Use of carbon markets and Article 6 for agriculture

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IFAD Innovation Talk on “Innovative climate finance”

Elements of Art. 6 of the Paris Agreement and related COP26 outcomes

Market-based approaches

Art. 6.2	• Guidance for *bilateral or multilateral approaches* (ETS linking, crediting mechanisms) • Also provides rules to governments how to *account* for CORSIA or the voluntary carbon market with *corresponding adjustments* (CA)
Art. 6.4	• Rules, modalities and procedures for a *multilateral crediting mechanism* (A6.4M) • Successor to the Clean Development Mechanism and Joint Implementation
Art. 6.8	• *Non-market* approaches

- Rulebook enables **rapid implementation of international carbon markets** to achieve NDCs and increase ambition beyond current targets.

- CDM activities can **transition to the A6.4M** upon approval by host country, if they comply with A6.4M rules
- CERs from **activities registered after 2013** can be used in the first NDCs

Purpose of Article 6 and its accounting

Intended to support governments in reaching their NDCs and increase ambition beyond current targets

No double counting: double bookkeeping (corresponding adjustments)

Art. 6.2 regulates trade of ITMOs: Internationally Transferred Mitigation Outcomes

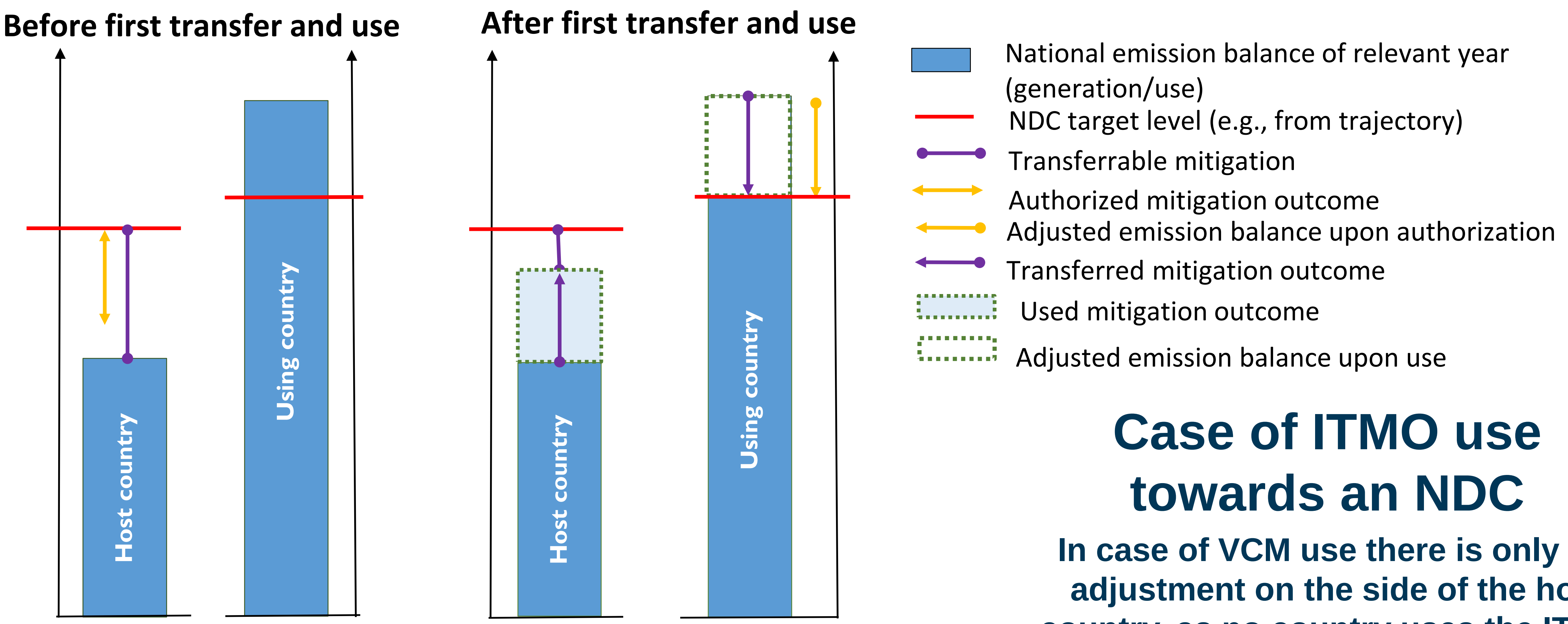
- Defined as: Real, verified and additional emission reduction or removal
- Mitigation outcome authorized by a host country for use:
  1. towards another country's NDC
  2. international mitigation purposes (e.g., CORSIA) , and/or
  3. other purposes (e.g., voluntary offsetting)

"Other international mitigation purposes"

The voluntary market is not regulated under Article 6, but Art. 6 decisions will affect it, especially with regard to accounting

A6.4M credits with and without corresponding adjustments

Key issue: Corresponding adjustments



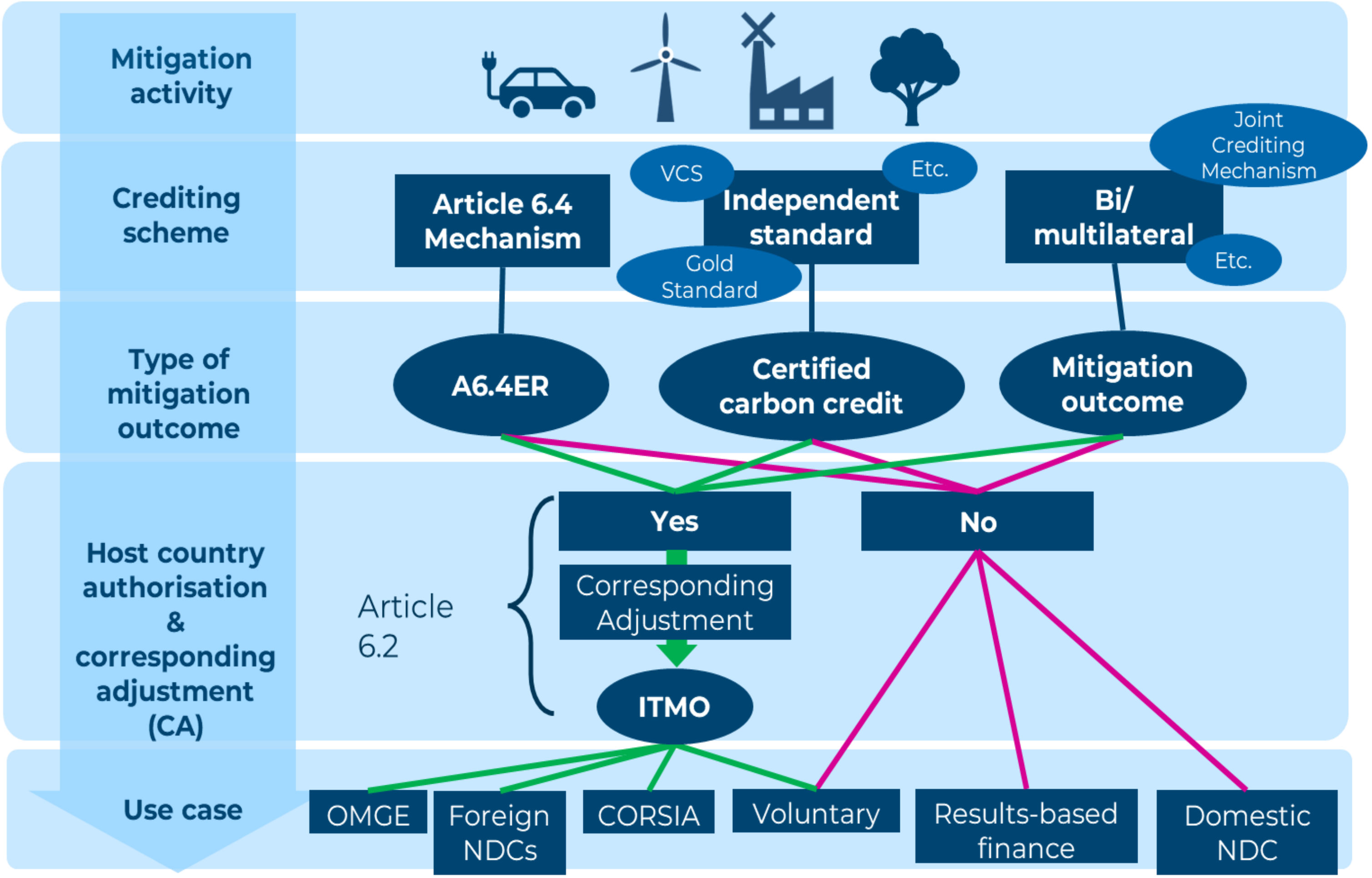
Initial scenario: Host country has emission balance under NDC target level, while using country is above target level. The host country then authorizes the sale of mitigation outcomes to the using country.

Resulting corresponding adjustment: Host country adjusts its emission balance to reflect the sale of the transferred mitigation outcomes, while the using country adjusts its emission balance down accordingly to meet its NDC target.

Case of ITMO use towards an NDC

In case of VCM use there is only the adjustment on the side of the host country, as no country uses the ITMO!

Key issue: Interlinkages with VCM



Source: adapted from Perspectives Climate Group (2021)

- In addition to compliance markets under the UNFCCC, voluntary carbon markets can serve as **additional instruments** to mobilise low-carbon investments
- These markets, with an annual current value of $1 billion (2021) are **growing rapidly since 2018**
- Many countries have linked **voluntary carbon markets to their mandatory carbon taxes** (e.g. South Africa, Colombia, Singapore) or to their ETS (e.g. California, Quebec)

Key issue: Reductions, removals and "avoidance"

- **Art. 6 covers emission reductions and removals generated from 2021.**
- Art. 6 has specific requirements for removals
  - **minimising** the risk of non-permanence of mitigation across several NDC periods
  - when reversals of emission removals occur, ensuring that these are **addressed in full** (Art 6.2)
    - What does this mean, especially for **removals in the AFOLU sector**?
    - Can **buffer stock approaches** be used or not?
    - **Temporary** credits?
    - **Tonne-year accounting**?
  - **45 year crediting period** (Art 6.4).
- **The term and role of emission avoidance under Article 6 is currently unclear for both Art. 6.2 and 6.4.**

➢ *Which definition is applied? UNFCCC: keeping fossil fuels in the ground; VCM: protecting standing biomass (REDD+)*

➢ Further UNFCCC negotiations to address terminology, but many countries want to defer this issue.

Timeline for Art 6 operationalisation

UNFCCC led capacity building programmes

Art 6.4 Work Programme

A6.4M operational

A6.4SB established

Art 6.2 Work Programme

Art 6.2 operational

2022

2023

2024

2025

COP27 CMA4

First two A6.4SB meetings held

First host country authorisations of ITMOs under Art 6.2 and first initial reports?

COP28 CMA5

31.12.2023
Host country approval for CDM activities seeking transition to A6.4M

COP29 CMA6

31.12.2024
First Biennial Transparency Reports by developing countries

First corresponding adjustments by host countries?

COP30 CMA7

31.12.2025
A6.4SB approval for CDM activities transitioning to A6.4M

Last day for applying CDM methodologies

Relevance of international carbon markets for agriculture and livestock

Carbon markets and agricultural sector

- **Soils** have significant potential to contribute to mitigation (GHG emission reduction / sink enhancement)

- While carbon markets for soil carbon offer huge benefits, they also face significant challenges, such as:
  - **Non-permenance risk**: carbon removal is fast
  - **Additionality** of soil carbon projects is often questioned (e.g., controversy about additionality of Australian SOC projects)
  - **Baseline setting and MRV** is cost-intensive
  - Uncertain land tenure arrangement and lack of comprehensive kand zoning create uncertainty on the **property rights to the emission credits**

- Increased availability of baseline methodologies - applicability for Art. 6 to be seen.

  E.g. Verra VM0017, VM0021, VM0042; Gold Standard: Soil Organic Carbon (SOC) Framework Methodology; Plan Vivo: SHAMBA

- **Rice field irrigation improvement** gaining traction
  - CDM and VCM methodologies exist, but projects remain few

Carbon markets and livestock sector

- **Strong CDM history** of activities for methane capture from anaerobic digestion of animal waste and use for energy
  - ➢ Pig and poultry manure: 248 projects registered of which 113 had issuances of **16.7 million CERs**
  - ➢ Largest of all CDM programmatic activities with **~1000 components** in Brazil, **7.6 million CERs issued**
- Some methodologies for **feed supplements to reduce methane emissions of ruminants** exist in national and voluntary markets
  - ➢ Australian Emissions Reduction Fund (ERF):
  - ➢ a) feeding nitrates to beef cattle, b) feeding dietary additives to milking cows
  - ➢ Verra methodology VM0041 developed by Swiss company Mootral in 2019
- Connections to SOC (grassland management)
- Clarify the relation to the **Global Methane pledge**
  - ➢ Article 6 potential depends on **coverage of methane by NDCs**

Summary

- **Article 6 rules define the framework for international carbon markets; full operationalization by 2025 likely**
- Close interaction between **compliance and voluntary markets through double bookkeeping (corresponding adjustments), Art. 6.4 bifurcation**
- **Demand for high-quality emission credits issued for the agriculture, forestry and other land use (AFOLU) sector has risen** substantially since 2016 **on the voluntary market**.
- **Forestry sector is at the forefront** in terms of project implementation (2/3 of all credits), closely **followed by the livestock sector** (with strong track record on **manure management** in the CDM)
- **New approaches for the agricultural sector are gaining traction: soil organic carbon (SOC) sequestration , rice field irrigation improvement**
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Thank You!

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