Carbon sequestration opportunities in soils in Latin America and the Caribbean

The sequestration of carbon (C) in the organic matter of soils used in agriculture is a viable option to mitigate the emission of greenhouse gases (GHG) and to increase the resilience of these systems to climate change.

Organic carbon is the principal indicator of the quality and productive potential of the soil and, at the same time, the largest carbon pool in the biosphere.

The implemented initiative

The objective of this project is to contribute to the design of land uses and management with a high potential for SOC sequestration in the agricultural production systems of LAC and to generate capacities in LAC for the quantification and monitoring of the SOC stock.

The objectives are:

i) Assist LAC countries in the reporting and the following of their SOC stocks according to land use and management,

ii) identify an opportunity for SOC sequestration in five LAC countries, and quantify its impact on the net emission of greenhouse gases and the economic property result, and

iii) generating capacities in LAC for the quantification and monitoring of the SOC stock.

Identification, and evaluation of strategies, to intensify agricultural production systems in LAC with the potential for mitigating and adapting to climate change.

The technological solution

Identify opportunities for carbon sequestration in the soil for Uruguay, Argentina, Chile, Costa Rica, and Colombia, in addition to quantifying the impact both on the net emission of greenhouse gases and on the economic result of commercial properties. In this way, the project will contribute to the identification and evaluation of strategies to intensify agricultural production systems in LAC with the potential for mitigation and adaptation to climate change.

Qualitative analysis

Results

1. Generated references for the agencies in charge of reporting the national GHG inventories in each country and for those agencies involved in the generation of NDCs and NAMAs.

2. An opportunity identified for the sequestration of CO₂ will be obtained, with potential for implementation as a NAMA evaluated in its potential economic and environmental impact for the five LAC countries participating in the project.

3. Traine staff to update their SOC stock reports and stock changes with the necessary quality in the time required by international agreements in the five participating countries in this project and have the reference material developed in the published component for subsequent consultations.