FACTSHEET: RESPONSE TO THIRD-PARTY REVIEW

A critical component of the Latin America Coffee Carbon Footprint Baseline Study was the contracted third-party review, led by experts from CIRAD (the French Agricultural Research Centre for International Development). As a neutral third-party, CIRAD advised the Sustainable Coffee Challenge as well as the study's Technical Service Provider, Meo Carbon Solutions, by reviewing methodological approaches and contributing expertise on the following: the template used for data collection, the sampling strategy, the collected data, and the final data analysis/results.

CIRAD's review, which began in August 2024 and continued to January 2026, strengthened the credibility, robustness, and transparency of the final national-level farm-gate carbon footprint baselines. CIRAD developed a comprehensive review report (available for download here: full report or summary report).

The review process was fruitful and provided meaningful insights, reflections, and discussions. For instance, throughout the study the CIRAD team noted reservations about the study's objective to establish national-level average farm-gate carbon footprint baselines. Instead, they encouraged typology-related baselines more consistent with the sampling strategy, which used a typology-based approach to assess total sample size. CIRAD further reiterated their interest in multi-year analysis to properly model the perennial crop cycle. The study's final report, published by Sustainable Coffee Challenge, is transparent about CIRAD's methodological divergences and suggests further research to increase sector-wide alignment.

Complementing CIRAD's extensive review report, this document provides a quick overview of CIRAD's main recommendations organized into 4 main categories, with insight into whether and how those recommendations were incorporated.

CATEGORY 1: DATA COLLECTION TEMPLATE

CIRAD provided the following recommendations upon review of the draft data collection template, which was designed to align with Cool Farm Platform. Meo Carbon Solutions' responses are also documented below.

RECOMMENDATION	RESPONSE
Train enumerators to properly assess plantation history and understand the logic of farmer practices and ensure they collect data by visiting farms.	Prior to survey application, enumerators were trained and instructed to visit all farms, and to take the time to fully understand the farm history and its

	relevant practices. Enumerators had access to a WhatsApp group for technical support.
Collect input data for at least two stages—the immature and mature stages—to correctly model the perennial crop cycle.	The survey was updated to ensure that multi-year data would be collected for yield and certain practices, such as fertilizer application.
Avoid asking for percentages by using practical ratios, and when asking about average practices, ensure clarity and estimate dispersion around the mean.	During training, enumerators were instructed to elicit ratios rather than percentages wherever possible, and to be explicit when asking about average practices. They were provided with standard reference ratios for the most common cases where misinterpretation was likely, for example, the conversion ratio from coffee cherries to green beans, and were trained to cross-check farmer-disclosed values against these benchmarks. Equivalent reference ratios were supplied for other relevant categories. Enumerators were also instructed to provide concrete examples to help farmers frame their responses accurately.
Collect more details on organic inputs, not only crop residues.	In addition to crop residue options, the survey captured organic fertilizer inputs from a comprehensive list of animal-derived organic sources, with predefined nitrogen content values to ensure consistent emissions modeling.
Cross-check output data against input data.	All relevant data was cross-checked during quality control phases. Enumerators were also instructed to cross-check as possible during survey application.

CATEGORY 2: SAMPLING STRATEGY

The sampling strategy created by Meo Carbon Solutions was developed over time in consultation with study partners. It reduced the sampling needs from approximately 1,500 farms per country (the initial sampling design) to 500-600 farms per country (feasible based on Supplier Partner capacity). It also aligned with CIRAD's overarching recommendation to utilize typology-based sampling. Upon review of Meo Carbon Solutions' approach, CIRAD deemed the sampling strategy highly relevant and provided recommendations for further research when errors in typology research were noted or when there was a need for more data to classify typologies. Meo Carbon Solutions took action on each recommendation.

CATEGORY 3: COLLECTED DATA

CIRAD focused its review of the collected data on understanding whether i) the data provided sufficient information for relevant typologies and ii) the data was thoroughly cleaned and ready for analysis by Meo Carbon Solutions. Their response to the former for the data they reviewed is available in their report, while they made the following recommendations for improved data cleaning. Additional issues were flagged via an Excel spreadsheet, available here. Meo Carbon Solutions' responses are documented within this spreadsheet, while their responses to CIRAD's other recommendations are below.

RECOMMENDATION	RESPONSE
Cross-check dead trees in one year with lost trees over a cycle to assess annual loss and inter-annual variability.	Meo Carbon Solutions properly cross-checked dead trees with lost trees, as recommended.
Properly calculate nutrient inputs per tree, per hectare by ensuring comparability in nutrient content across diverse inputs. Properly identify nutrient outliers and assess how inputs (to possibly include irrigation) vary by production type.	Meo Carbon Solutions followed CIRAD's recommendations for input comparability. However, as results were not displayed by production type, input variability by typologies was not assessed.
Harmonize all language and exclude under-represented farm types.	Meo Carbon Solutions harmonized all language as relevant, but chose not to exclude under-represented farm types, as results were not displayed by typology. However, other relevant outliers and incomplete or erroneous data were excluded.
Apply specific techniques to properly model the perennial crop cycle, rather than using data from only the	While multi-year data was collected in some instances, Meo Carbon Solutions chose to calculate emissions for a single reporting year rather than applying CIRAD

collection year, and assess the relationship between yield and inputs.	recommendations in order to be consistent with the Greenhouse Gas Protocol (GHGP) Corporate Accounting and Reporting Standard. Further explanation is provided in the report, and an assessment of the relationship between yields and inputs is provided.

CATEGORY 4: DATA ANALYSIS

The draft final report for the Latin America Coffee Carbon Footprint Baseline Study underwent several reviews. In addition to CIRAD, key reviewers included team members from Sustainable Coffee Challenge and Conservation International, as well as experts from the study's governance body (Consortium/Roaster Partners) and broader Supplier Partner network. CIRAD reviewed only the first draft and noted that Meo Carbon Solutions should clarify the goal and scope of the study, including its system boundaries, and thoroughly describe the Cool Farm Platform's calculation parameters so that results could be better interpreted. In addition, CIRAD suggested: i) increased clarification of how missing or inconsistent data were handled, ii) enhanced use of dispersion around the mean instead of only averages, iii) improved visuals, and iv) a clearer structure for the study's comparative analysis. Each of these recommendations were applied prior to final publication and were also recommended by other reviewers.