Call for submission on adaptation actions and plans that could enhance economic diversification and have mitigation co-benefits[1]

We thank you in advance for filling out this template with concise, evidence-based information and for referencing all relevant sources. There are several sections in the template: please fill the sections that are relevant to the work of your government or organization. As you will see on the last page of the document, more detailed information on case studies, tools/methods and other knowledge resources for dissemination through the Adaptation Knowledge Portal is welcome, but optional.

Name of the organization or entity:

Caribbean Natural Resources Institute (CANARI)

www.canari.org

Type of organization:

Please choose as appropriate:

- ☐ Local government/ municipal authority
- ☐ Intergovernmental organization (IGO)
- ☐ National/public entity
- ☒ Non-governmental organization (NGO)
- ☐ Private sector
- ☐ Regional center/network/initiative
- ☐ Research institution
- ☐ UN and affiliated organization
- ☐ University/education/training organization

Scale of operation:

- ☐ Global
- ☐ Local
- ☐ National
- ☒ Regional
- ☐ Subregional
- ☐ Transboundary

City(ies)/Country(ies)/Region/s of operation (if appropriate):

Trinidad and Tobago – Caribbean region

Description of relevant actions/plans or research:

Please describe the actions or plans that your entity has implemented. In case your entity carried out research on such actions/plans, please describe them.

CANARI implemented the project *Building climate-resilient rural enterprises in Trinidad and Tobago* in collaboration with the Brasso Seco Paria Tourism Action Committee and the Brasso Seco Morne La Croix Farmers' Association in north Trinidad from 2016-2017. The project was funded by the United Nations Development Programme (UNDP) Global Environment Facility Small Grants Programme (GEF-SGP) in Trinidad and Tobago and was worth US $50,000.

The aim of the project was to 'climate proof' natural resource-based rural enterprises to build resilience to climate change and related natural hazards. The specific objectives were to:

[1] FCCC/SBSTA/2016/2, paragraph 15 (d)

1. build understanding of stakeholders in at least two enterprises in the pilot community about key climate change issues and natural hazards and how these affect rural livelihoods through effectively communicating relevant scientific information to key stakeholders and distilling local knowledge in the pilot community;
2. build the capacity of stakeholders in at least two enterprises in the pilot community to develop and implement mechanisms for resilience to climate change and natural hazards into their businesses;
3. test and document a methodology for increasing the resilience of livelihoods in rural communities in Trinidad and Tobago to the impacts of climate variability and climate change and natural hazards and communicate to key stakeholders in Trinidad and Tobago and the Caribbean islands.

The project was implemented in two phases. In the first phase, workshops to raise awareness of climate change, its local impacts and vulnerabilities were undertaken with the Brasso Seco community. The two target community groups then each selected a natural resource-based enterprise as the focus for the project. The enterprises chosen were cocoa products, including chocolate and cocoa butter, by the Brasso Seco Paria Tourism Action Committee and honey production by the Brasso Seco Morne La Croix Farmers Association. With a business expert as a mentor, the two community groups identified the vulnerabilities of different aspects of their enterprises to climate change using value chain analysis and determined cost-effective solutions to adapt and build resilience in their enterprises.

In the second phase, each community group then implemented at least one of the identified solutions to adapt to climate change with the support of their business mentor and a small grant. Each community group was also mentored in project development, management and reporting on grants as part of this process to build their capacity.

Description of relevant tools/methods:

Please describe the tools and/or methods that have been developed and/or used.

Value chain analysis was piloted as a methodology to assess the vulnerabilities of natural resource-based rural enterprises to climate change and identify appropriate strategies for adaptation and building resilience. A value chain represents all the processes involved in an enterprise. It shows the steps from getting the raw materials for the products/services to developing the products/services through to the sale to the final consumer. Analysing the value chain is one way that helps the entrepreneur to deliver goods and services at the lowest possible cost. By mapping all the processes in the enterprise, it can also help to identify vulnerabilities to climate change.

With a business expert as a mentor, the two community groups constructed value chains for their enterprises focused on cocoa products and honey production. They identified greater rainfall variability, and more frequent and extreme drought conditions, as the most significant climate change risks to both enterprises in terms of their ability to collect raw materials to reliably produce high quality cocoa products and honey. Each group was then able to identify a number of potential adaptation strategies to address drought and 'climate proof'. In the case of the cocoa enterprise, planting drought-resistant species to ensure that there is a cocoa product when water is scarce as well as planting other types of drought-resistant crops to ensure income generation where there is no cocoa. In the case of the honey enterprise, re-planting native, drought-resistant plants that continue to produce flowers in times of water scarcity so that honey production is assured. The potential for installing a rainwater harvesting system was also identified to use to water flowering plants and for the honey bottling process to ensure phytosanitary conditions.

Additionally, using the value chain analysis, the Brasso Seco Paria Tourism Action Committee highlighted the need to install a solar electric system to support production of chocolate, cocoa butter and other cocoa products. There was no electric supply at their cocoa production house, and there were concerns that grid-produced electricity will be unstable in high winds and intense rainfall events due to climate change. A solar electric system will ensure that there is reliable off-grid electricity available.

Key outcomes of the actions/plans undertaken:

Please provide information regarding the outcomes of the actions/plans described above, and also provide qualitative assessment and/or quantitative data to substantiate the information, if applicable

- Enhanced awareness and understanding of climate change, its impacts and the vulnerabilities of natural resource-based enterprises and livelihoods among at least 20 community members
- Capacity built among the two target community groups to identify vulnerabilities to climate change and potential adaptation strategies, and to take action to climate proof their rural enterprises
- Value chain analysis piloted successfully with two community groups and documented as a methodology for a systematic and comprehensive assessment of the vulnerability of rural enterprises to climate change
- Innovative practices and technologies identified based on local knowledge and applied to enable adaptation to climate change, including identifying drought-resistant cocoa species for cultivation and drought-resistant native plants for honey production and installing rainwater harvesting systems
- Approximately 6 hectares of land for cocoa cultivation under improved land use and contributing to climate proofing community agricultural practices in addition to providing mitigation co-benefits as these long term tree crops can act as carbon sinks

Description of lessons learned and good practices identified:

Please consider the following points when describing lessons learned and good practices: (a) effectiveness/impacts of the actions/plans (including measurability of the impacts), (b) efficiency in the use of resources, (c) replicability (e.g. in different locations, at different scales), (d) sustainability (i.e. meeting the current economic, social and environmental needs without compromising the ability to address future needs).

- Mentoring is a highly effective approach to build the capacity of rural communities and entrepreneurs to assess vulnerabilities and take action on climate change, but requires a relationship of trust between the mentor and community group or entrepreneur.
- Value chain analysis is an effective tool for a comprehensive and participatory assessment of the vulnerability of rural enterprises to climate change and can support identification of potential adaptation strategies for climate proofing.
- Learning by doing is key to reinforce knowledge and skills gained through climate change awareness raising and training of rural communities and entrepreneurs, and can be facilitated through small grants to support application of learning.

Description of key challenges identified:

Please describe the key challenges associated with those actions/plans or the use of those tools/methods, that policy-makers, practitioners and other relevant stakeholders should know about.

- Ongoing monitoring and evaluation is needed to track the long-term success of the adaptation strategies and to determine the economic, environmental and social benefits of climate proofing the rural enterprises.
- The low level of capacity within the rural community groups hinders effective management and reporting on small grants and meeting. There is a need for flexibility and appreciation of these constraints among donors and other technical partners.
- Community groups and enterprises need to be held to high standards of financial accountability and transparency to increase their awareness and appreciation of global best practices in financial management.
- Project budgets need to factor in additional costs for insurance and installation of security systems in case of theft or damage to capital assets and equipment for enterprises, such as a new solar electric system and generators.
- There is limited recognition of the role and value of small and micro-enterprises in adaptation and building resilience to climate change at the community level and further investment is needed in this area.

Planned next steps (as appropriate):

Based on this experience or research, have next steps been planned to address/study some of the identified challenges, implement, scale up (e.g. from local to national context) or scale out (e.g. from one country to another) such actions/plans?

CANARI is developing a case study to formally document the value chain analysis as a methodology for participatory vulnerability assessment of climate change with rural enterprises to enable knowledge sharing and support scaling up within the Caribbean region and beyond. CANARI will conduct training of trainers and scale up work to climate proof rural community green enterprises across the Caribbean islands.

Relevant hyperlinks:

Please provide hyperlinks to sources of information.

Project webpage: http://www.canari.org/building-climate-resilient-rural-enterprises-in-tt

Further information:

Please do not hesitate to submit more detailed information on case study(ies), tool(s)/method(s) and/or other relevant knowledge resource(s) that are relevant to economic diversification. The latter will be shared through the Adaptation Knowledge Portal:

- Case study(ies)
- Tool(s)/method(s)
- Other knowledge resource(s) (online portals, policy briefs, training material, multimedia material, technical reports and scientific publications)