



V1.1 July 2024

Risk Assessment for Carbon Loss or reversal Events under the UK Carbon Code of Conduct

This risk assessment evaluates potential carbon loss events from fire, wind, storm, and poor management affecting projects approved by the UK Carbon Code of Conduct. It also outlines mitigation strategies to reduce these risks. Project developers shall work with project hosts to ensure risk of loss mitigation strategies are considered and implemented.

1. Introduction

Projects registered under the UK Carbon Code of Conduct aim to remove atmospheric carbon through change in land management practices. However, various risks can threaten the permanence and effectiveness of these carbon removal efforts. This assessment identifies key risks and provides recommendations for minimizing carbon losses.

2. Risk Assessment

2.1 Fire

Risk Description

Fires, whether natural or human-induced, can cause significant carbon loss by destroying biomass and releasing stored carbon dioxide into the atmosphere.

Risk Factors

- Drought conditions increasing fire likelihood
- Human activities such as campfires or arson
- Accumulation of dry biomass increasing fire fuel

Mitigation Strategies

- 1. Fire Breaks and Buffer Zones:**
 - Establish fire breaks and buffer zones around forested areas to prevent the spread of fire.
- 2. Regular Monitoring:**
 - Implement regular monitoring and surveillance to detect fires early.
 - A continual adoption of regenerative practices should ensure green cover is maintained and improved as each project matures.
- 3. Community Engagement:**
 - Engage local communities in fire prevention activities and education.



4. Controlled Burns:

- Conduct controlled burns to manage biomass accumulation and reduce fire risk.

5. Firefighting Resources:

- Ensure adequate firefighting resources and training are available.

2.2 Wind

Risk Description

High winds can damage trees, leading to physical loss of biomass and increased vulnerability to disease and pests.

Risk Factors

- Geographic location and topography
- Tree species susceptibility to wind damage
- Extreme weather events

Mitigation Strategies

1. Species Selection:

- Choose wind-resistant tree species and implement mixed-species planting to enhance resilience.

2. Structural Management:

- Implement silvicultural practices such as pruning and thinning to reduce wind resistance.

3. Windbreaks:

- Establish windbreaks using robust species to protect vulnerable areas.

4. Diversification:

- Diversify plantings to include species with varying root structures and growth habits.

2.3 Storm

Risk Description

Storms can cause widespread damage to vegetation, leading to carbon losses through uprooting and structural damage.

Risk Factors



- Frequency and intensity of storms
- Soil type and stability
- Forest structure and age

Mitigation Strategies

- 1. Soil Management:**
 - Improve soil stability through planting deep-rooted species and maintaining ground cover.
- 2. Infrastructure:**
 - Design and maintain infrastructure to manage stormwater and prevent erosion.
- 3. Emergency Response Plans:**
 - Develop and regularly update emergency response plans for storm events.
- 4. Regular Maintenance:**
 - Conduct regular maintenance and inspections to identify and address vulnerabilities.

2.4 Poor Management

Risk Description

Ineffective or negligent management can lead to suboptimal growth, increased vulnerability to pests and diseases, and carbon sequestration losses.

Risk Factors

- Lack of expertise or resources
- Poor planning and implementation
- Inadequate monitoring and reporting

Mitigation Strategies

- 1. Training and Capacity Building:**
 - Provide ongoing training and capacity-building initiatives for project managers and staff.
- 2. Management Plans:**
 - Develop and implement comprehensive management plans with clear objectives and monitoring protocols.
- 3. Regular Audits:**
 - Conduct regular audits and assessments to ensure compliance with best practices and standards.



4. Stakeholder Engagement:

- Foster stakeholder engagement and collaboration to enhance project oversight and accountability.

3. Monitoring and Evaluation

- **Regular Monitoring:** Establish a robust monitoring system to assess the effectiveness of mitigation strategies and track changes in carbon stocks.
- **Data Collection:** Collect data on weather patterns, biomass growth, and disturbance events to inform adaptive management strategies.
- **Performance Indicators:** Develop performance indicators to measure progress in risk reduction and carbon sequestration.

4. Conclusion

Effective risk management is crucial for the success and sustainability of carbon sequestration projects under the UK Carbon Code of Conduct. By implementing targeted mitigation strategies and fostering adaptive management, projects can significantly reduce the impact of carbon loss events and enhance their resilience to environmental challenges. Regular monitoring and stakeholder engagement are essential components of a robust risk management framework.



UK Carbon Code of Conduct: Carbon Loss or Reversal Event Response and Compensation Protocol

Introduction

The UK Carbon Code of Conduct (UKCCC) establishes a comprehensive framework to ensure the integrity of carbon credits generated by various projects. A critical aspect of maintaining this integrity is the management of **carbon loss or reversal events**—situations where previously sequestered or reduced carbon emissions are unintentionally released back into the atmosphere, diminishing the value of carbon credits. This protocol provides a structured response and compensation plan to address such events and ensure the credibility of the UK carbon market.

1. Purpose of the Carbon Loss or Reversal Event Protocol

The main objectives of this protocol are to:

1. **Minimize the impact** of carbon loss or reversal events on the credibility and functionality of carbon credit projects.
 2. **Provide clear guidance** on the steps to take following an event, ensuring a swift and effective response.
 3. **Ensure compensation measures** are in place to offset any losses and restore the balance of sequestered or reduced carbon.
 4. **Hold responsible parties accountable**, ensuring transparency and trust in the carbon credit market.
-

2. Definition of Carbon Loss or Reversal Event

A **Carbon Loss or Reversal Event** refers to any situation in which carbon that has been sequestered, reduced, or otherwise accounted for by a carbon credit project is released back into the atmosphere. This could include:

- **Natural Disasters:** Wildfires, floods, storms, or other extreme weather events.
- **Project Failures:** Deforestation, habitat degradation, agricultural failure, or failure of technological solutions to capture carbon.
- **Anthropogenic Activities:** Illegal logging, land conversion, or intentional actions that result in carbon emissions from the project area.

Types of Reversals:



- **Temporary Reversals:** Reversals that can be addressed and corrected within a specific time frame (e.g., a forest fire where the forest can be replanted).
 - **Permanent Reversals:** Reversals that cannot be corrected, leading to permanent carbon loss (e.g., complete deforestation of a project site without the possibility of replanting).
-

3. Response Protocol for Carbon Loss or Reversal Events

3.1 Immediate Reporting of the Event

Once a carbon loss or reversal event has occurred or is suspected, the following steps must be taken immediately:

- **Project Developer Notification:**
The project developer must report the event to the UKCCC Commissioner and the carbon registry within 14 days of discovering the event.
- **Assessment of the Extent of Carbon Loss:**
The project developer, in consultation with the UKCCC, must assess the extent of the carbon loss or reversal and submit an initial report detailing the estimated emissions released or reductions undone.
- **Stakeholder Notification:**
The project developer must inform all relevant stakeholders, including credit buyers, investors, and local communities, about the event and the planned response actions.

3.2 Third-Party Verification and Assessment

- **Independent Verification:**
The UKCCC will commission an independent third-party verifier to assess the scope of the carbon loss or reversal, confirm the estimated emissions, and evaluate the cause of the event. The assessment must be completed within 60 days of the event report.
- **Root Cause Analysis:**
The third-party verifier will conduct a root cause analysis to determine if the event was the result of negligence, natural causes, or other unforeseen circumstances. This analysis is critical in determining liability and future preventive measures.

3.3 Containment and Remediation Measures



- **Immediate Containment Actions:**

The project developer must take immediate steps to minimize further carbon loss and prevent escalation of the situation. This could include:

- Containing wildfires.
- Preventing further deforestation or degradation.
- Rehabilitating damaged infrastructure.

- **Remediation Plan:**

The project developer must develop a remediation plan, including specific actions to restore carbon sequestration or reduction capacity. For example:

- Replanting trees in case of forest fires.
- Restoring wetlands or other ecosystems damaged by natural disasters.
- Adjusting technology or infrastructure for carbon capture projects.

The plan must be submitted to the UKCCC within 90 days of the event and approved before implementation.

4. Compensation Protocol for Carbon Loss or Reversal Events

When carbon loss or reversal occurs, compensation measures must be put in place to neutralize the impact of the released carbon and restore the balance of credits. The UKCCC outlines the following compensation mechanisms:

4.1 Buffer Pool Contribution

- **Buffer Pool System:**

All UKCCC projects are required to contribute a percentage of their carbon credits into a **buffer pool**. The buffer pool acts as an insurance mechanism, ensuring that in the event of a carbon loss or reversal, credits can be drawn from the buffer pool to compensate for the lost carbon.

- The contribution rate is typically 10-20% of all issued credits, depending on the risk profile of the project.
- The UKCCC Commissioners will determine the number of buffer credits to be allocated to offset the reversal, based on the independent verifier's report.

4.2 Purchase of Replacement Credits

- **Replacement from Market Credits:**

If the buffer pool cannot fully compensate for the carbon loss, the project developer may be required to purchase valid replacement credits from the carbon market.



These credits must come from UKCCC verified projects and be equivalent to the lost emissions reductions or sequestrations.

- Replacement credits must be purchased and retired within six months of the final verification report.
- The UKCCC will oversee the credit retirement process to ensure that all replacement credits are legitimate and meet the required standards.

4.3 Project Developer Liability

- **Financial Compensation:**

If the carbon loss or reversal event is found to be due to negligence or a violation of project protocols, the project developer may be held financially liable for compensating the carbon loss.

- Financial compensation may include paying for the cost of replacement credits or contributing to a broader restoration fund aimed at supporting environmental recovery efforts.
- Project developers may also be subject to fines or penalties under UKCCC regulations.

4.4 Reissue of Credits After Remediation

- **Restoration of Carbon Credits:**

If the carbon loss or reversal is temporary and the project developer successfully implements the remediation plan (e.g., replanting trees), the UKCCC may authorize the reissuance of carbon credits over time, based on the restored capacity for carbon sequestration or reduction.

- The reissued credits will be subject to additional verification and monitoring to confirm that the carbon has been sequestered or emissions reduced as claimed.

5. Monitoring and Long-Term Measures

5.1 Post-Reversal Monitoring

- **Continuous Monitoring:**

Following a carbon loss or reversal event, enhanced monitoring will be required to ensure that similar events do not reoccur. Project developers must submit more frequent reports and implement additional risk mitigation strategies.



- **Re-evaluation of Risk Profile:**
The risk profile of the project will be reassessed to determine if higher buffer pool contributions or additional safeguards are needed to prevent future reversals.

5.2 Preventive Measures and Best Practices

- **Risk Mitigation Plans:**
All projects must develop and implement risk mitigation plans that account for potential natural and human-made risks. This may include:
 - Fire prevention and management strategies.
 - Infrastructure reinforcement for carbon capture technology.
 - Community engagement to prevent illegal activities such as deforestation.
- **Training and Capacity Building:**
Project developers must ensure that local communities, workers, and stakeholders are trained to handle reversal events and minimize their impacts.

6. Roles and Responsibilities

- **Project Developers:**
Responsible for promptly reporting carbon loss or reversal events, implementing containment and remediation measures, and compensating for carbon losses through the buffer pool or by purchasing replacement credits.
- **UKCCC Commissioner:**
Oversees the entire response process, from reporting and verification to compensation and remediation. Ensures that project developers comply with the protocol and enforces penalties if necessary.
- **Third-Party Verifiers:**
Independently assess the extent and cause of carbon loss or reversal, ensuring accurate reporting and verification of both the event and any subsequent remedial actions.
- **Carbon Registry:**
Tracks the status of carbon credits, facilitates buffer pool withdrawals, and ensures the proper retirement of replacement credits.

7. Penalties and Enforcement

- **Fines and Penalties:**
If a project developer is found to have been negligent or failed to follow the required



protocols, they may face financial penalties or suspension from the carbon credit registry.

- **Project Suspension or Delisting:**

In cases of significant non-compliance or repeated reversals, the UKCCC reserves the right to suspend or delist the project, invalidating any future credit issuance until compliance is restored.

8. Conclusion

The **Carbon Loss or Reversal Event Response and Compensation Protocol** ensures that carbon credit projects under the UKCCC maintain high integrity and transparency. By addressing carbon loss events swiftly and comprehensively, the UKCCC upholds its commitment to maintaining a credible and effective carbon market that delivers real, lasting climate benefits.

The UKCCC recommends that project developers insure all carbon credits with a reputable provider to cover the cost of replacing lost carbon credits.
