Offset Use Across Emissions Trading Systems

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What is an offset and how are they generated?

• An offset represents 1 tCO2e reduced or removed, compared to a counterfactual scenario
• Achieved by implementing emissions reduction projects
  – E.g., landfill methane capture, afforestation
• Projects normally take place in activities/sectors outside the scope of an ETS
• Generated by crediting mechanisms
  – “International” (e.g., Verra) or “Domestic” (e.g., CCER)
  – Mechanisms ensure compliance with requirements and issue units

Source: ICAP Offset Use Across ETS (2023)
Difference between allowances and offsets

They are much more different than they appear!

ETS jurisdiction

**Allowances:**
Units **under a cap**
**Inside** the ETS scope

**Offset credits:**
Credits against a **counterfactual** baseline
**Outside** the ETS scope

Source: ICAP Offset Use Across ETS (2023)

Source: La Hoz Theuer (2018)
Offsets and ETS: How and why?

- Regulated entities can surrender an offset instead of ETS allowance
- **Rationale:**
  - More flexibility for regulated entities
  - Can lower compliance costs (if offsets are cheaper than allowances)
  - Provides incentives for abatement outside of ETS scope
  - Stimulates learning outside the system
- **What’s happened in practice**
  - Often qualitative and quantitative restrictions on offset use

Source: ICAP & PMR ETS Handbook (2021)
Using offsets

**Benefits**

- **Cost containment**: Realizing low-cost mitigation opportunities from uncapped sectors
- May allow policy makers to set a more ambitious cap
- **Expand abatement incentives and co-benefits** to uncovered sectors
- May facilitate **transition** to marked-based mechanisms in uncovered sectors and countries
- **Target** specific policy goals
Using offsets

Challenges

• **Lower allowance prices** and fewer incentives to reduce in covered sectors
• Establishing **additionality**, i.e., if it would not be implemented in the absence of the crediting mechanism, holding all other factors constant

• **High transaction costs**

• **Reversal**: Offset credits from sequestration projects might have a **non-permanent mitigation** effect only

• Shifting activities, market and investment **leakage**

• **Distributional issues**: Offsets imply resource transfers to areas outside the ETS or abroad

• **Subsidy lock-ins**: Offsetting sectors may resist eventual inclusion in ETS
Offset design considerations

Geographic coverage

**Domestic system**

- Attractive where *domestic emissions reductions* are key priority
- Keeps *co-benefits* of mitigation in the jurisdiction
- May reduce *MRV and compliance concerns*

**International system**

- Expands supply and offers more low-cost abatement options
- Aids *international cooperation*, provides carbon finance to specific regions, countries or sectors
- Potentially greater concerns with ensuring environmental integrity
Offset design considerations

Option to connect to existing mechanism

- **Set up a domestic crediting mechanism**
  - Tailor to local context, more domestic control
  - Saves the costs of establishing a new program but less domestic control over offset system

- **Outsourcing**: building on international program, but with domestic oversight

- **Gatekeeping**: additional domestic qualitative and quantitative restrictions

- **Full reliance** on externally administered mechanism
Current status of offset use around the world

Source: adapted from: ICAP Offset Use Across ETS (2023)
Carbon credits and compliance instruments

- At present, compliance instruments only represent a small portion of the demand for carbon credits
- This can change over time: in the past they were virtually the only source of demand (EU ETS and NZ ETS for the CDM)
- Compliance-driven demand is highly fragmented and characterized by low-fungibility
- Different approaches to: geographical/sectoral scope, level of reliance on offsets, use of standards and methodologies for generation.

Retirements of carbon credits in 2022

Source: Own elaboration based on WB State & Trends of carbon pricing (2023)
European Union and New Zealand

Harnessing the potential of the Kyoto Protocol’s flexible mechanisms

• Early years: extensive integration with Kyoto Protocol flexibility mechanisms
• Lots of offsets used for compliance; high supply of KP units
  – But this contributed to declining allowance prices
  – + Impacts of financial crisis
• Concerns about quality of some offsets
• EU: Major restrictions introduced from 2013, significantly curtailing offset eligibility
• NZ: Market price for international offsets crashed from late 2012 (drop in demand after financial crisis + higher-than-expected supply volumes of KP units)
  – No limits, so rush of international offsets to NZ → NZU price crash, halt in domestic abatement activities, buildup of NZUs in circulation
• Both EU (disallowed 2021) and NZ (disallowed 2015) now exclude offsets entirely
China and Republic of Korea

*Domesticating Kyoto flexibility mechanisms*

- China and South Korea originally involved as CDM host countries
  - Helped establish experience and capacity for government and in developing carbon offset projects
- Experience with CDM key to establishing their own crediting mechanisms
  - Chinese Certified Emission Reductions (CCER) scheme
  - Korean Credit Units (KCU) scheme
- **CCER**
  - 2017: Need to revise “Interim Measures” → suspended CCER
  - Signals that CCER will become operational again
- **KCU**
  - Domestic projects to generate Korean Offset Credits + (some) CDM CERs allowed
  - Domestic and international offsets are converted to KCUs before being used for compliance
Western Climate Initiative and Regional Greenhouse Gas Initiative

Using domestic crediting mechanisms

- Offsets allowed, though eligibility varies between programs
- Systems follow broader guidelines to make offsets comparable and fungible across borders
- Administered independently
- Environmental integrity approaches:
  - Québec: environmental integrity account used to replace any offsets deemed illegitimate after issuance
  - California: buyer liability → state can invalidate offsets later determined not to meet the protocol requirements and the entity must substitute it
  - Forest Buffer Account for wildfires/pests
In the works

New offset regulations in existing ETSs / upcoming ETSs with offset provisions

• Mexico
  – Flexibility mechanisms including offsets currently under development

• Colombia
  – 2018 climate change law includes crediting provisions
  – Offsets used under carbon tax since 2017
  – ETS under development, expected pilot phase in 2024 / full operation in 2025
  – Offset provisions not yet defined

• Vietnam, Indonesia
  – Developing a national crediting program
Takeaways

*Looking back, looking ahead*

1. Clear move away from international crediting mechanisms in the last decade
2. International mechanisms have nevertheless played a key role in supporting the growth of domestic mechanisms
   - E.g., building capacity, developing methodologies
3. Where allowed, offset use is carefully regulated by governments
   - Balance between flexibility for participants and achieving the ETS targets
4. Offsets must be of high integrity or risk undermining ETS objectives
5. Offsets look to play a prominent part in the next generation of ETS/CPIs, often countries setting up domestic mechanisms
6. Article 6 and independent standards can offer additional opportunities going forward
New ICAP publication

- Available on ICAP website
- Overview of offset provisions in several major ETSs around the world
- Provides outlook for offsets in the future

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Thank you

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