

Addressing Carbon Reversal Risks from LULUCF Activities

New Approaches for Projects and Potential Large-Scale Mitigation Activities

Non-Permanence, Reversals and the UNFCCC

Non-permanence and reversals – the issue:

- Carbon stored in terrestrial sinks, such as forests and soils, is susceptible to “re-emission” when disturbed by natural phenomena or human intervention.
- Emission reductions and removals from land use, land-use change and forestry (LULUCF) must be adjusted to account for such reversals.
- Adjusting for reversal risks protects the environmental integrity of LULUCF CDM projects—currently confined to afforestation/reforestation (A/R)—but lowers financial returns.

To date the CDM has addressed project reversal risk with temporary crediting (tCERs and ICERs):

- Temporary Certified Emission Reductions (tCERs) expire at the end of the commitment period following the one during which they were issued and long-term Certified Emission Reductions (ICERs) expire at the end of a project’s crediting period.
- The entity that used the temporary credit for compliance purposes must ultimately replace each unit with a permanent credit.
- There has been little market demand for LULUCF CDM credits in part due to their limited fungibility and their ban from the EU-ETS and other climate policy regimes.

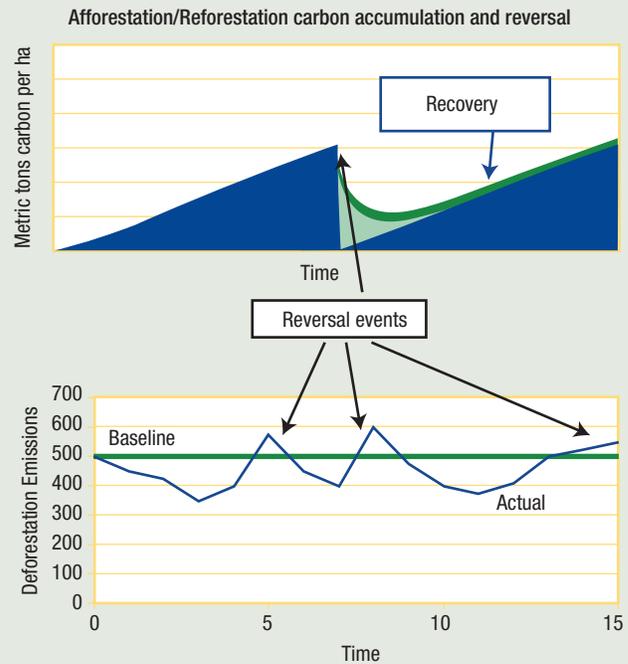


Figure above at top shows stand-level reversal event for an afforestation/re-forestation project due to harvest of the stand. Bottom figure shows reversal from a REDD project, where deforestation emissions exceed the baseline

The UNFCCC gives a platform to revisit the issue of non-permanence and consider other approaches for handling reversal risks:

- Parties are considering requesting the Subsidiary Body for Scientific and Technical Advice (SBSTA) to explore new approaches for addressing non-permanence in the CDM.

LULUCF Activities and Non-Permanence

Type of activity	Characteristics	Permanence considerations	Relevant project type
Emission reductions	Avoids land use conversion, disturbance or management activity that would otherwise occur and release stored carbon into the atmosphere	Emissions may simply be delayed if disturbance is deferred, rather than stopped (fire)	REDD+, avoided conversion of wetlands, grasslands, or croplands
Carbon sequestration	Changes land use or management to store more carbon on site	Carbon stocks or newly sequestered carbon can be re-emitted to the atmosphere as CO ₂	Afforestation/Reforestation, carbon stock enhancement, agricultural soil management, wetlands and grassland restoration

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- ✦ In parallel, the process for including reduced emissions from deforestation and degradation (REDD+) lists addressing reversal risk as part of the safeguards.
- ✦ Reduced emissions from agriculture may need to address reversals as well.
- ✦ An opportunity exists for integrating reversal approaches for different activity types and at different scales of operation.

New Approaches

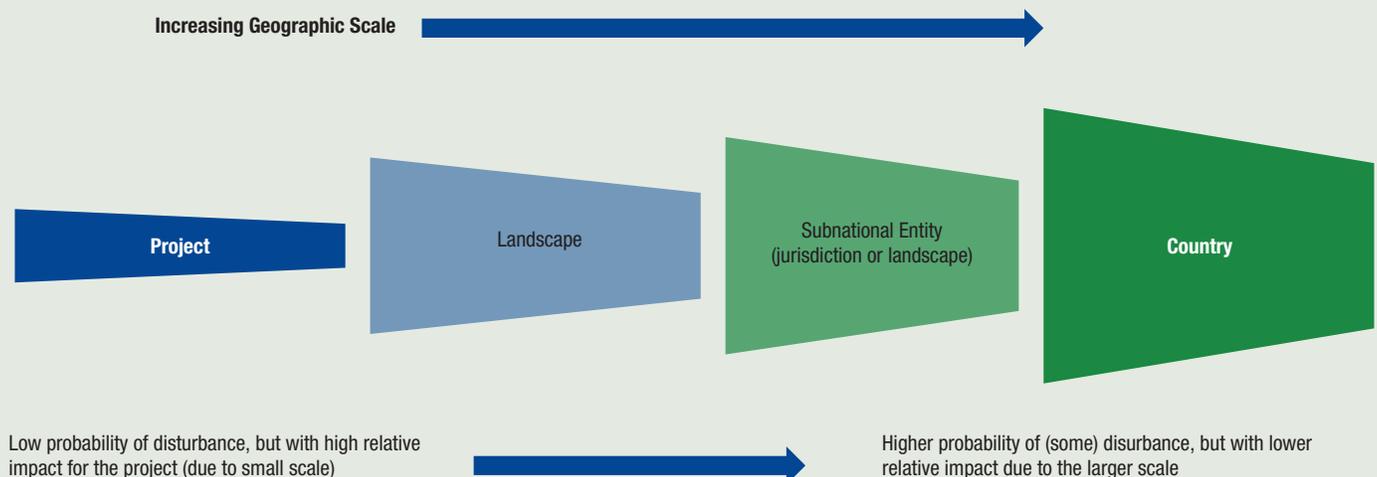
Other ways of handling project reversals may allow emission reductions from LULUCF activities to be more comparable with emission reductions from mitigation activities in other sectors.

Other ways of dealing with non-permanence besides temporary crediting can result in the recognition of credits from LULUCF activities that are fungible with credits from mitigation in other sectors. Reversal mechanisms used in the voluntary carbon market, other innovative risk mitigation instruments, and country guarantees of projects (potentially with support of appropriate financial instruments) may hold promise for LULUCF activities in the UNFCCC process.

Advantages of Risk Pooling

Aggregation of projects or activities at large geographic scales can help manage reversal risks.

Any one project may have a relatively small chance of a reversal. But if the reversal adversely impacts on the carbon gains to date, it can be devastating to the project. Pooling multiple projects at the landscape, jurisdictional or national scales can help diversify project risks and provide a mechanism for covering the projects that experience reversals. Pooling risks across projects could be done using reserve accounts, insurance, or host guarantees of projects (above); or by moving from project accounting to national or jurisdictional accounting (below).



National and Jurisdictional Accounting

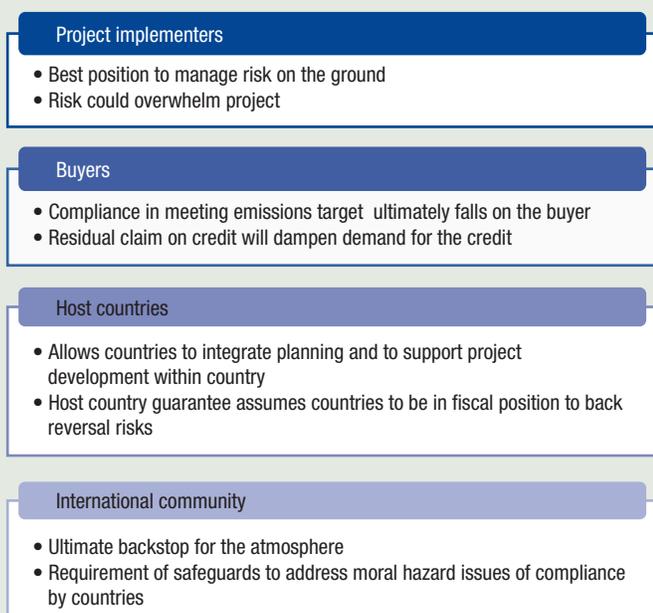
Moving from project to subnational or national accounting automatically pools project risks. However it imposes responsibilities on the host government for maintaining project and non-project carbon stocks.

One option for pooling risks is to scale up the accounting from the project level to the national level, or to subnational entities such as legal jurisdictions (e.g., states, provinces, districts) or distinct landscapes (e.g., watersheds). National accounting is already part of the framework being discussed for REDD+. It could be extended in principle to the CDM if it incorporates other LULUCF activities over time. Projects could still be maintained under this system, but reconciliation between project and national (subnational) accounts may be necessary via “nested” accounting.

UNFCCC Considerations Moving Forward

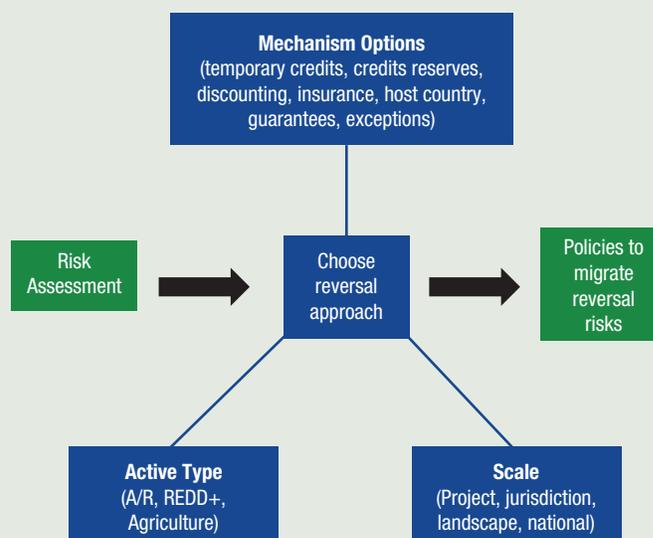
1. Determining the Responsible Entity for Reversals

A key aspect of risk management is assigning responsibility for rectifying the reversal event. There are several links in the chain where responsibility can be assigned. Each approach has different implications for stakeholders in the LULUCF mitigation activities.



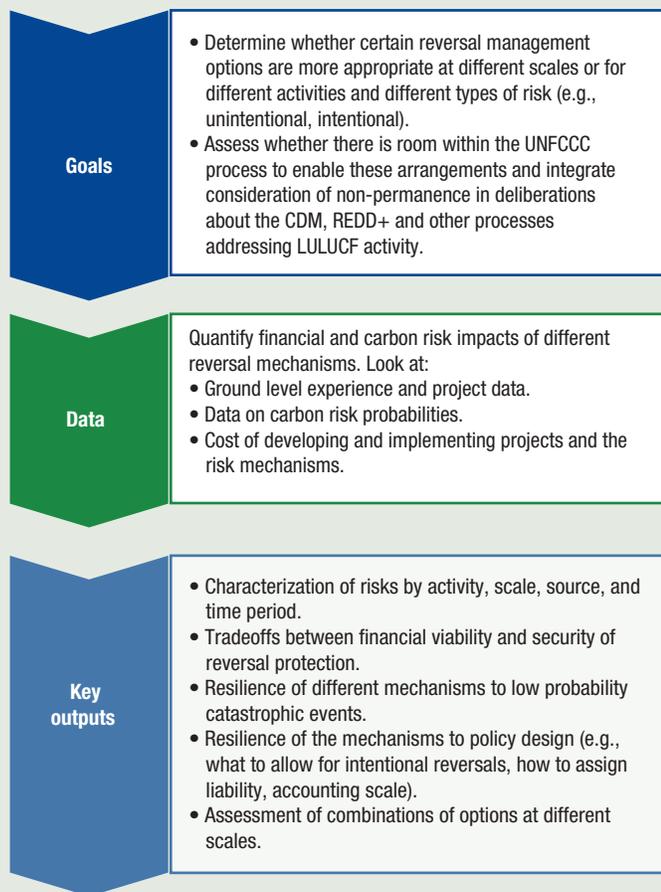
2. Combinations of Approaches for Addressing Non-Permanence Risk

UNFCCC Parties need to consider whether the current system of temporary crediting is to be refined, replaced, or supplemented with alternative options for addressing the risk of non-permanence or reversal. A combination of approaches may be needed, rather than one approach to fit all circumstances. Parties may consider whether reversal requirements need to be strictly prescribed, or whether countries will have the option to select relevant approach(es) from a menu of approaches consistent with UNFCCC guidance and tailored to national circumstances. The specific activity and accounting scale may determine the most appropriate reversal mechanism. The selection of the appropriate reversal mechanism should be preceded by a rigorous risk assessment, and succeeded by the implementation of policies to mitigate reversal risk.



3. Analysis Needed to Inform UNFCCC Decisions

To help inform the UNFCCC process, the World Bank's BioCarbon Fund is sponsoring analytical work to rigorously assess options for addressing reversals at different scales and activities. The work has several dimensions to it.



The work is expected to present an analysis of promising approaches and combinations thereof for consideration in the UNFCCC process. An issue paper will be published and disseminated in 2012.

Summary

- ★ LULUCF projects are susceptible to risks leading to reversal of carbon sequestered in mitigation activities, which must be addressed in accounting;
- ★ Current approaches adopted in the CDM have limited the market for LULUCF projects and their credits;
- ★ The UNFCCC is seeking new approaches for addressing non-permanence under the CDM, and potentially at multiple scales, from individual projects to higher scales of aggregation (e.g., national);
- ★ Combinations of approaches may be appropriate for different activities, scales, risks within and the capacity of countries to implement these mechanisms;
- ★ Rigorous analysis is needed to assess the financial viability, environmental integrity and practical feasibility of different approaches.

For More Information

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