

## Auto-CCAFS-MOT: a batch calculator tool for farmers greenhouse gas emissions (GHG)

**Project Title:** P1543 - CoP Data-Driven Agronomy Module 2

**Description of the innovation:** The main purpose of this repository is to offer a tool that can estimate GHG emissions for multiple crop-events. 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:** Leveraging on the CCAFS-MOT version, we developed a new system to calculate GHG emissions for multiple crop events. It was completed in python to facilitate the integration with web applications. User can download soil-data from SoilGrids, explore state-of-art methodologies and interact with experts from CoolFarmTool and CCAFS team.

**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:**

- 1,000 Days
- Alliance of Bioversity International & the International Center for Tropical Agriculture (CIAT)
- ICESI - Universidad ICESI
- University of Aberdeen
- UVM - University of Vermont

**Milestones:** No milestones associated

**Sub-IDs:**

- 29 - Enhanced adaptive capacity to climate risks (More sustainably managed agro-ecosystems)

**Contributing Centers/PPA partners:**

- Bioversity (Alliance) - Alliance of Bioversity and CIAT - Headquarter (Bioversity International)

**Evidence link:**

- [https://github.com/CIAT-DAPA/ghg\\_emissions/](https://github.com/CIAT-DAPA/ghg_emissions/)

**Deliverables associated:**

- D17403 - Mini-Grant for enhancing Digital Extension services (**Not disseminated**)

**Contributing CRPs/Platforms:**

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