

Terms of Reference

Consultancy:
Analysis of Geographical Priorities for Climate Smart Agriculture
Spatial analysis for intervention areas in ResCA projects

I. CONTEXT

Central America is one of the most vulnerable regions in the world for climate change due to its geography and socio-economic conditions. Tropical storms, hurricanes, and droughts all cause severe impacts across the region. For example, Honduras ranked second and Nicaragua sixth in countries most affected by climate change according to the 2019 Global Climate Risk Index. Between 1998 and 2017, Honduras and Nicaragua lost USD \$556 M and USD \$223 M respectively to climate impacts (Eckstein et al., 2018). These impacts were especially damaging in rural areas, where according to the Food and Agriculture Organization of the United Nations (FAO), 300,000 families were impacted by severe flooding in both Panama and Honduras. As a result, food insecurity in Central America, where there are currently 11 million malnourished people and 1.4 million people that need food aid, has increased from 10.2% of the population in 2015 to 12.5% in 2017 (FAO, 2018). In addition, climate related migration in Central America is expected to reach an average of 1.4 to 2.1 million people, primarily from rural areas due to lost crop productivity (Kumari, 2018).

For these reasons, Central America is considered a priority action landscape for the implementation of TNC's Regenerative Ranching and Agriculture (R2A), previously referred to as the *Healthy Agricultural Systems (HAS) Strategy* which leads climate smart agriculture. The R2A Strategy focuses on the mutually beneficial relationships between natural resources (water, soil, biodiversity, and natural habitats) and the agricultural and fisheries sectors, by utilizing regenerative agriculture and ranching practices that promote climate resilience and sustainable food production.

Since 2016 The Nature Conservancy (TNC) has led the implementation of the Resilient Central America Program (ResCA, www.resilientcentralamerica.org/en), whose objective is to reduce the vulnerability to climate change of the agri-food and fisheries sectors and promote food security in the most vulnerable Central American countries. The ResCA program has three fundamental pillars of the program:

1. **Trade and Access to Markets:** ResCA seeks to link producers (farmers and fishers) to global and regional demand for “cleaner” and more sustainable agricultural products through interventions such as building traceability and validation mechanisms into supply chains, as well as promoting policy and regulatory reform that supports creation of and producer connection to sustainable supply chain initiatives.
2. **Increased Sustainable and Climate Resilient Productivity:** ResCA seeks to establish agricultural policies, strategies, and practices that sustainably increase productivity and decrease pressure to expand into new, forested areas that would release CO₂; fisheries and mariculture practices that conserve coastal ecosystems and improve the resilience of fish stocks and their resilience to climate change; and new sources of finance (or facilitate access to current sources of finance), such as agricultural credit and innovative business models.

3. **Agricultural and Environmental Management:** ResCA seeks to establish systems of agricultural and fisheries management that are compatible with environmental management goals, such as multi-stakeholder alliances to adopt landscape-scale analysis of environmental, social, and economic objectives.

II. CONSULTANCY OVERALL OBJECTIVE

In order to examine the connections the ResCA Program and climate smart agriculture (regenerative agriculture) have implemented with relationship to landscape conditions, the consultancy aims to map the coverage of ***land use, ecosystems, protected areas, wildlife and/or biodiversity hotspots to understand how the ResCA intervention areas are benefitting conservation efforts in the Central American Dry Forest Corridor and the Mesoamerican Reef system.***

III. SPECIFIC OBJECTIVES

In order to draw linkages to the goals of promoting climate smart agriculture, providing food security, building climate resilience and conserving these critical natural resources, the consultancy proposes three main objectives:

Objective 1. Central America Baseline (Secondary Research)

1. What is the current land use coverage in Central America?
2. What are the most important protected areas in Central America and what are the expansion threats they face?
3. What studies exist that identify priority conservation areas (wildlife, ecosystems, risks) in Central America?
4. What climate risks exist in specific areas of Central America?

Objective 2. ResCA mapping of intervention areas

5. Where are the ResCA intervention areas spatially located?
6. What productive systems or agroecosystems are in these ResCA intervention areas?
7. What habitats and ecosystem services border agricultural production where ResCA is working?
8. What priority conservation areas and protected areas border the ResCA intervention areas.

Objective 3. Spatial analysis with historical data

1. What biodiversity is at risk in the region where ResCA is intervening?
2. What are the most biodiversity-rich ecosystems in Central America under threat?
3. What ResCA practices and solutions are assisting in conserving these conservation areas and minimizing threats?
4. What is the historical trend of deforestation and transformation of the agricultural frontier in this region?

IV. SPECIFIC ACTIVITIES TO BE CONDUCTED

1. Conservation baseline outputs

- Output: Maps of protected areas (national, jurisdictional, municipal, voluntary conservation areas) in Central America
- Output: Maps of conservation priority areas
- Output: Maps of climate risks in Central America
- 2. ResCA Intervention areas**
 - Output: Maps of ResCA intervention areas
 - Output: Geo-database of ResCA intervention areas characterized by productive system
 - Output: Spatial analysis of habitats an ES bordering agricultural production area
 - Output: Spatial analysis of priority conservation areas
 - Output:
- 3. Reports of spatial analysis**
 - Output: Spatial analysis of biodiversity and risks
 - Output: Spatial analysis of ResCA practices , protected areas and threats
 - Output: Analysis of deforestation and agricultural areas

V. DELIVERABLES

| | Product | Delivery Date |
|--|---|-------------------|
| | Product 1: Work Plan | December 22, 2020 |
| | Product 2: Final mapping portfolio | January 16, 2021 |
| | Product 3: Final geo-database including all of the spatial analysis | February 19, 2021 |
| | Product 4: Final report with outputs of spatial analysis | March 15, 2021 |

VI. CONSULTANCY DURATION

This consultancy is expected to take 3 months, initiating in mid-December and finalizing in mid-March, 2021.

VII. CONSULTANT PROFILE DESIRED

The contractor (either individually or in a team), must demonstrate experience and verifiable skills in the following points:

- Experience with spatial analysis, geographic information systems (GIS) in Latin-American.
- Experience in the collection of primary and secondary, qualitative and quantitative information.
- Minimum of three years’ experience working in or with conservation organizations in the Latin-American region.
- Excellent oral and written communication skills.

VIII. CONSULTANCY REQUIREMENTS

- The contractor must have basic medical and life insurance.
- The contractor must comply with the requirements demanded by the social and tax laws of his/her country of residence.

- The contractor must comply with its tax obligations independently and in accordance with legal provisions.
- The contractor must deliver the corresponding official vouchers for the payment of professional fees actually executed.

IX. CONSULTANCY VALUE & PAYMENT SCHEDULE

The proposed value of the contract should include the delivery of the products, including taxes and travel expenses anticipated. Payments will be made against the delivery of products to the full satisfaction of TNC. As proof of each payment, the corresponding official invoice must be delivered for each of the products, which must be authorized at the corresponding tax level. Payments will be made as follows:

| Payment | Product | Payment Date | % Payment |
|---------|------------------------------------|-------------------|-----------|
| 1 | Product 1. Work Plan | December 22, 2021 | 10% |
| 2 | Product 2. Final Mapping Portfolio | January 16, 2021 | 35% |
| 3 | Product 3. Final geo-database | February 19, 2021 | 35% |
| 4 | Product 4. Final report | March 15, 2021 | 20% |
| TOTAL | | | 100% |

X. OTHER EXPENSES

All expenses, including trips related to the fulfillment of specific activities and the delivery of products for this contract must be included in the economic offer.

XI. PRESENTATION OF THE CONSULTANCY

Those interested in applying for this consultancy must submit in PDF format and in either separate documents or one package:

- i) Letter of interest signed
- ii) Resume/Resumes
- iii) Economic Offer
- iv) Technical Offer (proposal according to what is requested in these terms of reference that includes activities, schedule and development methodology.)

These documents must be sent electronically to jesse.festa@tnc.org by December 14, 2020 by 5pm Central America Standard Time.

XII. CONTACT

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