

Auto-CCAFS-MOT: a batch calculator tool for farmers GHG emissions

Project Title: P1592 - Towards a Digital Climate Smart Agriculture (D-CSA) transformation in Latin America (LAM)

Description of the innovation: The main purpose of this repository is to offer a tool that can estimate GHG emissions for multiple crop-events. The development compromised several steps from exploring state-of-art methodologies to having meetings with experts, CoolFarmTool and Lini Wollenberg's team. In the end, we choose to leverage CCAFS-MOT. This tool estimates GHG emissions, likewise offers mitigation alternatives. Our scope was to automatize this tool, giving the option of addressing multiple crop events in a faster way.

New Innovation: No

Stage of innovation: Stage 3: available/ ready for uptake (AV)

Innovation type: Production systems and Management practices

Geographic Scope: Global

Number of individual improved lines/varieties: <Not Applicable>

Description of Stage reached: Taking advantage of the CCAFS-MOT version, we decided to go further, developing a new system, which is able to calculate GHG emissions for multiple crop events. This new development was completed on python that facilitates its integration with web applications. Besides users can download soil-data from SoilGrids.

Name of lead organization/entity to take innovation to this stage: CIAT (Alliance) - Alliance of Bioversity and CIAT - Regional Hub (Centro Internacional de Agricultura Tropical)

Names of top five contributing organizations/entities to this stage:

- University of Aberdeen

Milestones:

- Innovative tools/approaches (inc. checklists on feasibility of different CSA practices within local context), CSA technology depository, citizen science service provision and agro-eco region specific models co-developed and tested for scaling out CSA/CSVs

Sub-IDOs:

- 8 - More efficient use of inputs
- 30 - Reduced net greenhouse gas emissions from agriculture, forests and other forms of land-use (More sustainably managed agro-ecosystems)
- 23 - Enhanced conservation of habitats and resources

Contributing Centers/PPA partners:

- CIAT (Alliance) - Alliance of Bioversity and CIAT - Regional Hub (Centro Internacional de Agricultura Tropical)

Evidence link:

- https://github.com/CIAT-DAPA/ghg_emissions

Deliverables associated: <Not Defined>

Contributing CRPs/Platforms:

- BigData - Platform for Big Data in Agriculture
- CCAFS - Climate Change, Agriculture and Food Security