear to have been taken into consideration in any of the existing strategies.
• None of the strategies proposed appear to be linked to other national and regional efforts to promote tourism in Honduras.
• There are no baseline assessments, guidelines, or sector standards for MSMEs to follow (e.g., on services, prices, products to be developed, environmental compliance, etc.).
• There is no census of MSMEs that provide the services and products to be developed or that require training and capacity building to join the overall strategy. Climate change learning and adaptation could be added to those training modules.
• Although products and services have been identified, the costs of developing, implementing and maintaining such products, and how a changing climate and a rise in the sea level might affect those costs, have not been calculated.
2. Climate Risks Across the Sector

According to the Honduran Institute of Tourism (Instituto Hondureño de Turismo, or IHT) 2013 statistics bulletin, the tourism sector in Honduras grew between 2008 and 2012 (data are not yet available for 2013 or 2014). In 2012, Honduras received 894,700 visitors, creating 179,463 jobs (CANATORH, 2013).

Climate-related events affect the tourism sector. Some of the immediate effects are infrastructure damage, suppliers’ failures, damage to destinations resulting in a decline in the number of visitors, and transportation failures. In coastal areas, service providers have observed beach erosion. According to the DesInventar Database (2012), Honduras has been impacted by several hurricanes (1931; Francelia, 1969; Fifi, 1974; Greta, 1978; Alleta, 1982; Joan, 1988; Allison, 1995; Cesar, Douglas and Marcos, 1996; Mitch, 1998; Stan and Gamma, 2005 and Mathew, 2010). The database reported damage to tourist areas in the Atlántida Department from hurricanes Fifi, 1974; Greta, 1978; Mitch, 1998; and Felix, 2007.

Socioeconomic conditions in La Ceiba and Tela justify investment to diversify their economies. According to Zappino (2011) poverty reached 45 percent and, extreme poverty was almost 20 percent. Investment in the tourism sector—a sector that the Multilateral Investment Fund (MIF) has been supporting—is challenging due to the high degree of informality of service providers and the poor quality of tourism infrastructure, services, and product offerings. Since most initiatives are in their incipient stages, climate resilience components could be incorporated into them. Furthermore, in view of the early stage of development of the sector and its willingness to develop, the tourism sector in the La Ceiba-La Tela region could also be at a critical point for climate adaptation intervention. Such challenges, and those listed in Table 1, can be seen as opportunities to develop a climate-resilient tourism sector in the region.

Table 1 outlines the shortcomings identified in the La Ceiba Master Plan, their relationship to the growth of the tourism sector, and whether such challenges could increase with a changing climate. It is important to note that due to the lack of data on coastal erosion, precipitation, drought, climate variability, and other climate-related impacts, the table contains the best available knowledge and expertise.
### Table 1. Challenges Identified by La Ceiba Master Plan and their Relationship to the Tourism Sector and to Climate Change

<table>
<thead>
<tr>
<th>Challenges according to La Ceiba Master Plan (undated)</th>
<th>Impact on the tourism sector</th>
<th>Potential impacts of climate change on these challenges</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pollution</td>
<td>Pollution will negatively affect tourism. It decreases its value.</td>
<td>Climate change and pollution are ecosystem stressors. Climate change could further stress already polluted ecosystems.</td>
</tr>
<tr>
<td>Beach erosion**</td>
<td>La Ceiba’s current and future tourism investments are based on these resources. Beach erosion is a serious threat to the sector and needs to be properly assessed.</td>
<td>It will only increase (speed and magnitude) with sea level rise as a consequence of climate change.</td>
</tr>
<tr>
<td>Biological corridors perspective/policies have not been applied at the department level*</td>
<td>There are seven protected areas identified in the region, ranging from mountain to coral reef ecosystems. Protected areas need to be strengthened; biological corridors are critical to their adequate functioning.</td>
<td>Biological corridors play a key role in species migration and movement. Adequate biological corridors are crucial for species and ecosystem climate change resilience.</td>
</tr>
<tr>
<td>Road CA-13 invasion</td>
<td>Adequate infrastructure is important for tourists to arrive to their destinations and for ensuring permanent supply of goods.</td>
<td>An adequate network of roads and infrastructure is essential during extreme events. Blockages of roads could delay or restrain evacuation and delivery of goods.</td>
</tr>
<tr>
<td>Unplanned growth along the CA-13</td>
<td>CA-13 is the main road connecting La Ceiba with the airport and several tourist attractions. Unplanned growth is visually unappealing and can hamper transportation.</td>
<td>It is important to assess whether that growth is occurring in high-risk areas and how it could affect evacuation routes or emergency plans.</td>
</tr>
<tr>
<td>Poor quality of urban transportation*</td>
<td>Efficient urban transportation is central, not only for tourists but also because it can ensure the arrival of employees to their workplace.</td>
<td>Depending on the reasons why the system has been classified as poor, it could also become worse during storms and the rainy season.</td>
</tr>
<tr>
<td>Underused airport</td>
<td>An increase in tourism brings more flights to the airport; thus, it must be adequately managed.</td>
<td>It is important to assess how climate change could impact flights arriving and departing from the airport and its infrastructure.</td>
</tr>
<tr>
<td>Deficient residual water management (collection, storage, and treatment)*</td>
<td>This deficiency would affect the sector, increasing the risk of disease, flooding, and contamination of water.</td>
<td>With sea level rise this problem can become worse as sewage systems can be flooded with sea water, leading to a collapse of the system and flooding (Cartagena, Castries, and Santa Marta).</td>
</tr>
<tr>
<td>Lack of urban planning documents*</td>
<td>Urban planning is fundamental to identifying those areas most suitable for tourism development.</td>
<td>Urban planning is central to identifying high-risk areas and ensuring that appropriate measures are taken to avoid development in those areas or development that contemplates such risks, including safe evacuation areas.</td>
</tr>
<tr>
<td>Settlements located in</td>
<td>Some of those settlements could be providing</td>
<td>Depending on which risks have been identified,</td>
</tr>
<tr>
<td>Challenges according to La Ceiba Master Plan (undated)</td>
<td>Impact on the tourism sector</td>
<td>Potential impacts of climate change on these challenges</td>
</tr>
<tr>
<td>---------------------------------------------------------</td>
<td>-----------------------------</td>
<td>--------------------------------------------------</td>
</tr>
<tr>
<td>disaster risk areas*</td>
<td>tourism services and products. Employees could be living in high-risk areas.</td>
<td>climate change may exacerbate them.</td>
</tr>
<tr>
<td>Lack of equipment and infrastructure for transportation and markets</td>
<td>Efficient transportation is essential in a tourism destination.</td>
<td>Left as it is, the situation could become worse with climate change.</td>
</tr>
<tr>
<td>Poor image</td>
<td>Image and aesthetics are key for sector development and positioning.</td>
<td>Left as it is, the situation could become worse with climate change.</td>
</tr>
</tbody>
</table>

The (*) symbolizes those challenges that will become more critical in a changing climate.

The final report of the project entitled Proyecto para el desarrollo de un modelo de turismo sostenible en la costa norte de Honduras identifies 16 tourism products along Honduras’ north coast. Most visitors to the area are Honduran nationals, followed by nationals from other Central American countries. Visitors from other regions of the world arrive in La Ceiba and Tela as part of regional tours; others come to enjoy camping and social tourism. Bird watching, SAVE (scientific, academic, volunteer, educational), and scuba diving could be further developed for international markets.

The project has identified six products: sun and beaches, ecotourism, adventure and sports, city breaks, rural communities, and tours with thematic routes. A product factsheet was developed for each sector proposed, taking into consideration the following factors: concept, motivation for visiting, available resources, basic services required to develop the product, complimentary services, main actors, priority markets, characteristics of visitors, how the product would strengthen the strategy, product challenges and, potential tourism packages.
Table 2 presents a summary of those six products and the potential challenges to each of them posed by climate change. A proper vulnerability assessment should be conducted, as the table is presenting only a list with the best available information and knowledge of the region.

<table>
<thead>
<tr>
<th>Product</th>
<th>Challenges identified</th>
<th>Adaptation challenges</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sun and beach.</strong>&lt;br&gt;<strong>Fun and rest, discovering Garifuna culture.</strong>&lt;br&gt;<strong>Baseline product</strong></td>
<td>• Improve beaches’ environmental settings.&lt;br&gt;• Solve contamination issues&lt;br&gt;• Improve beaches’ infrastructure and equipment (signs, information).&lt;br&gt;• Improve accommodation.&lt;br&gt;• Diversify activities offered.&lt;br&gt;• Ensure inclusion of Garifuna culture.&lt;br&gt;• Improve restaurants’ availability, services, and offerings.&lt;br&gt;• Integrate surrounding communities with the sector.&lt;br&gt;• Increase cultural visibility.&lt;br&gt;• For those beaches located within protected areas, there are no standards of operation or user guidelines.</td>
<td>Some beaches already appear to be eroding. A detailed assessment of current shoreline erosion at the site is needed.&lt;br&gt;With SLR this will only increase.</td>
<td>It appears as if the only resources at the moment are the beaches, which are eroding. This situation will only worsen with SLR.&lt;br&gt;The tourism product needs further development.</td>
</tr>
<tr>
<td><strong>Ecotourism in protected areas</strong></td>
<td>• Improve information and infrastructure available for visitors.&lt;br&gt;• Identify the products of each protected area&lt;br&gt;• Establish relationships between protected areas and tourism operators, with clear and transparent responsibilities.&lt;br&gt;• Involve protected areas’ managers in the process.&lt;br&gt;• Involve/integrate PA plans with the tourism development sector.&lt;br&gt;• Redesign the tourism model associated with PA.</td>
<td>It appears that some protected areas are being degraded.&lt;br&gt;It is important to understand the impact of climate change on protected areas. For example, will there be species and ecosystem migration or greater pressure from local communities? Will the purpose of protection still be valid? How will the provision of ecosystem services affect the tourism sector and the region?</td>
<td>It is crucial to understand that protected areas have been created for the purpose of conservation, restoration, and preservation of key species and ecosystems. The tourism sector needs to adapt to the PA objectives and requirements and not the other way around.&lt;br&gt;It is also important to understand that climate change will impact PA.</td>
</tr>
<tr>
<td><strong>Active and adventure tourism</strong></td>
<td>• Incorporate safety measures into all activities.&lt;br&gt;• Incorporate sustainability safeguards into all activities.</td>
<td>It depends on whether the activity is water dependent, marine, or forestry dependent. The impacts might vary.</td>
<td>All activities appear to be in need of development. Although some activities are already being offered, more information is required. For example, some of these activities seem to be occurring in protected areas.</td>
</tr>
<tr>
<td>Product</td>
<td>Challenges identified</td>
<td>Adaptation challenges</td>
<td>Notes</td>
</tr>
<tr>
<td>-----------------------------------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>City tours</td>
<td>• Garner political will.</td>
<td>Each city needs to assess its vulnerability to climate change independent of tourism.</td>
<td>This product needs to be developed from scratch even for current visitors. A vulnerability assessment and sound urban planning would produce immediate results and actions.</td>
</tr>
<tr>
<td></td>
<td>• Develop entertainment activities.</td>
<td>Such an assessment should consider:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Develop shopping areas.</td>
<td>- Fresh water availability</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Restore historic buildings.</td>
<td>- Sewage management</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Develop activities around architecture, urban planning, and railways.</td>
<td>- Risk areas</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Develop an events agenda.</td>
<td>- Sea level rise and saline intrusion</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Food security</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Transportation, among others.</td>
<td></td>
</tr>
<tr>
<td>Rural communities, agrotourism, and Garífuna culture</td>
<td>• Develop agrotourism.</td>
<td>It would be important to identify how climate change could be impacting both, farms and the Garífunas.</td>
<td>Both agrotourism and cultural tourism products need to be fully developed.</td>
</tr>
<tr>
<td></td>
<td>• Improving Garífunas’ environmental settings.</td>
<td>For example the Garífunas are located at the shoreline, so what could happen with those settlements with SLR.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Build capacity within communities</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Develop the Garífuna stamp “Garífuna culture, world heritage site.”</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tours and guided routes (This product is a combination of all of the above.)</td>
<td>• Improve services in general.</td>
<td>Idem, as it is a combination of the above.</td>
<td>The baseline resources have been identified but the products and the tourism services need to be further developed.</td>
</tr>
<tr>
<td></td>
<td>• Improve security.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
2.1 Summary of Climate-related Risks affecting Selected Tourism Destinations in Honduras

Tourism productivity is directly dependent on the general climate and overall weather conditions of the destination. Climate is a decisive factor for many tourism activities; the seasonality of rains and droughts already determines peak visiting periods of some destinations. It also influences operating costs, such as heating and cooling needs, food supply, water availability, activities in areas of interest, and insurance, among others. However, although climate may affect the duration and characteristics of tourist seasons, and therefore influence tourists’ destination decision making and their spending in the selected destination,¹ such decisions are also made taking into consideration the capabilities, service quality, and diversity of services offered at the destination.

Many tourist destinations are closely associated with the natural environment. Climate affects sightseeing, beaches, coral reefs, biodiversity, wildlife productivity, and biodiversity, water levels and quality, which in turn affects tourism productivity. Other impacts on tourism related to climatic and environmental conditions are some diseases, wildfires, and extreme weather events, such as hurricanes, among others.

Therefore, any changes to known climate patterns or the consequences of such changes could potentially severely affect MSMEs in the sector. Strengthening the country’s tourism sector would make it more resilient to climate change and improve the quality of products and services.

According to the World Tourism Organization (UNWTO), adaptation capacity is different across the sector:²

- Tourists are the least vulnerable to climate change, as there is relative freedom to avoid destinations that are or have become less attractive because of climate change. There are already schemes that allow tourists to shift their holiday timing and destinations to avoid unfavorable climate conditions.
- Local service providers and communities whose livelihood depends on tourism are the most vulnerable to climate change, and they are ones that would have to invest in adaptation initiatives to increase their capacity to respond.
- Suppliers (food, goods, and materials) and tour operators have greater capacity than local communities and businesses, as they can diversify their risk and normally do not have infrastructure in place.

The latter applies only to large suppliers. If the suppliers are local, they are likely to be as vulnerable to climate change as tourism service providers, depending on the type of business. Table 3 lists critical climate risks for small businesses in tourist destinations based on the interviews and consultations conducted.


Table 3. Climate Risks Associated with Different Tourism Sector Services and Products

<table>
<thead>
<tr>
<th>Climate risks/threats</th>
<th>Site (destination, accommodation, food, etc.)</th>
<th>Transportation (local and international)</th>
<th>Services/products (information, tours offered, local guides, tour operators, etc.)</th>
<th>Markets (sales pre/post)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Droughts</td>
<td>- Water shortages</td>
<td>- Destinations in rivers and lakes that depend on aquatic transportation can be affected</td>
<td>- Fewer tours that require aquatic transportation available</td>
<td>- Number of tours available</td>
</tr>
<tr>
<td></td>
<td>- Food scarcity</td>
<td></td>
<td></td>
<td>- Sales of tours can be affected</td>
</tr>
<tr>
<td></td>
<td>- Investment in appropriate water collection systems</td>
<td></td>
<td></td>
<td>- Bad image of the site</td>
</tr>
<tr>
<td></td>
<td>- Some destinations cannot receive tourists because of water scarcity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Extreme events</td>
<td>- Infrastructure damage</td>
<td>- Road network failure</td>
<td>- Services or activities offered to tourists damaged</td>
<td>- Bad publicity</td>
</tr>
<tr>
<td></td>
<td>- Supplier failure</td>
<td>- Airport failure</td>
<td></td>
<td>- Lower sales</td>
</tr>
<tr>
<td></td>
<td>- Tourists trapped in the area</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Extreme rain/flooding</td>
<td>- Tourism infrastructure can be flooded</td>
<td>- Destinations in rivers, lakes, and shorelines that depend on aquatic transportation can be affected</td>
<td>- Planning/schedules of tours can be affected/delayed</td>
<td>- Number of tours available</td>
</tr>
<tr>
<td></td>
<td>- Local residents and tourists are more vulnerable to diseases</td>
<td></td>
<td></td>
<td>- Sales of tours can be affected</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Bad image of the site</td>
</tr>
<tr>
<td>Storm surges</td>
<td>- Flooding, infrastructure damage, beach erosion and closure</td>
<td>- Coastal infrastructure failure (railways, airports, roads)</td>
<td>- Activities along shorelines could be damaged, cancelled</td>
<td>- In beach areas, erosion could prevent visitors to return</td>
</tr>
<tr>
<td></td>
<td>- Landscape changes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Sewage system failure</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sea level rise</td>
<td>- Coastal erosion</td>
<td>- Damage to roads, airports, and other infrastructure near the shoreline</td>
<td>- Any activities related to coral reefs, mangroves, or other coastal and marine ecosystems could be affected if these disappear or become more degraded</td>
<td>- If ecosystems are degraded and there are no coastal activities to offer, sales will decrease</td>
</tr>
<tr>
<td></td>
<td>- Infrastructure damage</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Sewage and drainage malfunction</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Ecosystems’ coastal squeeze</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Climate risks/threats</td>
<td>Site (destination, accommodation, food, etc.)</td>
<td>Transportation (local and international)</td>
<td>Services/products (information, tours offered, local guides, tour operators, etc.)</td>
<td>Markets (sales pre/post)</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-----------------------------------------------</td>
<td>------------------------------------------</td>
<td>---------------------------------------------------------------------------------</td>
<td>------------------------</td>
</tr>
<tr>
<td>Saline Intrusion</td>
<td>- Access to fresh water</td>
<td>Unknown</td>
<td>- Access to fresh water</td>
<td>Accommodations can become more expensive, as they would have to depend on other sources of fresh water</td>
</tr>
<tr>
<td></td>
<td>- Soil salinification affects crops</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High temperatures</td>
<td>- Heat stress on tourists and employees</td>
<td>- Increased fuel use for air conditioning</td>
<td>- Quality of tourist product can be affected because of high temperatures</td>
<td>- Decline in number of visitors for domestic and international markets</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Fewer tourists willing to visit the area during hot seasons</td>
<td></td>
</tr>
</tbody>
</table>
Transportation

Access to and within tourist destinations is almost as important as the destination itself, as it affects the ability of tourists to move from one attraction to another within the destination.

Maintenance of the road to La Ceiba is crucial. Several of those interviewed mentioned that climate-related events could affect road access.

Access to Potable Water and Sanitation

Availability and access to potable water during the dry season (and sometimes even during the rainy season) were identified as among the main priorities in tourist destinations. Businesses and destination areas will need to invest in water collecting/harvesting technologies to guarantee water delivery throughout the year.

Sewers and wastewater management are also a problem, since in many cases sewage is dumped directly into the water or is not managed properly. This can cause aquifers to become contaminated during the rainy season. In coastal areas, sewage and drainage infrastructure would have to be adequate to overcome rising sea levels.

Extreme Events

DesInventar records for Honduras (1975-2010) report 7,968 climate-related events. Excluding epidemics that in the database appear to be related to climate conditions, the most common climate-related events are floods (31 percent), droughts (9 percent), landslides (6 percent), heavy rains (5 percent), windstorms (2.5 percent), and tropical storms (2 percent). Other hydroclimatic events reported to have affected the country include forest fires, hurricanes, tropical storms, storm surges, heat and cold waves, frosts, flash floods, hailstorms, and tornados.

Seven percent (556 reports) of all climate-related natural disasters in Honduras occurred in La Atlántida Department. Those most commonly reported were: floods, epidemics, landslides, rains, storms, and droughts. In La Ceiba (211 reports), the most commonly reported events were floods (more than 50 percent), storms, landslides, and heavy rains. Other hydroclimatic events reported to have affected the municipality of La Ceiba include forest fires and hurricanes, tropical storms, storm surges, and flash floods.

Sea Level Rise

Coastal erosion, flooding, and soil salinization are direct consequences of sea level rise (relative and instantaneous). There is no information available that can be used to assess how the sea level has changed over time in Honduras or specifically in the region of La Ceiba. However, a third (30 percent) of those interviewed responded that they have observed an increase in coastal erosion and a rise in the sea level, and another third (33 percent) responded that they have not noticed any difference. The remainder of those interviewed had no opinion.

Since 1975, according to the DesInventar database, storm surges have affected La Ceiba six times. There is no information available on the damage from hurricanes impacting the city. Despite the lack of damage reports, sea level rise could potentially be the greatest hazard for communities in La Ceiba and the Bay Islands, where the beaches are the most highly valued tourist attraction. Other related activities, such as scuba diving, snorkeling, and fishing, could also be affected, as the coral reefs might not be able to withstand rising sea levels and increasing temperatures.

Beaches, dunes, mangrove forests, and other coastal ecosystems could also face coastal shrinkage and the risk of disappearing as a consequence of the rising sea level. The inability of these ecosystems to migrate

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backward due mostly to artificial barriers, such as roads, buildings, and farms, or natural barriers, such as rivers and mountains, prevents them from migrating at the same pace as the encroaching seas.

These ecosystems provide numerous services to coastal communities and their economic activities, most importantly the tourism sector. They are being rapidly degraded. Once these ecosystems disappear from shorelines, the process of sea level rise is expected to accelerate.

Last but not least important are the effects of saline intrusion on aquifers and soils, particularly those used in agriculture. It is important to ensure and plan for the availability of fresh water and food security of the city in a changing climate, independent of the tourism sector.
3. Project Entry Points, Beneficiaries, and Potential Partners

To fully develop a tourism product and destination, it is crucial to identify what the area has to offer in terms of culture, entertainment, natural ecosystems, activities, leisure, and other activities that could be attractive to tourists. It is also important to develop awareness programs among the local communities about the importance of welcoming visitors, and to make the destination attractive to visitors (access, information in different languages, schedules, ports of arrival and departure, emergency plans, etc.). Physical and logistical tourism infrastructure is crucial. It is also important to define the target tourism capacity of the region, develop the attractions, and focus all marketing strategies on that market.

Figure 2. The Influence of Climate on the Tourism Sector

** Represents a field in which local and regional climate are critical for the provision of the services and products.

For all of the above, there should be a financial plan that could be public-private sector driven. Since the tourism sector in La Ceiba is still dominated by MSMEs, it is most likely that the local government and national authorities would take the lead, strengthening small business.
Project entry points are those points across the value chain where it is considered that specific actions could be implemented to increase the resilience of small producers and small businesses to climate change. Box 1 summarizes the main entry points identified for the project that could increase climate resilience in the tourism sector in the region of La Ceiba. Specifically for La Ceiba, and considering that both the MIF\(^2\) and the World Bank\(^3\) have already initiated efforts to develop the tourism sector in the region, three entry points have been identified for a potential ProAdapt project:

1. Develop and support existing tourism products that are compatible with climate change.
2. Implement actions at the destination area that reduce its vulnerability to climate change.
3. Implement actions to improve tourism services and develop products in the area.

**Box 1. Entry points for MSMEs’ climate resilience in the tourism sector in Honduras**

It is considered that the above can be achieved by implementing the following actions:

1. Create and promote good practices for MSMEs providing services:
   - Build management capacity within the business (customer service, accountancy, marketing, supply management, etc.)
   - Train MSMEs on all services and all products that La Ceiba can offer
   - Implement good practices for water management
   - Implement good environmental practices
   - Improve understanding of the history, ecology, and climate of the region

\(^2\) Proyecto para el desarrollo de un modelo de turismo sostenible en la costa norte de Honduras. FOMIN 2014.

2. Strengthen MSMEs' infrastructure:
   - Climate-proof products and services
   - Reduce the risk of damage from climate-related events

3. Strengthen the capacity of associations:
   - Improve networks and cooperation between associates
   - Improve information management and distribution among associates
   - Improve understanding and management of the regional environment and ecosystems
   - Conduct assessment of vulnerability to climate change (all services and products offered in La Ceiba)
   - Improve access to training

4. Improve access to climate information:
   - Set up networks
   - Collect, monitor, and transform climate data
   - Create information-sharing mechanisms.

5. Include climate adaptation strategies in new/recent developments:
   - Conduct vulnerability assessment of the services
   - Identify actions to reduce vulnerability

Furthermore, to support the development of climate-compatible products, decrease the area’s vulnerability to climate change, and improve the overall competitiveness of the sector, the following specific actions are needed (some of which cut across the five pillars of actions listed above). Some are only related to the entry point. General actions that can be addressed following each entry point across the value chain are explained below, indicating which adaptation options could help address each action. Section 4 of this CN and the report entitled ProAdapt Nicaragua Honduras Overview Adaptation Initiatives present greater detail on those adaptation technologies. Section 4 presents the technology factsheets applied to the tourism sector in Honduras, and the report ProAdapt Nicaragua Honduras Overview Adaptation Initiatives contains the supporting analysis that led to their selection.

The following adaptation actions have been organized according to the entry points previously mentioned:

**Actions to Increase Climate Resilience at the Destination**
Actions to increase overall resilience to climate change at the destination (La Ceiba) can be undertaken by local governments, national agencies, donor agencies, and nongovernmental organizations (NGOs), with technical support from academia and experts. La Ceiba’s climate-change vulnerability assessment includes those areas that are being considered for development.

<table>
<thead>
<tr>
<th>Actions</th>
<th>Adaptation option</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ensure that adequate policies to monitor community health (dengue and other diseases), availability of fresh water, drainage and sewage systems, and ecosystem services are put in place and implemented.</td>
<td>2,3,5,11,12</td>
</tr>
<tr>
<td>Invest in improving road infrastructure (a good road network will aid with transportation and mobilization of visitors to and from tourist destinations).</td>
<td>2</td>
</tr>
<tr>
<td>Improve communication services (mobile, landlines, and Internet).</td>
<td>2,8,9</td>
</tr>
<tr>
<td>Regulate and educate people about water consumption.</td>
<td>1,2,3,4,9,10</td>
</tr>
<tr>
<td>Develop emergency and evacuation plans.</td>
<td>2,3,4,8,9,12</td>
</tr>
<tr>
<td>Draft legislation and good practice guidelines for infrastructure that preserves natural ecosystems.</td>
<td>2,3,4,9,11</td>
</tr>
<tr>
<td>Improve access to transportation within the area (busses, taxis, trains).</td>
<td>2</td>
</tr>
<tr>
<td>Transform the urban landscape for resilience, with tourism as a driver of development.</td>
<td>2,3,5,9,11</td>
</tr>
</tbody>
</table>

**Actions to Increase Climate Resilience at the Business Level**

At the business level, the main actions should be directed to achieve and educate entrepreneurs about good practices with respect to the climate risks they are facing in their regions. It would be important to consider the main climate risks that affect businesses’ products and/or services before performing the adaptation action.

<table>
<thead>
<tr>
<th>Actions</th>
<th>Adaptation option</th>
</tr>
</thead>
<tbody>
<tr>
<td>Invest in training and acquiring information on good practices in tourism for a changing climate.</td>
<td>1,2,3,4,7,9,10,11,12</td>
</tr>
<tr>
<td>Improve water use and management through water storage and/or irrigation to prevent water scarcity, including rainwater collection and water recycling systems.</td>
<td>2,3,4,9,10,11</td>
</tr>
<tr>
<td>Water source management (e.g., springs).</td>
<td>2,3,4,10,12</td>
</tr>
<tr>
<td>Design water conservation policies for guests and employees.</td>
<td>4,5,10</td>
</tr>
<tr>
<td>Invest in climate-resistant infrastructure, such as rainwater</td>
<td>2,3,7,10,11</td>
</tr>
</tbody>
</table>
collectors, ventilation, etc.

Invest in providing better information to guests about their services and the destination. 1,2,3,4,9

Develop emergency and evacuation plans. 1,2,3,8,11

Develop infrastructure that complements natural ecosystems and the destination landscape. 2,3,5

Invest in and commit to following good practices (building, management, and environment) as part of a beneficiary scheme. 1,2,3,4,7,8,9,10

**Actions for Associations to Increase Climate Resilience in the Tourism Sector**

In some cases, adaptation measures are not taken by tourism service providers; rather, they rely more on management decisions made by the local or national government. Formalization of service providers can help the sector and small businesses to address the environmental and socioeconomic problems they face.

<table>
<thead>
<tr>
<th>Actions</th>
<th>Adaptation option</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conduct climate vulnerability assessment of products and services developed or under development for the region.</td>
<td>1,2,3,8,11,12</td>
</tr>
<tr>
<td>Conduct assessment of current services provided (what exists and what needs to be changed to improve the service/product/activity) under the existing project.</td>
<td>1,2,3,9</td>
</tr>
<tr>
<td>Provide training (customer service, understanding of risk, understanding the history and ecology of the region).</td>
<td>1,2,3,4,7,9</td>
</tr>
<tr>
<td>Include services and products that La Ceiba can offer in the existing platforms.</td>
<td>1,4,9</td>
</tr>
<tr>
<td>Invest in information services for tourism businesses, including early warning systems, websites, and other information technologies, to share practical information on adaptation measures and sustainable tourist activity.</td>
<td>1,2,4,8,9,12</td>
</tr>
<tr>
<td>Promote partnerships and associations between service providers.</td>
<td>1,6,7</td>
</tr>
<tr>
<td>Build capacity and strengthen tourism associations and cooperatives and their linkages with small business and national entities to form a resilient tourism value chain; formalize businesses, cooperatives, and associations of SMEs to help the sector and small business address environmental problems they face.</td>
<td>1,3,4,6,7,9,10</td>
</tr>
</tbody>
</table>
and socioeconomic problems.

Support, encourage, and lobby for financial services for small tourism enterprises (private investment funds), with preferential low-interest credit terms tailored to the needs of the sector.

Invest in marketing and product development to overcome weaknesses in the capacity to trade and market tourism products.

Promote local actions to reduce risks in areas affected by landslides, ecosystems reductions, and those already impacted by waves, storm surges, or saline intrusion.

Promote the creation of advisory MSMEs for a resilient tourism industry.

Promote actions that strengthen capacity in financial literacy and marketing strategies.

Promote information services for tourist destinations and businesses, including sustainability planning, weather information, early warning systems, and information about the activity.

### Actions to Increase Resilience across the Value Chain (destination end user)

<table>
<thead>
<tr>
<th>Actions</th>
<th>Adaptation option</th>
</tr>
</thead>
<tbody>
<tr>
<td>Promote the purchase of climate insurance for small tourism businesses.</td>
<td>2,6,7,8,13</td>
</tr>
<tr>
<td>Support awareness campaigns aimed at tourism businesses, associations, industry, and consumers, to increase understanding of the climate risks affecting the value chain.</td>
<td>1,2,3,4,9,12</td>
</tr>
<tr>
<td>Promote access to information through information systems to facilitate data sharing, questions, information about the weather, markets, etc.</td>
<td>1,2,4,8,9,12</td>
</tr>
<tr>
<td>Design financial services that can be used to climate-proof MSMEs in the tourism sector.</td>
<td>1,2,6,7,13</td>
</tr>
</tbody>
</table>

Identification of the entry points suggested above should be seen as one of many steps in the process of climate change adaptation for MSMEs, rather than as the sole answer to achieve resilience. Local and
national organizations with the knowledge and capabilities to provide training and financing for climate change adaptation should be encouraged to participate.

### 3.1. Stakeholders and Beneficiaries

Stakeholders have been classified according to the role they play in the value chain and what role they would play in an adaptation project. A stakeholder analysis for the tourism sector in Honduras is summarized in Annex 1.

Some of the executing agencies suggested in the stakeholder table may have the capacity to coordinate and lead all of the suggested entry points. However, ProAdapt will need to assure that the agency effectively has a good understanding of the entry points throughout the value chain and the related climate risks. Some of the stakeholders identified are currently not operating in La Ceiba, but their expertise (Solimar, USAID-ProParque) could be very valuable for the project. An advisory committee should be created for each entry point (destination, associations, and SMEs), so that each component is implemented in collaboration with a series of local and national institutions. This committee or agency should have experience and technical expertise in areas not covered by the main executing agency. This would also be a way to create resilience at the institutional level.

The adoption and investment in technology and innovation recommended here requires a group of partners with sector experience and experience in training and capacity building, and another group of partners with technological tools available in the country. As a complement, partners with experience in financial services for the tourism sector will be needed.

Using a power, interest, and legitimacy (PIL) analysis, the following partners were identified:

- **Fundación Mundo Maya**, with agencies across Central America, is active in Mayan heritage areas. It was established to increase the technical and financial capacities to develop an associated cultural and natural product following Hurricane Mitch, with the aim of improving the management and efficiency of the Maya Route. The initiative comprises 20 hotels and 12 tour operators.

- **La Mesa de Organizaciones Co-Manejadoras de Áreas Protegidas (MOCAPH)** is a group of NGOs with a co-management agreement with the Hondurean Institute for Conservation, Forest Development, Protected Areas and Wildlife (ICF). NGOs with such agreements are considered the official managers of protected areas in Honduras.

- **CANATURH La Ceiba**, the Tourism Chamber of Commerce, is a private, non-profit, apolitical organization that represents firms that offer tourism products and services in La Ceiba and surrounding areas. It has 13 associate partners. It has never worked on disaster prevention, environmental sustainability, or climate-change mitigation or adaptation. CANATURH builds strategic partnerships with public-private entities to promote sustainable development, include rural communities in tourism-related activities, and conserve protected areas.
4. Adaptation Initiatives

We have compiled a database of several hundred potential adaptation options with a spreadsheet of over 20 options selected as suitable for investment in resilience supply chains in Central America. Below we highlight 13 options for the tourism sector in Honduras.

The initiatives listed below have been developed considering four crosscutting entry points through which investment could increase the resilience of small producers and businesses to climate change in the region mentioned in Section 3. The order in which they are listed does not represent a sequence of implementation, but rather the relevancy of each particular strategy or technology for achieving or increasing the climate resilience of tourism-related MSMEs. Readiness refers to the sector’s current capacity to implement specific technologies. Thus, only those technologies that reflect some degree of sector readiness have been included. Some of the options, such as climate information systems and monitoring, will only see results over the long term. However, implementation should begin now to achieve the longer-term benefits.

These sector adaptation technologies and initiatives applicable to MSMEs are presented as cards or factsheets to synthesize the relevant information as briefly as possible. Further analysis is required to implement each of those options. The factsheets should be read as starting points and not as options ready for implementation. Each technology has been analyzed according to the climate impact addressed, business sustainability, ProAdapt objectives, and feasibility of implementation. The report entitled ProAdapt Nicaragua Honduras Overview Adaptation Initiatives includes the list of all 20 options and the analytical process that led to their selection.

Each factsheet contains the following information:

<table>
<thead>
<tr>
<th>Initiative number and title: name given to the strategy/technology</th>
<th>Sector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potential lead actors</td>
<td>Tourism</td>
</tr>
<tr>
<td>Location</td>
<td>Honduras – La Ceiba-Tela</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brief description of the initiative describing its rationale and how it would increase the climate resilience of MSMEs. It also includes examples of how the initiative could be applied. Such examples have been extracted from other projects that are not necessarily related to adaptation but that are successful in increasing MSMEs’ productivity and/or access to markets.</td>
</tr>
</tbody>
</table>

| Climate-related impact addressed |
**Brief description of the climate risk the initiative would be addressing and how.**

**Initiative investment and maintenance needs**

Brief description of the investment required for its implementation and the potential leaders in such investments, including the types of investments that would be required (infrastructure, equipment, training, etc.). It also refers to other investments and processes that would need to be implemented to be successful and actually improve the resilience of MSMEs.

**Examples of good practices**

List of good practices identified that could be used as guidelines for each sector and each option.

**Requirements**

Equipment, human, financial, technological and other requirements that have been identified for the successful implementation of each strategy.

This section includes the identifications of beneficiaries and partners. Beneficiaries are actors across the value chain that would benefit from the strategy. Some strategies benefit the entire chain, others certain stages of it, and still others would benefit entire communities where the product is harvested and/or transformed.

The partners listed are those that could be involved in the successful implementation of the strategy.

**Actors and financial mechanism for implementation**

Brief description of actors that are more likely to be involved in the strategy proposed. This section expands from the leading actors section. This box also includes a brief description of the financial mechanism that could lead to its implementation.

**Expected outcomes and benefits for MSMEs**

The outcomes listed have been identified to benefit the MSMEs if/when the strategy is implemented. They are linked to ProAdapt objectives, sustainable businesses and, to ways to increase climate resilience. Each strategy lists the outcomes to be achieved by its implementation.

- Reduced operating costs
- Less damage from extreme weather
- Number of new business models
- Reduction in work stoppages and interruptions
- Less climate-related damage, fewer interruptions, and lower costs associated with supply chains and distribution networks
• Increased productivity
• Increased sales
• Increased profitability
• More partnerships and alliances
• Increase in the number of new clients
• Increased business formality

The following adaptation options identified in this project would increase the climate resilience of MSMEs in the tourism sector in Honduras

1. Strengthen associations. By strengthening MSME capacity at all levels (financial, technical, communications, environmental impact, etc.), the entire value chain will be strengthened and MSMEs will have a reliable safety network. It is widely accepted that MSMEs will benefit directly by strengthening associations.

2. Diversify the offering of tourism services and products. A broader portfolio of services and products leads to longer stays, more visitors, and greater consumption by tourists. Diversifying the options offered to tourists will reduce dependence of those services that could be at risk, such as beaches, which are vulnerable to coastal erosion.

3. Integrate services to increase business resilience. Given the uncertainty regarding climate change and future climate-related risks and opportunities, there is a great need to integrate services at the regional level and provide climate-smart technical assistance to stakeholders across the value chain.

4. Produce manuals of good practices for a changing climate: Climate resilience among MSMEs can be achieved by implementing good practices that consider the impacts of climate change across the value chain in each sector. Good practices include improving entrepreneurial and productive processes, obtaining and achieving certifications, reducing environmental impacts, and achieving financial sustainability.

5. Create an enabling business environment for the preservation and protection of natural resources. MSMEs can be made more resilient through practices designed to preserve and restore the natural environment and modifying the business environment to provide greater protection, greater capacity to respond to disasters and reduce risk.

6. Improve access to financial resources and services. Improving access to financing enhances the resilience of MSMEs. Access to low-interest loans and credit on flexible terms would enable them to purchase materials and equipment and climate-proof some of their services, and in so doing, achieve ProAdapt goals.

7. Provide multiservice credit cards for adaptation. This would enhance and diversify financial flexibility and access to products by providing credit to MSMEs. Such credit cards would unify several services for
small businesses, including identification, affiliation, credit, access to information, discounts for special supplies or to specialized shops (equipment, laundry services, value chains, supplies a hotel, etc.), training, and insurance, among others.

8. Create early warning systems. Timely information to SMEs about potential risks that they face enables them to take corrective measures and reduce the impacts.

9. Improve access to information. MSMEs can make better decisions if they have better access to information relevant to their productive activity. Access to this information should be simple. Current weather and forecasts, market behavior, prices, good practices and policies of the sector, among other types of information, would allow small producers to plan more effectively.

10. Improve the efficiency of use and management of water by businesses. MSMEs should be provided water management solutions to access and manage water (irrigation systems, drainages, water collection mechanisms, etc.), including wastewater from their operations during dry and rainy seasons.

11. Provide climate-resistant infrastructure to businesses. This infrastructure should aim to ensure that MSME activities can function, and protection should be enhanced. This is achieved by reducing those activities directly exposed to hazards and diminishing the risk that crops, assets, and services are directly impacted by climate-related hazards.

12. Provide climate monitoring and information systems. Reliable climate information is necessary for decision making. Existing information providers and new actors should be supported to translate climate-related data for business owners and supply-chain decision making.

13. Provide climate insurance. Climate-smart agriculture components have been considered as a baseline principle for index-based insurance and can also be applied to the tourism sector. The insurance payment is generated after a threshold of climate conditions has been crossed or after a climate-related natural disaster has occurred. Traditional insurance is also applicable to infrastructure damage.
5. Outcomes in Promoting Resilience

The portfolio of options reviewed here that are pertinent to the tourism sector in Honduras would lead to the outcomes listed, promoting resilience. By strengthening associations, climate-proofing businesses, increasing entrepreneurs’ awareness of climate change, establishing monitoring systems and a more informed financing system that take MSMEs needs and climate challenges into account, it is expected that climate resilience will be enhanced.

The project has identified potential primary outcomes, which would yield direct results from their implementation, and secondary outcomes which, although not part of the project objectives, could come about as a consequence of a more resilient value chain, as well as empowered and aware businesses, associations, and financial institutions.

5.1 Primary Outcomes

- Improve the quality of tourism products and services, under international quality standards for both national and international markets.
- Improve the tourism supply chain at national level.
- Improve market access to small businesses.
- Strengthen the associations and destinations that understand climate risks and are ready to take action.
- Establish climate awareness in the tourism industry at the local and national levels.
- Provide adequate financing to help create resilient businesses and resilient communities. Investments in climate risk may help reduce economic, environmental, and social risks, and may provide investors with the potential for achieving higher risk-adjusted financial returns.4

5.2 Secondary Benefits

- It could be a useful tool for conservation, allowing people to obtain economic benefit from native forests and other flora and fauna in a non-destructive way, ensuring greater local participation in conservation efforts.
- Any measure that is taken with respect to land planning, reforestation, and prevention of deforestation will boost the resilience of the sector.
- Some destinations, such as private reserves and agrotourism sites, will have another source of income. The adaptation measures proposed here can strengthen the resilience of managers in their other productive activities.
- Coordination between civic, private, and government organizations may help to achieve institutional resilience in the tourism sector.

4 http://climateresiliencehub.com/climate-finance-hub/
The ProAdapt framework for Monitoring, Learning and Evaluation (MLE) is being tested and will provide further guidance for selecting indicators for the proposed project.

The MLE plan depends on the activities chosen and a formal theory of change for the project. These are some of the next steps in formulating the project as an investment-ready vehicle beyond the concept note stage.

The MLE plan should further develop the elements in the table below. This is an outline only; other features, including the logframe, milestones and work plan, resources for MLE, and baseline for evaluation of the project’s impact, are required.

Table 4 shows two principal panels. The top includes the conventional M&E requirements for a project, derived from its theory of change. Most of the indicators here are related to the project’s milestones and outputs following good practice in project design (and standard procedures in MIF).

The lower panel extends the project M&E to include features that are specific to monitoring actions that enhance resilience (e.g., key performance indicators for resilience) and enable learning and adaptive management as the project unfolds. It also includes an evaluation plan for testing the proposition that the project investment made a significant impact on climate resilience among the beneficiaries.

Designing the lower panel as an MLE plan for resilience depends on the specifics of the project.

**Table 4. MLE Structure for Resilience**

<table>
<thead>
<tr>
<th>Project M&amp;E Requirements</th>
<th>Project</th>
<th>MLE Plan</th>
<th>Baseline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purpose</td>
<td>Promote resilience among MSMEs in the tourism sector</td>
<td>Overarching theory of change and justification of entry points for the type of project and level of MLE</td>
<td>Inventory of existing investments and actors in the sector (as in this CN)</td>
</tr>
<tr>
<td>Components</td>
<td>Improved climate-tourism information service for MSMEs</td>
<td>Results chain for intervention for specific business processes (e.g., B*Resilience models)</td>
<td>Analysis of benefits including targeted number of beneficiaries; aggregate of activities</td>
</tr>
<tr>
<td>Activities</td>
<td>Identified options for each project component</td>
<td>Outputs from the options selected</td>
<td>Initial status of the activities, e.g., number of businesses, cost of credit</td>
</tr>
<tr>
<td>---------------------</td>
<td>-----------------------------------------------</td>
<td>----------------------------------</td>
<td>--------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>

### Private Sector Resilience

<table>
<thead>
<tr>
<th>Learning</th>
<th>Protect Assets</th>
<th>Secure Production</th>
<th>Enhance Profit</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Process-based indicators of adaptive management to achieve the principle business functions during the project</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Outcomes</td>
<td>• Outcomes during the project cycle</td>
<td>• Sustained outcomes beyond the project at the business level</td>
<td>• Sectoral outcomes of scaled up activities</td>
</tr>
<tr>
<td>Impact evaluation</td>
<td>• Design and baseline for measuring impact of outputs at the level of individual beneficiaries, across the actor-network involved in the project, and at the sector level in the region/market</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
7. Key Messages

The following key messages are a summary of the observations, analysis, interviews, and conversations undertaken for the project and the results obtained.

- All small tourism enterprises (does not cover all regions in Honduras) interviewed are aware that severe weather conditions influence their business. They consider climate to be one of the critical aspects of their business; nevertheless, the full impacts of climate change on tourism services, areas, and products or their associated value chains are not understood, either by the business owners or other stakeholders involved in the activities or services.

- In the La Ceiba region, those who are already suffering the impacts of sea level rise for example, do not appear to have associated coastal erosion with SLR, and the sector in general has not thought about how to address it in the medium and long term.

- The impacts of climate variability across the value chains are more visible at the producer/business level; nevertheless, building resilience among small producers and businesses requires actions across the entire value chain and with multiple stakeholders.

- For most MSMEs (excluding those at La Ceiba and Tela), security and safety are still big challenges to ensure that tourists continue to visit. Other issues that influence the tourism sector are environmental degradation, government policies, road infrastructure, and the general state of the economy (national, regional, and global).

- For MSMEs, tourism is often a second source of livelihood, given the seasonal nature of the sector and low occupancy on weekdays. However, almost half of the MSMEs interviewed (n=23) had accessed loans from banks or cooperatives.

- Enabling transparent communication between MSMEs, associations of MSMEs, financial institutions and the government will allow effective project implementation. These stakeholders have been identified as the key decision makers for ProAdapt. Other key stakeholders that can contribute knowledge, expertise, and capacity building include larger companies, technical agencies, NGOs, academia, and donor agencies.

- Technical assistance, improving MSMEs’ finance and management capacity, improving MSMEs’ access to information (climate, markets, environment, technology, finance, etc.), and adequate management of natural resources and the environment have been identified as the entry points for ProAdapt project implementation in the sector.

- There is a need to increase awareness and capacity within financial institutions and MIF partners so that they can provide services tailored to the needs of MSMEs in a changing climate. MSMEs in the tourism sectors in Honduras have stated that:
In general there is a lack of understanding about how to access credit.

Tourism MSMEs do not have the collateral or the credit history demanded by banks; hence, access to credit is difficult.

Lack of financial management skills (production of cash flow reports, financial reports, etc.) is seen as a challenge to accessing credit. Training in this area would benefit MSMEs.

Credit access is difficult even from entities that offer MSME-friendly credit lines.

Interest rates are too high. The best way to finance MSMEs would be through long-term, low-interest loans to associations.

Greater information and capacity building for those entrepreneurs that do have access to credit would be beneficial.

Cattle owners and tourism entrepreneurs are more likely to have accessed credit and insurance than honey or cocoa producers in Honduras and Nicaragua. Less than a third of those tourism MSMEs consulted have insurance, and most of those are only insured against fires.

Across all value chains and tourism services, there is a lack of awareness about where to access information regarding climate change policies, and strategies:

Most service providers and area managers are unaware of national and or sectoral climate change policies and strategies.

Most MSMEs have not received assistance after extreme events.

Most MSMEs are not aware of government or financial agencies’ policies for MSMEs and associations (access to funds).

MSMEs relate current climate variability with environmental degradation at the local level.

All MSMEs consider that with better climate information they could plan their business operations better.

Critical aspects that MSME businesses identified include: climate, transportation network, infrastructure, supplies, overall economic situation (national and global), region safety (violence), marketing, investment capacity, natural resources (water and forests), technical assistance, and installed capacity.

MSMEs consider that despite the presence of NGOs and technical agencies in the regions aiming to increase awareness about sustainable development and good practices, their language is too technical and lacks understanding of the sectors, which hinders its effectiveness.
• Honduras and Nicaragua lack integrated sectoral policies that reflect the realities of rural producers or small entrepreneurs.

• Through implementing the B*Resilient approach, MSMEs can identify how climate variability is affecting and could affect their businesses by: i) identifying critical points during the operation, actions designed to increase resilience, principal actors along the decision chain, and tools currently available for adaptation; and ii) increasing their awareness of actions across the value chain that could increase climate resilience.

• There are several products (reports, platforms, tools) designed to provide knowledge for adaptation by small producers in rural areas. The technologies and initiatives selected benefit all four sectors and are considered suitable for investment in resilience supply chains in Central America. Some of the options, such as climate information systems and monitoring, will only see results in the long term. Implementation should start now to realize the longer-term benefits.

• The project CN follows our review of the climate risks in the region and takes stock of existing initiatives, research efforts, and investment funds already in place or planned. Initial surveys with key stakeholders led to an initial set of potential opportunities. Intensive interactive workshops with stakeholders in the sector identified potential business processes that would increase climate resilience and clarify investment priorities.

• Achieving MSME resilience requires effective technical cooperation and financing.

• The standard model of a causal chain from investment to impact fails to capture the longer-term nature of climate resilience and the complexity of coupled socio-ecological systems. Donors developing KPIs for resilience understand these issues but have not produced coherent and practicable solutions.

• Climate adaptation planning and processes should begin and end with the main purpose driving a business: returning a profit on investment.

• Private-sector adaptation to climate change should reduce the risk of investment to climate consequences while actively promoting business goals and outcomes.
8. References

CANATURH, BID-FOMIN, TMR. 2014. Proyecto para el desarrollo de un modelo de turismo sostenible en la costa norte de Honduras. Informe Final: Consultoría para análisis de la demanda y oferta turística y diseño de los productos turísticos y propuesta de paquetes turísticos para La Ceiba y Tela.


9. Annexes

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### Annex 1. Actors in the Tourism Sector in Honduras

<table>
<thead>
<tr>
<th>Actor</th>
<th>Type of institution</th>
<th>Scale of work</th>
<th>Scope for this project</th>
<th>Which entry point would address</th>
<th>Executing agency/Beneficiary</th>
<th>Financial management capacity</th>
<th>Understanding of CC</th>
<th>Worked with FOMIN before</th>
</tr>
</thead>
<tbody>
<tr>
<td>LARECOTURH&lt;br/&gt;La Red de Comunidades Turísticas de Honduras</td>
<td>Association</td>
<td>National</td>
<td>Tourist destination assessment from a tourist business perspective not from a climate assessment perspective</td>
<td>Tourism destination assessment and development of the product and services</td>
<td>If considered an executing agency or a beneficiary of the project</td>
<td>If it can prove that can manage funds from donors</td>
<td>Clear understanding of the impacts of CC in the sector</td>
<td>yes/no</td>
</tr>
<tr>
<td>REHNAP&lt;br/&gt;Red Hondureña de Reservas Naturales Privadas</td>
<td>Association</td>
<td>National</td>
<td>Tourist destination assessment Training</td>
<td>Protected areas management Training</td>
<td>Beneficiary</td>
<td>yes</td>
<td>no</td>
<td>no</td>
</tr>
<tr>
<td>CANATURHs&lt;br/&gt;Cámaras de turismo locales</td>
<td>Association</td>
<td>local</td>
<td>Tourist destination assessment from a tourist business perspective not from a climate assessment perspective</td>
<td>Tourism destination assessment and development of the product and services, including supply chains</td>
<td>Partners and beneficiaries</td>
<td>yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CATIE</td>
<td>Research</td>
<td>Regional, Central America</td>
<td>Agrotourism and EBAs</td>
<td>Destination assessment and links with agriculture</td>
<td>Executing agency</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>MOCAPPH&lt;br/&gt;La Mesa de Organizaciones Co Manejadoras de Áreas Protegidas</td>
<td>Association</td>
<td>National</td>
<td>Climate change vulnerability assessment for the sector</td>
<td>Destination environmental assessment and management considerations</td>
<td>Advisor to the executing agency</td>
<td>yes</td>
<td>yes</td>
<td>No</td>
</tr>
<tr>
<td>IHT: Instituto Hondureño de Turismo</td>
<td>Government</td>
<td>National and local</td>
<td>Sets the country’s tourism policy</td>
<td>Development of tourism products</td>
<td>Advisor of executing agency</td>
<td>yes</td>
<td>no</td>
<td>yes</td>
</tr>
<tr>
<td>Fundación Mundo Maya</td>
<td>Association</td>
<td>Regional, Central America</td>
<td>Research, expertise on destination, credit line, capacity building, marketing</td>
<td>Product development and marketing</td>
<td>Advisor of executing agency</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>Actor</td>
<td>Type of institution</td>
<td>Scale of work</td>
<td>Scope for this project</td>
<td>Which entry point would address</td>
<td>Executing agency/ Beneficiary</td>
<td>Financial management capacity</td>
<td>Understanding of CC</td>
<td>Worked with FOMIN before</td>
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<td>------------------------------------------------------</td>
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<td>---------------------</td>
<td>------------------------</td>
</tr>
<tr>
<td>Universidad Nacional Autónoma de Honduras (UNAH)</td>
<td>Academia</td>
<td>National</td>
<td>Project management</td>
<td>Destination assessment and evaluation (not climate)</td>
<td>partner in the project</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>OTSCC: Observatorio de turismo sostenible y cambio climático</td>
<td>Research/ academia</td>
<td>National</td>
<td>Research, monitoring and evaluation</td>
<td>Provide information for assessment, ensure monitoring of actions and provide information for the sector</td>
<td>partner in the project</td>
<td>no</td>
<td>Mitigation and clean development yes. It is not clear about adaptation</td>
<td>no</td>
</tr>
<tr>
<td>USAID/ProParque</td>
<td>Int. Cooperation</td>
<td>International</td>
<td>Agro-tourism</td>
<td>Destination management</td>
<td>Executing agency</td>
<td>yes</td>
<td>yes</td>
<td>no</td>
</tr>
<tr>
<td>CREDIA</td>
<td>Research/ academia</td>
<td>National</td>
<td>Research, training, capacity building, project management</td>
<td>Destination management, Infrastructure Energy and water efficiency, tourism product/services, market access</td>
<td>Executing agency/advisor to the executing agency</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>ZOLITUR</td>
<td>Public</td>
<td>National</td>
<td>Tourism management, capacity building, project management</td>
<td>Infrastructure Energy and water efficiency, tourism product/services</td>
<td>Advisor to the executing agency</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>FUCSA</td>
<td>NGO</td>
<td>National</td>
<td>Research, expertise in destination/tourism management, training, project management</td>
<td>Destination management, tourism product/services</td>
<td>Advisor to the executing agency</td>
<td>yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Fundación Cayos Cochinos</td>
<td>NGO</td>
<td>National</td>
<td>Tourism management, capacity building, project management</td>
<td>Destination management, tourism product/services</td>
<td>Advisor to the executing agency</td>
<td>Yes</td>
<td>yes</td>
<td>No</td>
</tr>
<tr>
<td>FUPNAPIB</td>
<td>NGO</td>
<td>National</td>
<td>Expertise in destination/tourism management, capacity building, project management</td>
<td>Destination management, tourism product/services</td>
<td>Advisor to the executing agency</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Solimar International</td>
<td>Private</td>
<td>International</td>
<td>Expertise in destination/tourism management, good practices, tourism market, tourism information, training,</td>
<td>Destination management, Infrastructure Energy and water efficiency, tourism product/services</td>
<td>- Executing agency - Advice to executing agency and to beneficiaries</td>
<td>Yes</td>
<td>yes</td>
<td>No</td>
</tr>
<tr>
<td>Actor</td>
<td>Type of institution</td>
<td>Scale of work</td>
<td>Scope for this project</td>
<td>Which entry point would address</td>
<td>Executing agency/ Beneficiary</td>
<td>Financial management capacity</td>
<td>Understanding of CC</td>
<td>Worked with FOMIN before</td>
</tr>
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<td>-------------------------------------------------------------</td>
<td>-----------------------------------------------------------------------</td>
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<td>--------------------------</td>
<td>------------------------</td>
</tr>
<tr>
<td>CATA Central America Tourism Agency</td>
<td>Private sector</td>
<td>International, regional, and national</td>
<td>Experts on marketing capacity building, project management</td>
<td>Destination marketing - Advice to executing agency</td>
<td>Yes</td>
<td>probably not</td>
<td>?</td>
<td>?</td>
</tr>
<tr>
<td>Flora &amp; Fauna International</td>
<td>NGO</td>
<td>International, national</td>
<td>expertise in protected areas management, training, capacity building, project management</td>
<td>Destination management - Executing agency - Advice to executing agency and to beneficiaries</td>
<td>Not this type of project</td>
<td>Yes</td>
<td>No</td>
<td>?</td>
</tr>
</tbody>
</table>
## Annex 2. MSMEs Interviewed in the Area of Potential Work

<table>
<thead>
<tr>
<th>Name</th>
<th>Type</th>
<th>Assets most affected by environment and climate conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>La Moskitia ECO Aventuras.</td>
<td>Tour operator, specialized tourism, restaurant, bar, leisure</td>
<td>Infrastructure</td>
</tr>
<tr>
<td>Tourist Options</td>
<td>Accommodation, tour operator, specialized tourism, transportation, restaurant, bar, leisure, other activities (scuba diving)</td>
<td>Infrastructure and landscape</td>
</tr>
<tr>
<td>La Casa del Jaguar</td>
<td>Restaurant/ bar/leisure</td>
<td>Infrastructure and employees</td>
</tr>
<tr>
<td>Litos Place</td>
<td>Restaurant/ bar/leisure</td>
<td>Infrastructure, suppliers, area of interest, natural spaces</td>
</tr>
<tr>
<td>La Relumbrosa</td>
<td>Accommodation, area of interest, activities, restaurant/ bar/leisure</td>
<td>Infrastructure, landscape, natural spaces, other: agro-tourism</td>
</tr>
<tr>
<td>Finca Agro-turística El Cayo</td>
<td>Accommodation, camping, restaurant/ bar/leisure, camping</td>
<td>Infrastructure and aquatic activities.</td>
</tr>
</tbody>
</table>

### Associations Interviewed in the Region

<table>
<thead>
<tr>
<th>Name</th>
<th>Number of partners</th>
<th>Services</th>
<th>Measures implemented to address climate variability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Empresa asociativa campesina de producción AMA LANCETILLA</td>
<td>10 women</td>
<td>Crafts and cacao greenhouses</td>
<td>None</td>
</tr>
<tr>
<td>Empresa Asociativa Campesina Bahía de Tela</td>
<td>10 (1 woman)</td>
<td>Area of interest/attraction tour operator and transport</td>
<td>None</td>
</tr>
<tr>
<td>Asociación de artesanos de La Ceiba</td>
<td>20 (4 women)</td>
<td>Area of interest/attraction and crafts</td>
<td>None</td>
</tr>
<tr>
<td>CANATURH La Ceiba</td>
<td>50 associates in all the levels</td>
<td>All services</td>
<td>None</td>
</tr>
<tr>
<td>Destino turístico el Pino, Unidad Sector Privado y Comunitario</td>
<td>30 (6) women</td>
<td>All services</td>
<td>Forest fire</td>
</tr>
<tr>
<td>Comité de Turismo Comunitario El Pino</td>
<td>28 members (11 women)</td>
<td>All services</td>
<td>Training, infrastructure, adapted crops (none of these have been assessed by this project team)</td>
</tr>
<tr>
<td>Asociación Pro comunidades Turísticas de Honduras</td>
<td>200 (92 women)</td>
<td>All services</td>
<td>Reforestation</td>
</tr>
</tbody>
</table>
Annex 3. Private-sector Adaptation Technologies and Initiatives Applicable to MSMEs in the Tourism Sector in Honduras

1. Strengthening associations

<table>
<thead>
<tr>
<th>Potential leading actors</th>
<th>Sector</th>
</tr>
</thead>
<tbody>
<tr>
<td>National government</td>
<td>TOURISM</td>
</tr>
<tr>
<td>Associations and cooperatives</td>
<td>Location</td>
</tr>
<tr>
<td>Technical agencies</td>
<td>HONDURAS</td>
</tr>
<tr>
<td>Chambers of commerce</td>
<td></td>
</tr>
<tr>
<td>MSMEs</td>
<td></td>
</tr>
</tbody>
</table>

**Description**

The purpose of this initiative is to strengthen capacity (financial, technical, communications, etc.) among associations as a way to strengthen the entire value chain and provide SMEs with a safety net.

Strengthening or supporting the formalization of producer cooperatives or associations of SMEs under Honduran law is an important measure that can help the sector and the small businesses associated with it to address the environmental and socioeconomic problems they face. It may also give them a voice and a vote in the decision-making process or facilitate access to financial services.

**Climate-related impact addressed**

It will create awareness and induce changes in practices that will increase resilience to climate change.

**Initiative investment and maintenance needs**

Investment in capacity building in good practices, water management, access to financing (as a group), sector policies, customer service, and others. It will create awareness among associates on issues related to climate change, formal business, and national and international issues in the tourism sector, with the aim of boosting competitiveness. A comprehensive strengthening program at the organizational, technical, financial and commercial levels may be required at all levels of the sector. This will respond to the needs of MSMEs, empowering them and creating organizational, technical, financial, and commercial skills.

**Examples of good practices**

- Bring together all beach-related tourism services to maintain natural vegetation along the beach
• Strengthen tourism boards or support the creation of new association and boards

Requirements

• Ensure transparency among associations to all associates
• Ensure that associations and boards are working for the good of associates and not their own interests
• Ensure that associations are willing to be trained
• Develop programs, modules, or training packages for each sector and region
• Identify the most relevant needs and challenges faced by associations
• Provide training according to their needs and climate challenges
• Provide financial support
• Beneficiaries: cooperatives, associations, SMEs.
• Partners: government agencies (Honduran Institute of Tourism), NGOs, academia, exporter’s associations, training agencies, associations, large businesses within each sector, and information management agencies.

Actors and financing mechanism for implementation

NGOs, knowledge-based organizations, and universities can design training modules. It is important that information be communicated clearly. There are several ways to fund the initiative. Ideally, the associations themselves should finance the training. However, since many of them do not have that capacity, a private-public sector initiative, under which large retailers or buyers of raw materials provide training as part of their quality assurance program and their social responsibility programs, could fund it. The public sector can contribute by providing information and investment.

Expected outcomes and benefits for MSMEs

• Fewer work stoppages and interruptions
• Less climate-related damage, fewer interruptions, and lower costs associated with supply chains and distribution networks
• Increased sales
• Increase in the number of new clients
• More partnerships and alliances
• Increased business formality
2. Climate-proofing tourism services and products under development

<table>
<thead>
<tr>
<th>Potential leading actors</th>
<th>Sector</th>
</tr>
</thead>
<tbody>
<tr>
<td>National and local authorities</td>
<td>TOURISM</td>
</tr>
<tr>
<td>Associations and chambers of commerce</td>
<td>Location</td>
</tr>
<tr>
<td>Technical agencies</td>
<td>HONDURAS</td>
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<tr>
<td>Large companies</td>
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<td>MSMEs</td>
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**Description**

The purpose of this initiative is to strengthen tourism businesses by diversifying the services and products available to tourists. A broad portfolio of services and products leads to longer stays, more visitors, and more consumption by tourists.

The La Ceiba-Tela region has already identified six products for strengthening and development. It is crucial to assess climate risk and the impacts of sea level rise on each product developed before any infrastructure is built.

This vulnerability assessment and product development should follow the Tourism Competitiveness Monitor (Navickas and Malakauskaite, 2008) (Annex 1) or a similar competitiveness assessment created specifically for the tourism sector.

**Climate-related impact addressed**

A larger portfolio of services will reduce dependence on a single service or product. However, in case of extreme events such as hurricanes, a greater variety of services will not insulate businesses from their effects. In coastal areas undergoing beach erosion, diversifying away from beach tourism should be considered.

These initiatives could reduce the losses related to specific impacts to one service in an area that is dependent on that service or that is only providing one service or product.

**Initiative investment and maintenance needs**

These initiatives require a comprehensive process that includes research on the area of interest for potential diversification, information, planning, training, and product or service design. This process requires a sound understanding of the area of interest, what it has to offer, and how it could be maximized without damaging it.

**Examples of good practices**

- Areas focused on beach tourism offering high-quality restaurants, sea/land activities, eco tours, spa treatments, sports and adventure, and nature routes
- Project Go Blue Central America in Honduras and Panama
- Pico Bonito Lodge, La Ceiba
Requirements

- Sound understanding of the area of interest
- Involvement of the local community
- Understanding of visitors’ interests and behavior
- Training on tourism service provision
- Infrastructure appropriate for tourism
- Emergency plans
- Information for tourists, such as maps, routes, emergency numbers, health centers, sites of interest with the respective information, and others
- Integrated planning (service provision, administration, training, maintenance)
- Mechanisms of collaboration between service providers
- Marketing strategies
- Beneficiaries: service providers, region of interest, local economy, country
- Partners: local and national governments, tourism promotion agencies, tourism unions, universities, and centers for information production and dissemination

Actors and financing mechanisms for implementation

The process should include the area’s communities in its planning and development, understand the visitors’ interests, and include mechanisms for regional collaboration. Although businesses are in competition with one another, they are also creating a brand. Thus, collaboration among providers is important. Financing instruments can be developed by commercial banks, NGOs, and government mechanism supporting the sector.

Expected outcomes and benefits for MSMEs

- Lower operating costs
- Reduction in damages from extreme weather
- Reduction of work stoppages and interruptions
- Reduction of climate-related damage, interruptions, and cost associated with supply chains and distribution networks
- Increase in the number of new business models
- Increased productivity
- New jobs created
- Increased sales
- Increased profitability
- Increase in the number of new clients
- More partnerships and alliances
- Increased business formality
3. Integrated tourism services for a more resilient business

<table>
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<tr>
<th>Potential leading actors</th>
<th>Sector</th>
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<tr>
<td>Associations and cooperatives</td>
<td>TOURISM</td>
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<tr>
<td>Technical agencies</td>
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<tr>
<td>Chambers of commerce</td>
<td>Location</td>
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<tr>
<td>MSMEs</td>
<td>HONDURAS</td>
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</table>

**Description**

The principle underpinning this initiative is that with a changing climate and the uncertainty related to it, coupled with the need to strengthen capacity at the regional level, agencies that can provide technical assistance on climate-related good practices to tourism businesses and across the chain could provide a valuable service, while at the same time creating local and national knowledge-based products that will become profitable.

**Climate-related impact addressed**

All impacts, including extreme events and climate variability, as the service would be provided by a technical team with a good understanding of climate change, environmental change, agricultural value chains, and business management. It will not address any of the impacts directly; however, it is assumed that the advice provided to businesses and associations would reduce the impacts of climate change.

**Initiative investment and maintenance needs**

Team capacity building and training is critical and is the basis of this initiative. Several universities in both countries are already addressing the topic. The company/service must be seen as a business-advisory service. Thus, the business model must be well thought out from the start.

**Examples of good practices**

- Training seminars on climate change and climate adaptation
- Advising on how to maximize resources in a farm/business
- Advising on water management at the household/farm/business level
- Finances and business management in a changing climate
- Policies and legislation affecting tourism businesses
- Applying for credits and funding opportunities

**Requirements**

- A multidisciplinary team composed of experts on tourism, climate adaptation, energy efficiency, water management, finances, access to credit, and national policies
- Facilities that enable the team to work
- Marketing strategy to promote and ensure that SMEs have access to it
- Multiple means of access (e.g., phone, email)
• Customer service protocols
• Protocols to respond to different needs and clients
• Beneficiaries: SMEs, service providers, the entire value chain
• Partners: large retailers within each sector, government, chambers of commerce

**Actors and financing mechanism for implementation**

This initiative (as a start-up) could be funded through programs sponsored by government, the private sector or multilateral organizations. Office equipment and access to information will be required. This initiative is based on exchanging and applying current knowledge to help small businesses adapt to climate change, using local expertise and facilitating access to global experts and other professionals working in their areas. Companies will charge a fee, which will enable them to sustain themselves.

**Expected outcomes and benefits for MSMEs**

• Reduction in work stoppages and interruptions
• Less climate-related damage, fewer interruptions, and lower costs associated with supply chains and distribution networks
• Increase in the number of new business models
• Increased productivity
• More partnerships and alliances
• Increased business formality
4. Best-practice manuals for a changing climate

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<tr>
<th>Potential leading actors</th>
<th>Sector</th>
<th>Location</th>
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<tbody>
<tr>
<td>Government institutions</td>
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<tr>
<td>Associations and cooperatives</td>
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<td>Technical agencies</td>
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<tr>
<td>NGOs</td>
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<tr>
<td>TOURISM</td>
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<td>HONDURAS</td>
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Description

The principle underpinning this initiative is to achieve climate resilience by implementing good practices, especially those that consider the impacts of climate change in each sector. Good practices can improve entrepreneurial and productive processes, obtain and achieve certifications, and help to achieve financial sustainability.

Best practices need to address every area of tourist business management and operations, to help to guarantee a sustainable activity, reducing possible impacts from climate change without sacrificing product quality and image. This will increase the efficiency of the tourism sector.

The United Nations Global Tourism Councils\(^5\) have practical information and recommendations for sustainable activity in the sector, including good practices for tour operators, accommodation, destinations, and related subsectors. This, together with the UNWTO climate book,\(^6\) could be the basis for developing the good practices.

Honduras already has portal and platforms for sharing information for tourists (Honduras.travel – ProParque, visitacentroamerica.com). CANATURH has an information website for La Ceiba (visitalaceiba.com). A similar platform can be built for SMEs with service guidelines, protocols, teaching modules, and information useful for the service providers.

These manuals would be made available in various formats, including electronic, to facilitate access to producers.

Climate-related impact addressed

The manuals would include practices to ensure the business is run sustainably and according to a changing climate. They would be produced specifically for each sector and contain with information for each condition that is variable and to each tourist region. The manuals can

\(^5\) [http://www.gstcouncil.org/](http://www.gstcouncil.org/)

include practices that address variability and preparation and response to extreme events. Although the monetary return on such manuals is intangible, it could be measured by calculating the increases in productivity and decreases in losses over time.

**Initiative investment and maintenance needs**

The government, international donors, and/or trade associations would have to make the initial investment. Good practices would not only make small producers more resilient; they are also likely to improve the quality of products and services for the tourism sector. This resilience will contribute to more resilient communities. The manuals should include innovations and should be updated after several years. Investment would include research on good practices for each sector, communication tools, printing, and an information platform.

**Examples of good practices**

- Improve information management (product, service, destination, area of interest, ecosystem, etc.) so that tourists understand their rights and responsibilities
- Educate visitors and employees on water conservation, recycling, waste disposal, and other sustainability measures
- Establish sustainable agroforestry programs, organic and/or ecologic agriculture (for agro-tourism destinations)
- Restore and protect ecosystems (for ecotourism destinations)
- Implement green and sustainability actions within the business
- Create programs to involve youth
- Improve the effectiveness water management

**Requirements**

- Graphic designers and communications professionals who can translate technical topics into simple language.
- Financial and budgetary support.
- Collaboration and commitment between sectoral agencies and links with financial institutions so that MSMEs can implement good practices.
- A cost-benefit analysis of each best practice proposed within a climate change context.
- Climate-change expert who ensures that good practices will lead to climate resilience.
- Communication campaigns (workshops, seminars, courses, etc.).
- Monitoring systems that allow agencies to monitor how the manuals are being used.
- Beneficiaries: tourism business, trades, visitors, universities.
- Partners: associations and trade unions, large tour operators, universities, technology centers, governments, and sector-specialized agencies (tourism).
**Actors and financing mechanism for implementation**

This initiative is most likely to be successful if led by government institutions trusted by business and supported by technical agencies and trade associations.

**Expected outcomes and benefits for MSMEs**

- Lower operating costs
- Reduced damage from extreme weather
- Declines in work stoppages and interruptions
- Declines in climate-related damages, interruptions, and cost associated with supply chains and distribution networks
- Increased productivity
- Increased profitability
- More partnerships and alliances
- Increased business formality
5. Alteration of the business environment (restoration or change) and forest protection

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<thead>
<tr>
<th>Potential leading actors</th>
<th>Sector</th>
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<tbody>
<tr>
<td>Local government</td>
<td>TOURISM</td>
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<tr>
<td>Associations and producer cooperatives</td>
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<tr>
<td>Technical agencies and local universities</td>
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<tr>
<td>Location</td>
<td>HONDURAS</td>
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</table>

Description

The purpose of this initiative is to strengthen the resilience of MSMEs by restoring the natural environment or modifying the business environment to provide greater protection and response capacity and reduce risk. In La Ceiba, the tourism sector currently centers almost entirely around its beaches. Future sector plans for tourism product offerings include ecotourism and protected areas. Ensuring the health of the natural ecosystems and providing such services are crucial elements of a successful sector.

Climate-related impact addressed

These initiatives depend on the type of business. They include restoration of ecosystems in upper areas of rivers and stream basins, construction of natural fences for wind protection or soil erosion protection, constructions of dikes in rivers, lakes, and along shorelines, road improvements, and communications upgrades, among others. The efficiency to manage extreme events, long-term climate variability, and current weather variability will depend on the type of alteration proposed.

These initiatives can reduce the impacts related to the interruption of activities (delivery of supplies or certain services), as infrastructure (natural and artificial) would resist such impacts and activities could continue. They are also likely to reduce climate-related operating and capital costs in the medium and long term.

Initiative investment and maintenance needs

These initiatives are related to elements most likely outside of the business (unless the service is being provided within a protected area) and would require approval and collaboration with local authorities and other owners that could be affected by the action. Activities such as restoring ecosystem services are normally community projects supported by governments or NGOs. Schemes in which the community provides the labor and part of the materials and equipment are commonly used.

The initial investment (time, personnel, and money) must be agreed between beneficiaries and
agencies providing support (technical or financial). Maintenance costs and responsibilities need to be established from the start.

**Examples of good practices**

- Restoring the natural vegetation of along shorelines would reduce the risk of coastal erosion and reduce the impact of waves during storm surges for those tourism establishments that are first along the shoreline.
- Shade provision and crop diversification would provide more shade and increase comfort for tourists.
- Slope contouring and site location (e.g., north-facing slopes, higher elevations for coastal resorts) would improve the sustainability of the services.

**Requirements**

- Specialized technical knowledge about the region and the consequences of altering the business surroundings
- Local authorities’ permission and involvement
- Materials and equipment required for alteration
- Maintenance protocols
- Budget for construction and maintenance
- Beneficiaries: producers and communities
- Partners: technical agency (university or specialized agency), local authorities (planning and environmental) and NGOs that implement projects and convene stakeholders.

**Actors and financing mechanism for implementation**

It is unlikely that altering hotel or tourism business environments would be financed by a normal bank, as the benefits are not clear (in monetary terms); thus, a whole community would have to be responsible for the loan. It might be easier for an association to undertake the financing, although the monetary benefits are difficult to calculate for a normal credit line.

Research and technical understanding of how to develop these designs are key and normally can be done by the communities (indigenous knowledge). It would require a technical agency that understands the needs of each sector and region where applied as well as the involvement of local planning and environmental authorities, given that it involves alteration of the natural environment, even when the alteration consists of restoration.
Expected outcomes and benefits for MSMEs

- Less damage from extreme weather
- Reduction in work stoppages and interruptions
- Reduction of climate-related damage, interruptions, and costs associated with supply chains and distribution networks
- Increase in the number of partnerships and alliances
### 6. Access to financial resources and services

#### Potential leading actors

<table>
<thead>
<tr>
<th>National government</th>
<th>TOURISM</th>
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<tr>
<td>Associations and cooperatives</td>
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<td>Financial institutions.</td>
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<td>Large companies.</td>
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#### Sector

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<th>Location</th>
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<tr>
<td>HONDURAS</td>
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#### Description

The principle supporting this initiative is that it will enhance and diversify financial capabilities among MSMEs. Loans will be used to buy materials and equipment. Interest rates will be low or zero if the ProAdapt goal is achieved. Part of the loan will be repaid, and part will be paid back in the form of social responsibility and community projects that would reduce poverty and enhance overall sustainability.

#### Climate-related impact addressed

This initiative will not protect assets or businesses in case of extreme events or climate variability. It will provide resilience to producers by maximizing their time and efforts through better equipment and materials.

#### Initiative investment and maintenance needs

The entire lending scheme needs to be developed. The scheme can be developed between banks, government, and the industries providing the equipment. It is important that the scheme not create more financial stress for the MSME; rather, it should increase MSMEs’ effectiveness and productivity. Investment is also needed in equipment, creating a credit line, and sustainability.

#### Examples of good practices

- Credit
- Microcredit
- Private funds with social impact
- Credit cards

#### Requirements

- Increase capacity within banks to understand the financing needs of MSMEs
- Develop a credit line
- Conduct a credit line climate impact assessment
• Identify payment alternatives that include social and environmental benefits
• Identify financing needs (e.g., equipment and supplies)
• Identify financial institutions willing to provide this service
• Identify firms willing to provide the service
• Establish process monitoring and evaluation to ensure that the scheme is not causing further financial stress to producers
• Beneficiaries: producers, associations, banks, and industry
• Partners: government, banks

**Actors and financing mechanism for implementation**

The main actors are banks, industries providing equipment, producers, associations, and governments. It would be advisable to include an external agency whose responsibility would be to safeguard the interest of the producers. The credit line can be created in coordination with banks and associations.

Financial literacy: This initiative may require remedial work to reduce the informality of some of the producers and MSMEs, specifically the lack of accounting and financial information that would help investors decide whether to invest in a business. As part of the adaptation measures, businesses and producers should be formalized and business practices (e.g., accounting, legal and market information, business plans) introduced to facilitate MSMEs’ access to credit from government or private programs.

**Expected outcomes and benefits for MSMEs**

• Reduction in work stoppages and interruptions
• Increase in the number of new business models
• Increased productivity
• Increased profitability
• More partnerships and alliances
• Increased business formality
7. Multiservice credit card for adaptation

**Potential leading actors**

<table>
<thead>
<tr>
<th>Trade association</th>
<th>Financial institutions</th>
<th>Chambers of commerce.</th>
</tr>
</thead>
</table>

**Sector**

TOURISM

**Location**

HONDURAS

**Description**

The objective of his initiative is to enhance and diversify financial flexibility and access to products through credit for MSMEs. It would allow several small business services to be unified, such as identification, affiliation, credit, access to information, and discounts for supplies (e.g., cleaning products, towels, sheets, food, etc.), training, insurance, and others.

The initiative would provide MSMEs with a personal card. The card can be designed according to the degree of formality of the producer. For example, a basic card for informal producers that are in the process of becoming formal would allow them access to information. A card with access to credit would be for formal producers.

**Climate-related impact addressed**

This initiative will not protect assets or businesses in case of extreme events or climate variability. It will make producers more resilient by providing them with better equipment and materials, more access to information, and a supportive network.

**Initiative investment and maintenance needs**

- The entire card scheme needs to be developed; such a scheme can be developed by banks, the government, and the industries providing the equipment, materials, and training.
- The scheme should be created so as not to create more financial stress on the MSME; rather, it should be a tool that allows it to be more effective and produce more.
- Investment in equipment and creation and sustainability of the credit line.
- It could be implemented through a bank or an association in partnership with a bank that would issue the cards.

**Requirements**

- Develop the credit line
- Credit line climate impact assessment
- Identify payment alternatives that include social, climate, and environmental benefits
- Identify financing needs (equipment and supplies)
• Create an information platform to which the small producers have access as beneficiaries/clients of the card
• Develop a call center that could be managed by an association
• Develop a training module for each sector and issue cards following completion of examinations and issuance of certificates to producers
• Identify financial institutions willing to provide this service
• Identify an industry willing to provide the service
• Conduct process monitoring and evaluation to ensure that this scheme is not causing further financial stress to producers
• Beneficiaries: producers, associations, banks and industry
• Partners: government, banks

**Actors and financing mechanism for implementation**

The main actors are banks, associations, and governments. An external agency that oversees the interests of the sector should also be included.

**Expected outcomes and benefits for MSMEs**

• Reduced operating costs
• Increase in the number of new business models
• Increased productivity
• Increased sales
• Increase in the number of new clients
• More partnerships and alliances
• Increased business formality
8. Early warning systems

**Potential leading actors**
- Government institutions
- Associations and cooperatives
- Technical agencies
- Universities
- Research centers

**Sector**
- TOURISM

**Location**
- HONDURAS

**Description**

The principle of this initiative is that by informing SMBs about potential risks that they face sufficiently in advance, they can take measures to reduce their impact. The early warning system is created for El Niño/La Niña phenomena, landslides, floods, droughts, and other climate-related conditions. Having reliable and accurate weather forecasts can help reduce post-emergency costs, save lives, reduce asset losses, and generate other benefits through optimization of economic production, as was demonstrated in Europe, supporting resilience systems in the long term.

The Honduran Adaptation Fund is working toward the establishment of the first meteorology station based at CURLA in La Ceiba and linked to the Observatorio de Turismo Sostenible y Cambio Climático

**Climate-related impact addressed**

Extreme events.

**Initiative investment and maintenance needs**

Data from stations and a team that collects that information and can interpret it will be required. The equipment will need to be properly maintained. It also requires a communication strategy so the alarm is triggered and communicated appropriately.

**Examples of good practices**

- Rainfall measurements during the wet season to monitor rivers
- Monitoring river levels

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7 http://blogs.worldbank.org/developmenttalk/early-warning-weather-systems-have-very-real-benefits
• Hurricane alerts
• El Niño/La Niña warnings for each specific sector

Requirements

- Climate data and information to develop the early warning procedures
- Understanding the physical conditions of each area
- Identify conditions that would trigger the early warning system
- Protocols for early warning system activation
- Protocols for SMEs once early warning systems have been activated
- Beneficiaries: SMEs and the entire value chain
- Partners: meteorology/oceanography information-gathering centers, government agencies (INETER), large companies in the sector, and NGOs

Actors and financing mechanism for implementation

Meteorology/oceanography information-gathering agencies are normally in charge of issuing early warnings. Funding is normally provided by governments and development agencies.

Expected outcomes and benefits for MSMEs

- Increased number of new business models
- Increased sales
- Increased profitability
- Increased number of new clients
- More partnerships and alliances
9. Improved access to information for MSMEs

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<tr>
<th>Potential leading actors</th>
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<td>National government</td>
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<tr>
<td>Associations and producers’ cooperatives</td>
<td>Location</td>
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<tr>
<td>Technical agencies</td>
<td>HONDURAS</td>
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<tr>
<td>Universities</td>
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<td>Research centers</td>
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<td>Chambers of commerce.</td>
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**Description**

The principle underlying of this initiative is that small producers can improve their decision making if they have access to information relevant to their productive activity. Access to this information should be simple and constantly updated. Information about current weather and forecasts, market behavior, prices, good practice, and sectoral policies would allow producers to plan. Such information is available in real time via the Internet.

Awareness raising: The interviews revealed that most cooperatives, associations, and SMEs lack a comprehensive understanding about the climate risks they face, although they understand that the changing climate is affecting their activities. For this reason, awareness campaigns directed to producers and cooperatives will be created to help them understand the climate risks affecting them, how to deal with the changing climate, and how to assimilate climate information in their businesses and livelihoods.

Marketing strategies: Marketing strategies may enhance climate resilience if businesses are able to improve the marketing strategies for their products or services. An increase in sales would increase business incomes, which would translate into greater investment capacity and returns for the business. This includes information about intellectual/tradable property rights, such as trademarks and geographic indications, which could help to protect and promote the products and processes in the area, providing added value to their production and may increase their incomes and promote sustainable development (Dutfield, 2011). The mission of the Central American Tourism Agency (CATA) is to market destinations in Central America.

**Climate-related impact addressed**

These initiatives will not protect assets or businesses in case of extreme events or climate variability. These initiatives will provide information to producers on topics that influence their businesses, including weather and climate, so that they can plan.

**Initiative investment and maintenance needs**

This initiative requires a large investment to make the information available and understandable to farmers and tourism services providers. The government or an international agency would need to make the investment, which would require building a platform and all
the software and applications for businesses in the sector to use. The initiative also requires data collection and maintenance of that data over time. This can only be achieved with a solid government component and a medium- to long-term program (15-20 years). The program would also include a training mechanism for producers and MSMEs using the platform to maximize its benefits. Finally, the program involves the provision of smart phones or tablets through which producers can access the information.

**Examples of good practices**

- Climate information and weather forecasts: Mobile application to access real-time information about temperature, humidity, and precipitation, updated daily and hourly. Weekly bulletins and early warning systems. For this information to be fully workable, a sound meteorological station network is required, as well as proper management of the data collected through this network.

- Market information: national and international prices of products and potential buyers of their goods and services.

- Credit access information: information on credit terms and conditions available for their sectors, banks that offer these credit lines, and how to access them. Minimal conditions to access credit, such as a self-assessment for producers and ways to improve their eligibility. Information on this line should include climate-related risks.

- Business baseline information template: a template into which businesses can insert information about their business, such as area, assets, income, owner data, productivity, impacts, and others. This information can be useful for the owner, the cooperatives, and the unions.

- Legal requirements for operating a business: hygiene register, industry register, chamber of commerce, environmental compliance, and others.

- Tools portfolio app for each sector: This app would allow producers to have access to information about tools and equipment that could enhance their productivity. It could be developed or funded by the industry offering these tools and could be accompanied by information on credit lines.

- Neighbors’ crowdfunding and networking: information about ideas that originate in the community and that require community funding. Examples include open alternative means of transportation, access to community funds, joint efforts to rent a truck so that everyone can send their products to market, or the use of a community tractor. This initiative would require a platform and a protocol that is built and agreed upon with the community.

**Requirements**

- A financing strategy that supports the development of the platform, data management, maintenance, and information delivery
- Technical support to maximize users’ benefits from this information
- Technical team to build the platform, including a web developer, an application developer for each type of information, a sector expert, and a climate expert
• Dissemination campaign: courses, seminars, and others
• Ensure that end-users have access to the Internet
• Financing strategy for users to have access to equipment, information, and platform
• Beneficiaries: producers, associations, and agricultural agencies
• Partners: associations, governments, universities, large retailers

**Actors and financing mechanism for implementation**

This initiative needs a strong commitment from governments and producers, who will be the beneficiaries of the technology. Most of the investment would fall on government institutions; producers would only need to purchase their smartphones or tablets.

**Expected outcomes and benefits for MSMEs**

• Reduced operating costs
• Reduced damage from extreme weather
• Reduction in work stoppages and interruptions
• Reduction in climate-related damage, interruptions, and costs associated with supply chains and distribution networks
• Increased productivity
• Increased sales
• Increase in the number of new clients
• More partnerships and alliances
• Increased business formality
10. Efficient use and management of water at the tourism site

**Potential leading actors**

<table>
<thead>
<tr>
<th>Associations and cooperatives</th>
<th>TOURISM</th>
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<tbody>
<tr>
<td>Technical water management agencies</td>
<td>TOURISM</td>
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<tr>
<td>Local agencies, technical agencies, and NGOs</td>
<td>TOURISM</td>
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<tr>
<td>MSMEs</td>
<td>TOURISM</td>
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</table>

**Location**

Honduras

**Description**

Water scarcity during the dry season and excess water during the wet season have proven to be challenges for small business. Improving resource management would increase the resilience of MSMEs. The aim of these initiatives is to provide MSMEs with water management solutions to access and manage water (e.g., irrigation systems, drainages, water collection mechanisms), including residual waters from their operations.

**Climate-related impact addressed**

Water management initiatives would ensure water provision during the dry season and reduce the impacts of extreme rains during the wet season. For extreme events, such as hurricanes, landslides, and flash floods, these initiatives might not be suitable. They are meant to address variations in the water supply.

**Initiative investment and maintenance needs**

Infrastructure and ecosystem restoration to manage water requires an initial investment. Any initiative that is implemented at the business level would have to be financed by the owner, while initiatives that impact the community or the region are financed by local or national authorities through taxes and loans. All initiatives would require maintenance, including materials, equipment, protocols, and guidelines, to work properly. To implement a successful strategy, each sector should be considered separately, along with the diverse geography of the region (topography, land formations, landscape, ecosystems, land use changes, biodiversity, other users, other interests).

**Examples of good practices**

- Improved drainage systems
- Irrigation systems
- Household/business water recycle (gardening, personal hygiene, etc.)
- Reservoirs
- Rainwater maximization
- Wetland and forest restoration upstream and along canals
Requirements

- Identify the most efficient and useful water management tool and strategy for each business and region, by sector
- Designs according to service provided
- Equipment that gauges the amount of water available for the sector per period of time
- Technical assistance
- Credit line designed to implement the initiative proposed
- Beneficiaries: businesses, associations, region of implementation
- Partners: associations, water management companies or entities, environmental agencies, land planning agencies, government, banks

Actors and financing mechanism for implementation

Depending on the scale of the intervention, the actors are local agencies, technical water management agencies, and small producers and associations. For large-scale projects governments get involved.

Expected outcomes and benefits for MSMEs

- Reduction in operating costs
- Reduction of damage from extreme weather
- Fewer work stoppages and interruptions
- Increased productivity
11. Tourism business climate-resistant infrastructure

<table>
<thead>
<tr>
<th>Potential leading actors</th>
<th>Sector</th>
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<tbody>
<tr>
<td>Associations and cooperatives</td>
<td>TOURISM</td>
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<tr>
<td>Technical agencies and universities</td>
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<tr>
<td>Research centers</td>
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<td>MSMEs</td>
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<thead>
<tr>
<th>Location</th>
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<tbody>
<tr>
<td>HONDURAS</td>
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</table>

**Description**

The aim of these initiatives is to ensure that MSMEs can function and to enhance protection by reducing direct exposure to hazards and reducing the impact of climate change on assets and services.

**Climate-related impact addressed**

These types of initiatives are more effective for extreme events such as floods, storm surges, droughts, extreme temperatures, and heavy rainfall. They are less effective against climate variability related to change in precipitation or temperature patterns, coastal erosion, or indirect impacts of climate-related events.

Maintenance of infrastructure that has deteriorated could also be included. If climate and weather conditions change, infrastructure maintenance might be required more frequently to avoid accidents.

These initiatives could reduce the impacts related to service interruptions, as the infrastructure would be better able to resist such impacts, and activities could continue. In the tourism sector, depending on the service provided, these initiatives could protect the assets of the business but not always the service provided.

**Initiative investment and maintenance needs**

These initiatives would require an initial expenditure by the MSMEs, but would reduce costs related to disruption of operations and increase the quality of the products and services provided. An assessment of the savings, costs, and revenue for each SME would be required.

**Examples of good practices**

- Proper maintenance of tourism infrastructure located in at-risk areas to ensure that tourists and hotel staff are not injured by faulty infrastructure. Particularly in coastal areas and in tropical rain forests, infrastructure is severely affected by the weather.
- Using climate designs and climate materials that consider current weather conditions and future changes can help improve drying facilities and obtain better results.
### Requirements

- Specialized technical knowledge about the infrastructure to be built and maintained.
- Building materials and equipment that are environmentally friendly and energy and water efficient.
- An infrastructure maintenance protocol (including training on the use of the equipment)
- Budget for building maintenance and equipment
- Financing mechanism appropriate for each sector. If it is an association, financing should consider the characteristics of each association.
- Beneficiaries: businesses or associations, depending on the scale of the initiative
- Partners: technical assistance agency, banks. When working with associations, large retailers could also be partners.

### Actors and financing mechanism for implementation

Climate-proof business infrastructure can be achieved with normal credit. The business owner, with technical support from an external advisory agency, would lead the research and provide technical understanding on how to develop these designs. Normally, the producer could do this using indigenous knowledge, but a technical agency that understands the needs of each sector and region would add value.

### Expected outcomes and benefits for MSMEs

- Reduction of damage from extreme weather
- Reduction in work stoppages and interruptions
- Reduction in climate-related damages, interruptions, and costs associated with supply chains and distribution networks
- Increased profitability
- More partnerships and alliances
12. Climate monitoring systems

Potential leading actors

<table>
<thead>
<tr>
<th>National government</th>
<th>Sector</th>
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</thead>
<tbody>
<tr>
<td>Local government</td>
<td>TOURISM</td>
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<tr>
<td>Technical agencies</td>
<td></td>
</tr>
<tr>
<td>Universities and research centers</td>
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Location

| HONDURAS |

Description

This initiative arises from the need for climate information that supports decision making. Reliable and constant climate information is a primary need, as is strengthening existing information providers and creating new ones. It is also essential that MSMEs and stakeholders across the value chain understand the climate risks they are facing. Production of weekly, monthly, and yearly bulletins, early warning systems, and capacity building can be useful products in the medium term. This initiative is applicable to all activities and sectors.

The Sustainable Tourism and Climate Change Observatory (Observatorio de Turismo Sostenible y Cambio Climático), based at the Universidad del Litoral Atlántico (CURLA), could make use of the climate data and interpret it for businesses and tourists. Currently, the Observatory is not collecting or analyzing climate data; however, it may incorporate such activities into its work.

Climate-related impact addressed

Climate variability is addressed over the medium and long term. Information for preparing for extreme events could be more detailed than what is available at the moment. However, this initiative is a means to understand local, regional, and national climate and weather patterns and variability.

Initiative investment and maintenance needs

Strengthening information includes the establishment of hydro-meteorological stations and oceanographic stations across the country, including the sea. Such equipment needs to be maintained and replaced when needed. It also needs a technical team that can collect and interpret the data to translate it into information useful for decision making by business and government.

This technology requires funding that may be nonrefundable and technical support. It is directed to SMEs, cooperatives, and local governments. Ideally, in the short to medium term, this network of weather stations could be linked to the national meteorological network,
provided that the data are compatible.

Environmental and oceanographic conditions, such as temperature, precipitation, winds, humidity, sea level, flow, and current speeds, among others, should be measured and monitored. It is also important to ensure that equipment is maintained and calibrated and that data measurements are constant in time and space. The latter include historical measures at the same point.

Ideally, the climate station network should be integrated into the national official meteorology and oceanography agencies. For this to occur, its characteristics should be known beforehand to ensure that the data collected by the project’s monitoring system are compatible with the national system.

For small business and producers, investment would be on accessing the information provided by the system, through a platform, bulletin, or newsletter that charges a reasonable fee for membership and access. Such a fee should be set in accordance with the client’s capacity to pay.

**Examples of good practices**

- Climate information network on coffee in Chiapas
- Centro de Investigaciones Cambio Climático – Guatemala

**Requirements**

- Weather information infrastructure, such as climate stations
- Equipment (installation and maintenance)
- Equipment management capacity building
- Data collection, analysis, and interpretation (technical climate team)
- Standardized procedures for data collection and interpretation
- Information interpretation for each sector (communications team)
- Budget for equipment, maintenance, and sustainability of the technical teams
- Beneficiaries: small, medium, and large business in all sectors, national meteorology and oceanographic agencies, local and national planning agencies and related institutions
- Partners: large producers in the sectors, trade unions, chambers of commerce, associations, national meteorological and oceanographic agencies.

**Actors and financing mechanism for implementation**

Several stakeholders from the national government and local agencies along the entire value chain could be involved. A network of associations and unions of particular sectors, which ideally would be linked to the national climate information system, would allow the private sector to control and use the data. The link to official providers of climate information should
be made from the start to ensure compatibility of equipment and data. The private sector
could provide partial financing of the oceanography and climate agencies. The project could
receive advice from COPECO and could partner with the Central American Hydraulic Resources
Committee (Comité Regional de Recursos Hidráulicos del Istmo Centroamericano, or CRHH-
SICA), which is already working on developing regional scenarios with information provided by
the countries of the region.

Small producers could be both beneficiaries and collaborators by lending equipment from
their farms and businesses and ensuring that they are properly managed and maintained.

**Expected outcomes and benefits for MSMEs**

- Lower operating costs
- Fewer work stoppages and interruptions
- Reduction in climate-related damage, interruptions, and costs associated with supply
  chains and distribution networks
- More partnerships and alliances
### 13. Climate insurance

<table>
<thead>
<tr>
<th>Potential leading actors</th>
<th>Sector</th>
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<tbody>
<tr>
<td>Financial institutions</td>
<td>TOURISM</td>
</tr>
<tr>
<td>Chambers of commerce</td>
<td>Location</td>
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<tr>
<td>Insurance companies</td>
<td>HONDURAS</td>
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</tbody>
</table>

#### Description

Climate-smart agricultural components are considered a basic principle for index-based insurance. The insurance payment is generated after a threshold of climate conditions identified as covered by the insurance has been crossed or after a climate-related natural disaster has occurred. For the former, the threshold will be different for each sector. This insurance only works with locally updated climate information and requires good research of the activities during the design of the insurance.

#### Climate-related impact addressed

Insurance does not reduce the risk of impacts of extreme climate events or climate variability; rather, it helps businesses rebuild and reduce their losses. Insurance is considered a short-term response than by itself does not provide resilience to climate change. If a particular area is susceptible to storms, floods, or droughts, insurance companies may decide not to cover that risk in that area.

#### Initiative investment and maintenance needs

Specific insurance policies need to be produced for each sector and still be profitable enough for companies to design and market. Climate information is required to develop the product, as is a sound understanding of the impacts of climate and environmental conditions by sector and region. The product should be linked to a climate information platform and a technical agency that can communicate climate risk to both insurance companies and end users. Software that organizes that information needed for insurance providers or banks to make decisions will be required.

#### Examples of good practices

- El Niño insurance in Peru (promoted by GIZ), which is paid out when the sea temperature changes, before fishermen start having losses and before they reach critical points.
- Natural disaster insurance
- Insurance covering crop losses due to drought
- Packages that publicize products and services in high-risk areas
**Requirements**

- Technical viability (a product that SMEs can afford and that responds to climate extremes and variability and their impacts)
- Clear protocols and guidelines on risks and responsibilities (shared and individual)
- Product financial sustainability (re-insurance, private-public partnerships)
- Affordability by producers and businesses
- Beneficiaries: producers, insurance companies, technical agencies.
- Partners: meteorological agencies, insurance companies, banks, technical agencies, government.

**Actors and financing mechanism for implementation**

Insurance companies, banks, and technical agencies. The product has to be financially sustainable; thus, it should be developed by insurance companies with technical support from experts (agencies or individuals) in each sector. It can be sold as insurance per se or as a credit line from a commercial bank. The product has to be easy for small producers to understand and accessible to them. Small producers would purchase the insurance. MSMEs can obtain insurance through credit lines or independently. Ideally, the insurance policies developed would follow good practices (social responsibility, environmental compliance, financing, etc.).

**Expected outcomes and benefits for MSMEs**

- Less climate-related damage, fewer interruptions, and lower costs associated with supply chains and distribution networks
- Increased business formality
Annex 4. Fact Sheet on Climate Change and Tourism SMEs

This fact sheet is a tool for the overall project communication strategy. It presents a summary of the analysis presented through the project. In this case, however, it does not present such a summary; rather, it is included in this report as an example of a communication tool that could be used to create awareness and to promote the project.
Annex 5. Summary and Action Plan

The following graphics synthesize suggested steps derived from this CN for the Honduran tourism sector. They were originally produced as a PowerPoint presentation, aiming to support the Washington ProAdapt team and provide guidance on project development and on communicating the idea to local counterparts. These graphics are not for distribution.

Figure 1 describes the process, the stakeholders involved, the beneficiaries, the activities, and the financing mechanisms for implementation. The subsequent figures expand on Figure 1, presenting more detailed information on the activities and steps involved in implementation.

Figure 1. Summary of the Project and Action Plan

1. Project objective
2. List of beneficiaries
3. Potential ProAdapt partners in Honduras
4. Steps for implementing the project. Enabling communication among stakeholders identified (4.1), parallel to process to design each identified activity (4.2).
5. Identification of financing mechanism for project implementation. Identification of mechanisms to enable MSME to access ProAdapt funds.

Figure 2. Expands on point 4.1 “Enabling communication among all stakeholders identified.” To enable such communication, it is important to determine what each institution can contribute. Not all stakeholders need to be included in the project; however, it is important to know what capacity exists in the country.

Figures 3-6. Expand on point 4.2 “Activity process implementation design.” There are four lines of action identified to fulfill the proposed objectives. A design process has been detailed for each action, including an aim, climate-related impacts addressed by its implementation, potential ProAdapt partners for implementation, obstacles, detailed activities within the process, and notes.
Figure 1. Summary of the Project and Action Plan

1. Objective:
Set the basis for a successful tourism destination that contributes to awareness and climate-resilient landscape by strengthening that climate resilience of SMEs that provide tourism services and products in La Ceiba, by:
• creating and promoting good practices within the sector
• strengthening MSMEs and associations
• improving information and access to information for decision makers
• including climate adaptation strategies in initiatives already underway

2. Beneficiaries:
• Small business
• CANATURH- La Ceiba
• Business associations
• Protected areas
• NGOs
• Research centers and universities: CREDIA, CURLA.
• Government associations
• Local MIFs and banks
• Local communities

3. Identified partners for the different phases of the project/activities:
• ProParque, Solimar, Mundo Maya, FUCSA, Fundación Cayos Cochinos, FUPNAPIB ➔ Training, capacity building, project management, expertise in developing the tourism sector, good practices. Could advise the project.
• FFI, MOCAPHL, CATIE ➔ protected areas management
• CANATURH, CREDIA ➔ Training, capacity building, project management
• CATA ➔ destination marketing
• REHNAP, RECOTURH ➔ tourism enterprises, associations
• Banks ➔ financing
• Observatorio Turismo Sostenible y Cambio Climático (OTSCC) ➔ research and monitoring MSMEs in the sector.

4. The HOW - Design and Implementation process:
1. Enabling communication among all stakeholders
2. Design process for each activity (slides 3-6)
   • What needs to change?
   • Who needs to lead the change?
   • Define financial possibilities
   • Design cooperation possibilities (based on point 1) for funding.

4.2. Projects or activities:
1. Create and promote good practices for MSMEs providing services:
   • Build management capacity within the business (customer service, accounting, marketing, supply management, etc.)
   • Train all MSMEs on services and products that La Ceiba can offer
   • Implement good practices for water management
   • Implement good environmental practices
2. Strengthen MSMEs’ infrastructure capacity
   • Climate-proof products and services
   • Reduce risk of damage due to climate-related events
3. Strengthen the capacity of associations
   • Improve networks and cooperation between associates
   • Improve information management and distribution among associates
   • Improve regional environment/ecosystems’ understanding and management
   • Conduct climate-change vulnerability assessment (all services and products offered at La Ceiba)
   • Provide access to training
4. Improve access to climate information
   • Set up networks
   • Collect, monitor, and transform climate data
   • Establish information-sharing mechanisms
5. Climate-proof new initiatives in the tourism sector

5. Financing mechanism:
• Grants
• Loans to SMEs and associations
• Membership fees
• Private investment fund
• Credit lines
4.1 Enabling communication among all stakeholders identified

- Identify what everyone brings to the table

**Stakeholders involved on tourism provision services and products (micro, small and medium) resilience to climate change La Ceiba, Honduras**

- **ProAdapt: Project Funding**
- **Micro and small business: land, labor, services, products**
- **FOMIN National Office: Project coordination**
- **Private sector (CATA, solimar, Fundacion Mundo Maya, REHNAP, Miramar Tour, Honduras Amazing Travel) Destination marketing**
- **Academia and Research research centres: CREDIA, CURLA, Vulnerability assessments students to visiting SMEs Training Observatorio Turismo Sostenible y Cambio Climático (OTSCC): statistics and information**
- **Cooperation Agencies (USAID): Strengthening associations capacity, training, expertise on specialized topics (finance, climate, sales, destination management)**
- **NGOs (FFI), MOCAPH: Protected areas management, communities trust, regional expertise**
- **Associations RECOTURH REHNAP, CANATURH, MOCAPH, FUCSA, F. Cayos Cochinos, FUPNAPIB. Access to MSMEs, capacity to bring MSMEs together CANATURH in particular knowledge of the sector**
- **Government Agencies: IHT Policies and legislation, understanding of policies and legislation, capacity to bring stakeholders together?, regional and national information (climate, tourism, protected areas, data)**
- **Banks and MIFs (BCIE, FICOHSA) Capacity to manage the part of the fund that is going to be awarded as credits/loans. Design the credits**
4.1 Improve best practices in the sector
- Build managing capacity within the business (customer service, accountancy, marketing, supply management, etc.)
- Train all MSMEs on the services and products La Ceba can offer
- Good practices for water management
- Good environmental practices

Aim: to provide business with more tools so their readiness to withstand changing climate is improved by strengthening their management capacity

Impact addressed: Direct impacts and indirect impacts

What needs to change: Currently small business are being affected by climate extremes and some sea level rise and saline intrusion. The tourism sector providers are not integrated, don’t have an understanding of good environmental, service or financial practices. By providing them with tools, alternatives, knowledge about the location where they provide their business, the impacts of CC and SLR and of good practices in the sector it is assumed that SMEs’ climate resilience will increase.

Define a target group. Identify MSMEs that are willing to participate

Define training team

Design training modules:
- Business management which includes all aspects of the business to be productive (finances, sales, marketing, water management, environment, importance of the destination)
- Products and service mapping and points of interest
- Improve (if possible) the service/product offered
- Infrastructure maintenance
- Climate influence on their activity and impacts of CC

Design includes teaching format and materials

Communication/Promoting strategy for the training modules in which benefits are clear

Identify the best format for information sharing (internet, bulleting, booklets) post training

Define other benefits of the full training and how they can be implemented:
- Certificate for access to loans
- Discounts on equipment, supplies
- Social recognition, enterprises awards
- Ensured prices by some buyers

Identify a mechanism through which MSMEs can assist to training

Define a financial mechanism that allows this activity to be sustainable and reaches many MSMEs:
- Small fee charge to participants
- Grants from the private sector
- Grants from government
- Transport and social events organize by cooperatives and associations, or by NGOs

Define role of SMEs that have been trained within their community, association, etc.

Notes:
- Access to loans by both Associations and SMEs could be subject to this type of training. For that reason the training has to be designed in a simple way and at the same time ensuring that it is providing that knowledge/tools farmers have not had access to.
- MSMEs that have gone through this training and that apply the learning could have preferable rates in loans, or at equipment stores, for example etc.
- Different types of benefits can be identified between partners and according to what each partner capacity to invest.
- The key aspects in those activities are that design of the tools and capacity to influence the MSMEs so they implement the learnings. Create the synergies among institutions involved so that farmers do see benefits (apart from learning) on attending to this capacity.
4.2. Strengthen infrastructure capacity:
- Climate proof product/service
- Reduce risk of damage for climate related events

Aim: To promote infrastructure designs/alterations within the tourism MSMEs services and products that decrease the risk of impact of extreme events and climate variability in the sector.

Current climate or SLE impacts: excessive rain, landslides, floods, coastal erosion.

What needs to change: By providing MSMEs in the sector with financial tools and technical assistance to improve the service or product infrastructure it is assumed the costs related with extreme events and climate variability can be decreased.

- Identify in the area of the project implementation which are the most common climate related impacts
- Risks, MSMEs, topography, rivers, stakeholders, communities, ecosystems, products and services mapping exercise
- Create an ideal tourism product/service according to those already analyzed/proposed in the area of interest with the ideal type of infrastructure
- Within such infrastructure improvement define: materials, costs and construction timeline
- Define a credit line for MSMEs to implement the changes, it might include: an insurance, delayed payments, long term, interest according to results

- Involve MSMEs, understand their building practices, understand the product/services they are offering
- Research into MSMEs characteristics, location and materials, with respect to the hazard (river, streams, hills, sea), drainage conditions, soil condition etc.
- The same with routes and areas of interest, including archeological sites and protected areas
- Define what would be the most efficient infrastructure alteration to protect and make more resilient the service/product offered
- Define a communication strategy so MSMEs have access to information about the improvement and how to achieve it. Including financial
- Identify what would be the best implementation strategy (intra MSMEs support, students helping, technical agencies) etc

Notes:
- Perhaps the credit line designed should have an imbibed hazards risk assessment, with the location of hazards at the local level. It is expensive to do as Honduras does not have such detailed information, however it would be easy to build a map with SMEs, products and services location and that information can be crossed with local hazard maps, and with forests maps.
- Access to loans by both Associations and MSMEs could be subject to this training about the improved infrastructure and about financial management.

The key aspects in this activity are understanding how climate and SLR is impacting the business, within the selected area and identifying what are the best engineering and designs to reduce the risks (design, materials, equipment, etc). Once those activities have been implemented, the third key issue is designing a credit mechanism that is affordable for farmers and/or associations.
4.3. Strengthen Associations capacity
- Training (product management)
- Improving networks and cooperation between associates
- Improving information management and distribution among associates
- Improving regional ecosystems understanding and management - Vulnerability assessment to CC (all services and products offered)
- Access to Training EWS (diseases, markets, trends)

Aim 1: to provide associations with more tools so they can support better their associates in managing their business, and on providing them with information related to the sector: prices, markets, national policies, business management and administration, equipment, climate etc.

Aim 2: to enhance local strategies supported by associations that aim to protect or restore natural forests and natural ecosystems. These ecosystems and natural protected areas are the baseline of La Ceiba as a tourist destination.

What needs to change: Most of the actions that will create a more resilient sector cannot be achieved by the MSMEs alone, are needed to be think as beneficial for all the sector. Strengthening associations actions towards reforestation and ecosystems recuperation, might contribute to the permanence of such systems that are the baseline for tourism.

Select which services/products from those already defined by FOMIN is interesting to work with

Design Association strengthening modules:
- Accountancy
- Service management which includes all aspects of the MSME to be productive (finances, sales, marketing, water management, environment, customer service)
- Service/product management
- Climate and Sea Level Influence on activity
- Watershed and Water Management practices, ecosystems protection and restoration
- Customer service
- Destination importance and products offered ... This should include design and implementation

Identify the best format for information sharing (Internet, bulletin, booklets, gatherings) post training

Define a communication mechanism and a strategy that ensures all associates inclusion:
- What the association can offer
- How is the association/cooperative built
- What are the benefits for their associates
- How is the information going to be shared
- Are all associates going to be trained or a few and then they pass the information on?

Define a financial strategy for the activity:
- Associates paying a fee
- Private sector grants
- Loans to associations for improved infrastructure

Notes:
- Areas in which associations can be stronger: Watershed and Water Management (waste management, reforestation, water management), Improved (climate proofed) communal products (any activities in PAs, accommodation along the shoreline, transport, etc.)

- The key aspects in this activity is to ensure that associations and cooperatives are transparent and inclusive and that all the benefits and training is not kept by a few and that the associations ensure to invest a good proportion of their revenue on ecosystems protection and maintenance and other activities that ensure services provision in the area.
4.4 Improving access to climate information
- setting up networks
- climate data collection, monitoring and transforming
- information sharing mechanisms
- EWS

**Aim:** to provide the sector with better climate information for decision making

**Impact addressed:** Direct impacts and indirect impacts

**What needs to change:** Currently there are no working meteorological or oceanographic stations at La Ceiba. A network of stations would allow at the long term to understand better the local climate and how local climate variability is affecting the region and that in turn would help small businesses and other actors along the chain to make better decisions across the sector value chain.

Identify the best locations where to set the stations, and how many are needed, including oceanography stations

Prepare a budget and a management protocol per station, including handlers responsibilities. It can be in a farm for example but clear protocols need to be set

Define a financial strategy for the activity:
- grant/government funding for equipment and equipment maintenance
- private sector buys the transformed data
- small fee from farmers to access to information....

Develop and create communication and implementation strategy for emergency and evacuation plans in case of natural disasters for all products and services in the region

Define the type of climate/oceanography data that would be relevant for better decision making at across the entire cocoa chain

With the relevant authority SMN identify how such stations are going to be managed and maintained and what are the protocols to collect data

Define the agency that will transform the climate data into useful information for the sector

Design climate information sharing mechanism that reaches all the sector. It can be through monthly bulletins, platform, radio, tv etc. It should also consider early warning systems

Define protocols for Early Warning Systems for floods, droughts and landslides

Design training modules so users across the sector understand how to interpret it for their business (similar to activity 1)

**Notes:**
- The key aspects in this activity are to ensure that stations are kept in the same place and adequately maintained, that the data are collected following defined protocols, that the system can be linked with the national met system and that in the long term the stations will continue working and that the data is being transformed for the end users.
- The information sharing mechanism might require that some users are trained on understanding or on interpreting the information that is being given to them so they can prepare better and take more informed decisions.
4.5 Including climate adaptation strategies in tourism products under development:

**What needs to change:** There are 6 tourism products that are being developed at La Ceiba. At least 4 of such products depend directly on the availability of good beaches and natural ecosystems which in turn could be severely impacted by climate change, particularly by sea level rise. There does not seem to exist a climate vulnerability assessment for the region or within the products developed an assessment of the risks these products could be facing. A grounded VA will allow local authorities, tourism authorities and associations to understand their risks and take action to ensure products sustainability in the long term.

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<tr>
<th>Action</th>
<th>Description</th>
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<tbody>
<tr>
<td>Produce tourism service and products vulnerability assessment, linked to the local vulnerability assessment.</td>
<td>Identify and mapping of key stakeholders and decision makers in the region.</td>
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<tr>
<td>Identification of punctual actions that diminish current vulnerability without increasing future risk. i.e address transport, communication, drainage issues.</td>
<td>Address the challenges identified in La Ceiba’s Master Plan.</td>
</tr>
<tr>
<td>Design emergency plans and evacuation plans for each product/service.</td>
<td>Design a strategy that ensures that all policies related to monitor communities’ health (dengue, water prone diseases, etc.), freshwater availability and distribution, sewage and drainage management, natural ecosystems management and protected areas, are integrated, adequate, in place and implemented.</td>
</tr>
<tr>
<td>Design climate information sharing mechanism that reaches all the sector. It can be through monthly bulletins, platform, radio, tv etc. It should also consider early warning systems.</td>
<td>Define protocols for Early Warning Systems for natural disasters involving MSMTs.</td>
</tr>
<tr>
<td>Design training modules so users across the sector understand how to interpret it for their business (similar to activity 1).</td>
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**Notes:**
- The key aspect in this activity is that the vulnerability assessments are produced for the entire region and for each specific product that is being developed. All risks should be considered. Such assessments should reflect the risks as well as the vulnerability drivers.
- Lack of climate and environmental data for the region can be overcome by using expert knowledge.
- The vulnerability assessment on its own won’t increase the sector’s resilience. It is very important to strengthen the entire sector and in that process ensure that the actions considered to improve the sector are increasing climate resilience and not reducing it or transferring risks to other areas.
Annex 6. Structure of the Tourism Competitiveness Monitor (CM)

**PCI - Price competitiveness indicators**
- Hotel and restaurant prices
- Prices of tourist goods and services (souvenirs, etc.)
- Purchasing power parity

**HTI – human tourism indicators**
- Tourism participation index
- Tourism impact index

**IDI – infrastructure development indicators**
- Road index
- Railroad network
- Airlines and telecommunication system quality
- Availability of hygiene infrastructure
- Quality of drinking water

**EERI – ecology (environment) related indicators**
- Population density
- Population density
- Carbon dioxide emission
- Ratified international agreements in the field of environmental policy

**TAI – technological advancement indicators**
- Internet index
- Phone index
- Mobile phone index
- High-tech export

**HRI – human resource indicators**
- Population
- Education index

**MOI – market openness indicators**
- sa index
- Tourism and trade openness degree
- Taxes on international trade

**SDI – social development indicators**
- Social development index
- Newspapers
- Internet cafes
- TV sets
For more information
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