**Soil Organic Carbon Activity Module**

###### PUBLICATION DATE ­ **27/10/2020**

###### VERSION **1.0**

###### RELATED DOCUMENTS – [Soil Organic Carbon Framework Methodology v.1.0](https://globalgoals.goldstandard.org/402-luf-agr-fm-soil-organic-carbon-framework-methodolgy/)–[SOC Activity Modules Approval Procedure v.1.0](https://globalgoals.goldstandard.org/402-1-luf-agr-map-soc-module-development-procedure/)

### Guidance on how to complete the template

* The module developer fills out each of the sections following the guidance provided in italics within the blue box.
* The developer shall delete the guidance blue box after completion of the draft.
* The developer shall complete all sections. Where not applicable, the developer shall insert “NA”. Please **do not delete** any of the sections/subsections of the template.

**SOC activity Module for…….**

The title must begin with “Soil Organic Carbon (SOC) Activity Module for” and then add the specific activity. For example “Soil Organic Carbon (SOC) Activity Module for grassland management”

###### Date: DD/MM/YYYY

Add the date of submission of the latest draft. Upon approval by Gold Standard, the date shall be updated to reflect date of approval. The date shall be entered in dd/mm/yyyy format.

###### Version: 0.1

The draft version shall start with 0.1. The version will be that of the approved document and numbered 1.0. Any updates to an approved methodology will continue the numbering such as 1.1, 1.2, etc.

###### Developer Name:

>>

Add developer(s) name(s) and Logo (optional).

Table of Contents

[1| Summary 4](#_Toc54082526)

[2| Definitions and References 4](#_Toc54082527)

[3| Applicability 5](#_Toc54082528)

[4| Additionality 5](#_Toc54082529)

[5| Project Boundaries 6](#_Toc54082530)

[6| Emission Reduction Quantification Approach 7](#_Toc54082531)

[7| Baseline Scenario 7](#_Toc54082532)

[8| Project Scenario 8](#_Toc54082533)

[9| Uncertainty 8](#_Toc54082534)

[10| Other Emissions 8](#_Toc54082535)

[11| Leakage 9](#_Toc54082536)

[12| Monitoring 9](#_Toc54082537)

Update the page number only – It is a Microsoft WORD automatic process – You do not need to update the numbers manually- 1) select the table-2) a box with a tab named “Table of Content” will appear –3) close to the name, click on the black arrow 4) it will display a pop up with 2 options 5) choose “Update numbers only”

1. Summary

*The summary should not exceed 1,200 words. The summary should provide enough information for users to understand the module applicability and concept. Summary may include information on following key elements:*

* *A brief on eligible (and non-eligible, as appropriate) activity types*
* *Geographical scope (global or regional):*
* *Applicable quantification approach/es referring to* [*SOC framework methodology*](https://globalgoals.goldstandard.org/402-luf-agr-fm-soil-organic-carbon-framework-methodolgy/)
* *Eligible GHGs*
* *Process by which SOC stocks are increased*

1. Definitions and References
   1. Definitions

* *Add relevant definitions that are not listed in the* [*SOC Framework Methodology*](https://globalgoals.goldstandard.org/402-luf-agr-fm-soil-organic-carbon-framework-methodolgy/) *and apply to and/or are relevant to the activity module.*
* *Definitions should include sources, where applicable*
* *Definition(s) should highlight if specific to a regional context.*

|  |  |
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| **Term** | **Definition** |
| Add term | Add definition |
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* 1. References

1. X
2. X

* *Add the references to methodological tools, guidelines, publications, data sources referred to in developing this SOC Activity Module.*
* *Use APA citation style as reference.*
* *Include weblinks to online resources.*

1. Applicability
   * 1. A project applying this Activity Module shall comply with the applicability conditions specified below and within the [SOC Framework Methodology](https://globalgoals.goldstandard.org/402-luf-agr-fm-soil-organic-carbon-framework-methodolgy/). In addition, the project shall comply with applicable [Land Use & Forests Activity Requirements](https://globalgoals.goldstandard.org/standards/203_V1.2.1_AR_LUF-Activity-Requirements.pdf) (hereafter LUF Activity Requirements) and the [Gold Standard for the Global Goals Principles & Requirements](https://globalgoals.goldstandard.org/standards/101_V1.2_PAR_Principles-Requirements.pdf). (hereafter Principles & Requirements).
     2. Applicability condition: >> Add description

*List and describe the conditions that determine if an area is eligible under this SOC Activity Module. Conditions include,* ***but are not limited to,*** *the following (include all necessary information data for users to determine/assess project eligibility):*

* *geographical scope (global/regional): if globally applicable prove, with peer-reviewed literature, that the proposed activity has been conducted and its GHG mitigation effects proven on a wide array of geographies. If such information is not available, then the geographical scope shall be regional and you should demonstrate, with locally conducted studies and/or direct measured data, that the proposed activity has GHG mitigation effects under the conditions and particularities of a project in the selected region; AND*
* *soil types: indicate eligible soil types to implement the selected activities; AND*
* *soil characteristics: indicate what are the soil characteristics in Baseline that determine land eligibility. Characteristics include, but are not limited to pH, soil organic matter (SOM), soil organic carbon (SOC), cation-exchange capacity (CEC), water retention capacity, others.*
* *cropping system in Baseline Scenario: define the crops, crop rotation/s, average yields, and agronomic practices in the Baseline; AND*
* *cropping system in Project Scenario: define the crops, crop rotation/s, average yields and agronomic practices in the Project; AND*
* *minimum size of eligible area (ha); AND*
* *others that are relevant for determining if an area and a practice are eligible to generate carbon credits under this SOC Activity Module.*

1. Additionality
   * 1. All Gold Standard projects shall demonstrate that they would not have been implemented without the benefits of carbon revenue. Specific rules and guidelines on how to assess additionality can be found in the Additionality section [LUF Activity Requirements](https://globalgoals.goldstandard.org/standards/203_V1.2.1_AR_LUF-Activity-Requirements.pdf) and the [AGR Additionality (AGR projects) Template](https://globalgoals.goldstandard.org/standards/203_V1.0_AR_LUF-Acitivity-requirement_AGR-Additionality-Template.docx).
     2. Additionality assessment: >> Add description

* *Additionality assessment shall follow the requirements of:*
* [GS4GG Principles and Requirements](https://globalgoals.goldstandard.org/101-par-principles-requirements/)*, Principle 5 “Financial Additionality & Ongoing Financial Need”; AND*
* [GS4GG Land-use and Forest (LUF) Activity Requirements](https://globalgoals.goldstandard.org/203-ar-luf-activity-requirements/)*, Principle 5 “Financial Additionality & Ongoing Financial Need”*

1. Project Boundaries

* *Define the spatial boundaries, temporal boundaries, and carbon pools under this SOC Activity Module.*
* *In the case a project boundary follows the rules and requirements of the* [*SOC framework methodology*](https://globalgoals.goldstandard.org/402-luf-agr-fm-soil-organic-carbon-framework-methodolgy/) *add the statement: “For (add name of the boundary), rules and requirements defined in the* [*SOC Framework Methodology*](https://globalgoals.goldstandard.org/402-luf-agr-fm-soil-organic-carbon-framework-methodolgy/) *apply.”*
  1. Spatial boundary:
     1. For spatial boundaries, rules and requirements defined in the [*SOC Framework Methodology*](https://globalgoals.goldstandard.org/402-luf-agr-fm-soil-organic-carbon-framework-methodolgy/)apply.
     2. >> Add description
* *Indicate the activities that are under the control of the project and from which GHG mitigation benefits will be claimed.*
* *Indicate if areas joining a project shall be entire farms or if it is eligible for areas within a farm to join as well.*
* *Indicate what provisions shall be in place to reduce the risk of project areas leaving a project within the crediting period.*
  1. Temporal boundary:
     1. >> Add description
* *Indicate the length of the crediting period in years and if it can be renewed and, if so, how many times.*
* *Follow the guidance in the* [*SOC Framework Methodology*](https://globalgoals.goldstandard.org/402-luf-agr-fm-soil-organic-carbon-framework-methodolgy/) *to determine maximum length of a crediting period.*
  1. Carbon Pools
     1. >> Add description
* *Indicate if the SOC Activity Module focuses entirely on the soil carbon pool or if a deviation from the* [*SOC Framework Methodology*](https://globalgoals.goldstandard.org/402-luf-agr-fm-soil-organic-carbon-framework-methodolgy/) *is necessary.*
* *If a deviation is necessary, indicate and justify the inclusion of other carbon pools.*

1. Emission Reduction Quantification Approach

Calculations for overall benefits follow the equations set out in Section: Emissions Reduction Quantification Approaches of the SOC Framework Methodology. Sections below specify approaches and calculations specific to this SOC activity module.

* 1. Approaches for baseline and project scenario quantification
     1. >> Add description
* *Indicate which of the three quantification approaches recommended in* [*SOC Framework Methodology*](https://globalgoals.goldstandard.org/402-luf-agr-fm-soil-organic-carbon-framework-methodolgy/) *is applicable under this module.*

1. Baseline Scenario

* *Indicate which activities under Baseline conditions are eligible under this SOC Activity Module and how many years of pre-Project Scenario of data are required to determine activities in the Baseline scenario (if the number of years of pre-Project Scenario data is no different from that required in the* [*SOC Framework Methodology*](https://globalgoals.goldstandard.org/402-luf-agr-fm-soil-organic-carbon-framework-methodolgy/)*, just indicate “Baseline data is required for as many years as required by the* [*SOC Framework Methodology*](https://globalgoals.goldstandard.org/402-luf-agr-fm-soil-organic-carbon-framework-methodolgy/)*”) .*
* *This section shall also indicate the criteria and process for stratification of the eligible area into modeling units (MUs).*
* *Also, indicate how will SOC variability be estimated to determine initial number of sample points to calculate uncertainty (ex-ante).*
  1. Baseline Calculations
     1. Quantification for soil organic carbon in the baseline (SOCBL,y) shall follow the rules, approaches, calculations, and parameters set out in Section: Baseline Scenario of the [*SOC Framework Methodology*](https://globalgoals.goldstandard.org/402-luf-agr-fm-soil-organic-carbon-framework-methodolgy/).
     2. >> Add description
* *Indicate if the SOC Activity Module deviates from the statement above and if it does, elaborate further.*
* *If the SOC Activity Module follows what is defined in the* [*SOC Framework Methodology*](https://globalgoals.goldstandard.org/402-luf-agr-fm-soil-organic-carbon-framework-methodolgy/)*, there is no need to elaborate this section further.*

1. Project Scenario

* *Indicate and elaborate on what the eligible activities are under the Project scenario.*
* *Indicate whether stratification at Baseline will be revised or not in the project scenario and, if so, under what process and based on which criteria.*
  1. Project Calculations
     1. Quantification for soil organic carbon in the project scenario (SOCt,y) shall follow the rules, approaches, calculations, and parameters set out in Section: Project scenario of the *SOC Framework Methodology*.
     2. >> Add description
* *Indicate if the SOC Activity Module deviates from the statement above and if it does, elaborate further.*
* *If the SOC Activity Module follows what is defined in the* [*SOC Framework Methodology*](https://globalgoals.goldstandard.org/402-luf-agr-fm-soil-organic-carbon-framework-methodolgy/)*, there is no need to elaborate this section further.*

1. Uncertainty
   * 1. Calculation of uncertainty shall follow the rules and equations set out in the [*SOC Framework Methodology*](https://globalgoals.goldstandard.org/402-luf-agr-fm-soil-organic-carbon-framework-methodolgy/).

* *Indicate if the SOC Activity Module deviates from the statement above and if it does, elaborate further.*
* *If the SOC Activity Module follows what is defined in the* [*SOC Framework Methodology*](https://globalgoals.goldstandard.org/402-luf-agr-fm-soil-organic-carbon-framework-methodolgy/)*, there is no need to elaborate this section further.*

1. Other Emissions
   * 1. Significant additional greenhouse gas emissions (>5% total) due to the project activity need to be accounted for. For this SOC Activity Module, this explicitly includes emissions from increased fertilizer input, fossil fuel combustion, and other agrochemical emissions. Calculation thereof shall follow the rules and equations set out in the [*SOC Framework Methodology*](https://globalgoals.goldstandard.org/402-luf-agr-fm-soil-organic-carbon-framework-methodolgy/).
     2. >> Add description

* *Indicate if the SOC Activity Module deviates from the statement above and if it does, elaborate further.*
* *If the SOC Activity Module follows what is defined in the* [*SOC Framework Methodology*](https://globalgoals.goldstandard.org/402-luf-agr-fm-soil-organic-carbon-framework-methodolgy/)*, there is no need to elaborate this section further.*
* *Indicate what are the expected Other Emissions that need to be accounted for under the Project scenario.*

1. Leakage
   * 1. Calculation of leakage shall follow the rules and equations set out in the [*SOC Framework Methodology*](https://globalgoals.goldstandard.org/402-luf-agr-fm-soil-organic-carbon-framework-methodolgy/). If a reduction in yield is detected in a performance certification, it is assumed that the lost production capacity will have to be made up for on land outside the project area. Emissions caused by such a shift shall be accounted for as leakage according to the equation listed in the [*SOC Framework Methodology*](https://globalgoals.goldstandard.org/402-luf-agr-fm-soil-organic-carbon-framework-methodolgy/).
     2. >> Add description

* *Indicate if the SOC Activity Module deviates from the statement above and if it does, elaborate further.*
* *If the SOC Activity Module follows what is defined in the* [*SOC Framework Methodology*](https://globalgoals.goldstandard.org/402-luf-agr-fm-soil-organic-carbon-framework-methodolgy/)*, there is no need to elaborate this section further.*
* *Indicate what sources of Leakage are expected, shall be accounted for, and how shall be estimated under the Project scenario.*
* *Indicate in which cases it is necessary to calculate Leakage. Indicate how will a project define the area within which Leakage must be accounted for/assessed (i.e. Leakage Area).*

1. Monitoring
   * 1. Monitoring approach and parameters shall be followed as set out in the [*SOC Framework Methodology*](https://globalgoals.goldstandard.org/402-luf-agr-fm-soil-organic-carbon-framework-methodolgy/). Also, the project owner shall collect and document evidence that this SOC activity module’s applicability conditions are met at all times.

* *Project Validation:* 
  + *Indicate if the SOC Activity Module deviates from the statement above, elaborate and justify.*
  + *If the SOC Activity Module follows what is defined in the* [*SOC Framework Methodology*](https://globalgoals.goldstandard.org/402-luf-agr-fm-soil-organic-carbon-framework-methodolgy/)*, there is no need to elaborate this section further.*
* *Project Verification:*
  + *Describe the frequency of proposed monitoring according to the quantification method proposed for the Project scenario.*
  + *Indicate what soil parameters need to be measured, measurement frequency, and what are the appropriate units of each parameter.*
  + *Indicate if direct sampling of SOC proxy/is are required in between verification audits.*
  + *Describe the eligible sampling methods and indicate what soil parameters need to be measured, measurement frequency, and what are the appropriate units of each parameter.*

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