

OBSERVATIONS IN RELATION TO CATEGORY ASSESSMENT

AFFORESTATION, REFORESTATION AND REVEGETATION – PART V

AUGUST 2026

1. Purpose of these observations

The Governing Board (the Board) of the Integrity Council for the Voluntary Carbon Market (ICVCM), when considering the assessment of methodologies related to Afforestation, Reforestation and Revegetation (ARR) identified that it would be beneficial to make available their observations for the purpose of supporting the future development of methodologies in this Category.

These observations are non-binding and do not impact or form any part of the Assessment Framework, Assessment Procedure, or any Decision (as defined under the Assessment Framework) and are published by the Integrity Council for the purpose of information only.

The Integrity Council may, from time to time, publish other observations for other Categories where it considers this may be useful for CCP-Eligible Programs and other stakeholders and may update and revise its observations from time to time based on further assessment processes or information. Observations are not an exhaustive set of views of the Governing Board, and not all aspects addressed in assessment processes are included. No reliance may be placed on observations, as they are for the purpose of information only, and observations published are without prejudice to other ongoing assessments.

The Governing Board would like to express its gratitude to the experts and other stakeholders engaged in the assessment process, who provided input to the ICVCM regarding this Category. It welcomes novel approaches to increase integrity and recognises that further research and empirical testing of such approaches in methodologies may identify new risks and will be attentive to these as part of general ICVCM ongoing assurance and oversight.

2. Observations relating to ARR methodologies

The Governing Board's observations regarding the assessment of ARR methodologies against the ICVCM Assessment Framework and its Core Carbon Principles generally relate to robust quantification and additionality.

The methodology considered by the Board within this Category and to which these observations relate is Agroforestry protocol, version 1.0, applied under Isometric. This methodology shares similar principles and approaches with Reforestation_v1.1, which is also CCP -Approved.

2.1. Category Details

Agroforestry is a collective term for land management systems where woody perennials (trees, shrubs, palms, bamboos, etc.) are deliberately integrated with agricultural crops and/or animals, in some form of spatial arrangement or temporal sequence. In agroforestry systems there are both ecological and socio-economic interactions between the different components.

Agroforestry lies within Afforestation, Reforestation, and Revegetation (ARR) activities, which encompass a variety of other practices, including mangrove restoration, commercial plantations, forest restoration, and farmer-assisted natural regeneration. This is a carbon sequestration category involving biological storage, which requires careful management to mitigate the risk of reversal in the short to medium term.

2.2. Additionality and Robust Quantification

The Agroforestry protocol uses a dynamic performance-benchmark baseline informed by remote sensing to estimate how carbon stocks from woody perennials would have evolved without the project. Baselines are validated by regularly comparing project-area carbon stock changes with those observed in statistically matched control areas. By retesting baselines against real-world observations of ‘matched controls’, the protocol aims to account for evolving market conditions, policy shifts, environmental variability, and other external drivers. The Governing Board notes that the protocol clearly specifies the process for developing the dynamic performance-benchmark baseline, including objective justification of criteria and expert review.

ICVCM notes that, under Isometric Agroforestry protocol v1.0, non-timber commodities must be primary products of working landscape with trees integrated to support productivity, ecosystem services, and resilience. Typical systems would include silvopasture, alley cropping, orchards, and windbreaks. ICVCM also notes that clear-cutting of woody vegetation for timber sale is not permitted, including beyond the Commitment Period. Selective harvesting is only allowed with prior approval by Isometric.

The protocol also incorporates digital MRV tools, including LiDAR-equipped drones, peer-reviewed machine-learning models, and detailed field measurements. Together, these elements strengthen the robustness and reliability of carbon accounting while improving automation, accuracy, and transparency.

Allometric equations – which relate simple measurements (e.g., trunk diameter) to biomass – are standard in ARR methodologies but vary by species, age, and site conditions. Because not all species have well-established allometries, credible approximations are often required. The methodology restricts allometric equations to those published in reputable literature and applies a clear hierarchy for selection: (i) local peer-reviewed equations, (ii) Chave, et al. (2014) for tropical regions, (iii) national forest inventories, or (iv) IPCC generalized equations.

ICVCM note that the methodology permits the use of a conservative global default value for the carbon fraction of dry biomass, but only when more specific factors are unavailable. These preferred factors include: i) regional or species-specific values supported by scientific literature, or ii) genus-specific or national average values, also supported by scientific literature. If the preferred factors are not available, the methodology allows use of a default factor. The Governing Board notes that this parameter is an average and that use of more specific data is mandated where it is available and this subject to oversight by both VVBs and the carbon crediting program.