



Atmospheric CO₂ and CH₄ Budgets to Support the Global Stocktake

Registration opening in Spring 2022

This three-part webinar series will introduce bottom-up and top-down methods for tracking emissions and removals of carbon dioxide (CO₂) and methane (CH₄) from the atmosphere. This training will explore how to combine this information to produce a more accurate and transparent global stocktake, and support efforts to reduce net emissions and mitigate their impact on the climate. Demonstrations will be provided on how top-down atmospheric budgets of CO₂ and CH₄ can be derived from atmospheric measurements and inverse models to produce a transparent description of their emissions and removals. Participants will also be introduced to pilot products and how information contained in these top-down atmospheric products can supplement bottom-up inventory products to assess the accuracy and completeness of emissions reports on regional, national, and local scales.

Part 1: Tracking Greenhouse Gases

- Paris Agreement and mitigation objectives
- Global Stocktake
- Bottom-up and top-down emissions inventories

Part 2: Creating Top-Down Atmospheric Budgets of CO₂ and CH₄ on Policy-Relevant Scales

- Emission and removal of CO₂ and CH₄
- Space-based, airborne, and ground-based measurements of CO₂ and CH₄
- Inverse modeling

Part 3: Top-Down and Bottom-Up Inventories to Support the Global Stocktake

- Best practices for use in assessing progress towards Paris Agreement goals
- Strengths, weaknesses, and future opportunities
- Case studies



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