The Carbon Reserve
Mitigation Value Assessment Framework

July 2024

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Part 1
Overview of concepts and terminology

1. Key terminology

1.1 *Carbon mitigation assets (CMAs)* are defined as any instrument generated as part of a scheme, project or program; the purpose of which is mitigation of carbon emissions, usually measured in base units of a tonne carbon dioxide equivalent greenhouse gas (tCO_2e).

1.2 *Mitigation value (MV)* is defined as a measure of the quality of mitigation efforts, or put another way, the expected mitigation impact measured in tonne CO2e after discounting for mitigation risks. MV is designed as a measure to provide assurance of the environmental integrity of the carbon mitigation asset.

1.3 *Toco* is the fungible unit of a 'transactional currency' based on MV to facilitate trade of heterogenous CMAs. Each unit in supply equals 1 (one) tonne of CO_2e.

2. The Foundation

2.1 The Carbon Reserve ("the Foundation") is a Swiss incorporated non-profit foundation.

2.2 The Foundation mandate is to expand carbon markets and increase carbon market participation.

2.3 The Foundation provides market participants with a safe, flexible, and stable international unit of trade (the toco) that enables and supports credible atmospheric carbon reduction.

2.4 The Foundation issues and regulates the supply of toco such that the mitigation value (MV) of each unit in supply equals 1 (one) tonne of CO_2e.

2.5 The mitigation value (MV) of the toco is backed by a portfolio of high quality, verified carbon mitigation assets (CMAs) that is actively managed by the Foundation.

2.6 The need to assess mitigation value (MV) arises from the heterogenous nature of CMAs. MV is intended to provide a way to differentiate between assets that are generated from mitigation actions that vary in their risk, design, integrity, implementation and impact. MV seeks to adjust for risk and provide assurance of the level of carbon (environmental) integrity of the asset.

2.7 This framework sets out the Foundation's risk-based approach to assessing mitigation value (MV) of heterogeneous mitigation actions and their associated CMAs.

3. Mitigation actions

3.1 GHG emissions cause climate change.

3.2 Mitigation action (MA) is required to minimise the worst impacts of climate change.

3.3 A mitigation action includes any action to:

3.3.1 limit, reduce or avoid GHG emissions, or

3.3.2 preserve or enhance sequestration sinks.

3.4 Once measured and verified, mitigation actions can be translated to mitigation outcomes.

4. Mitigation outcomes

4.1 Mitigation actions vary considerably in:

4.1.1 their design parameters.

4.1.2 the levels of governance and transparency of the jurisdiction, scheme or project in which they originate.

4.1.3 their characteristics, including but not limited to the type, location, sector, and methodology applied to arrive at the claimed mitigation outcome.

4.1.4 the robustness of their measurement and/or estimation.

4.1.5 their occurrence, i.e. whether they are ex-post or ex-ante.

4.1.6 the degree to which permanence can be assured.

4.1.7 the risk of fraud and potential for double counting or claiming.

4.2 By implication mitigation outcomes are expected to differ from one carbon mitigation outcome to

another, given the number of factors that affect whether any mitigation action realises its anticipated mitigation outcome.

5. Carbon mitigation assets

5.1 Carbon mitigation assets (CMAs) represent mitigation outcomes, measured in base units of a tCO_2e.

5.2 They are defined as any instrument or derivative generated as part of a scheme, project or program the purpose of which is mitigation of carbon emissions.

5.3 CMAs take various forms:

5.3.1 In *compliance markets*, allowances are usually issued by a compliance scheme administrator to scheme entities emitting GHGs who have obligations under the scheme to mitigate their emissions.

5.3.2 In *voluntary markets*, credits/offsets are generated by projects which avoid or reduce emissions that would otherwise occur, or which sequester GHGs from the atmosphere.

5.3.3 *Other forms* of asset might include any units issued pursuant to meeting mitigation commitments, for example, energy intensity units, tax credits, etc. that are issued under other schemes or pricing mechanisms.

6. Mitigation value

6.1 The need to assess mitigation value (MV) arises from the heterogenous nature of CMAs.

6.2 MV is intended to provide a way to differentiate between CMAs that are generated from mitigation actions that vary in their risk, design, integrity, implementation and impact.

6.3 MV seeks to adjust for risk and provide assurance and guidance on the integrity of the CMA claim.

6.4 Determination of MV follows a risk-based approach.[1]

6.5 Mitigation value (MV) therefore represents the expected mitigation impact measured in tonne CO2e after discounting for all the risks associated with any unit of reduction claimed (e.g. credit issued, or allowance to emit a ton of CO_2e).

6.6 MV = CMA x R where:

6.6.1 MV is the mitigation value (tCO_2e)

6.6.2 CMA is the CMA face value (tCO_2e)

6.6.3 R is the mitigation risk expressed as the probability that 1 tCO_2e is achieved with consideration of all risk factors that impact its creation.

7. Mitigation risk

7.1 Mitigation risk (R) is the level of confidence that the mitigation outcomes (tCO_2e) from emission reductions or removals claimed by any CMA occurred.

7.2 Mitigation risk arises from the implied heterogeneity of mitigation outcomes.

7.3 Mitigation risk is the probability that the tCO_2e reductions or removals claimed by the CMA are:

7.3.1 real, measurable, and verifiable.

7.3.2 permanent.

7.3.3 additional.

7.3.4 not double counted.

7.3.5 achieving the claimed net decrease and/ or avoidance of GHGs.

[1] MV could either be thought of as being binary or risk adjusted, for example, in the binary approach favoured by some, if a project is deemed to be additional and meets the rest of the requirements a credit is issued, if not there is no issuance. The reality however is that as a counterfactual argument, a project can never be said with 100% certainty to be additional or not. As such the better approach is to assign it a risk-adjusted value (between 0% and 100%). This approach is more in line with the realities of how the credits are created.

PART 2

The mitigation value assessment framework

8. Rationale

8.1 Market certainty and clarity in the carbon mitigation “worthiness”, i.e. the MV of the Foundation’s portfolio of CMAs are vital to pursue the foundation’s mandate.

8.2 The Foundation requires consistent assignment of MV across its portfolio of CMAs to provide input for portfolio management decisions to ensure long term toco MV stability.

8.3 The Foundation requires a framework to guide the development of a risk-based approach to assessing CMAs in existing carbon markets as well as new markets that can supply mitigation outcomes. No such framework exists today nor any independent proven rating agencies.

8.4 A risk-based approach to assessing CMAs is considered by the Foundation better than a binary approach for several reasons:

8.4.1 Allows for a more detailed and nuanced evaluation of CMAs.

8.4.2 Captures CMA complexity better than a binary approach, which might oversimplify by categorizing credits only as "acceptable" or "unacceptable" without recognizing the spectrum of quality, creating a barrier to entry.

8.4.3 Provides detailed information about the specific risks and strengths of each CMA, allowing stakeholders to choose CMAs that align with their risk tolerance and environmental goals and/or to deploy portfolio strategies to achieve their objectives.

8.4.4 Encourages project developers to improve their practices and reduce identified risks leading to overall improvements in the quality of CMAs over time.

8.4.5 Allows for differential pricing based on the CMA risk profile.

8.4.6 More flexible and adaptable to changing conditions and new information as the market develops.

8.4.7 Avoids arbitrary cutoffs that may exclude support for mitigation activities that are mostly, but not perfectly, compliant with best practices.

8.5 A structured framework for risk-based assessment of MV will help the Foundation to:

8.5.1 Identify and prioritize CMAs that effectively lower atmospheric carbon.

8.5.2 Make informed decisions based on the comparative effectiveness of different mitigation strategies.

8.5.3 Efficiently allocate its financial resources to deliver the highest environmental benefits.

8.5.4 Enhance transparency in reporting and evaluation of carbon mitigation actions and ensure that claims of carbon reduction are substantiated by rigorous analysis.

8.5.5 Align its strategy with global climate goals and demonstrate its commitment to environmental stewardship to the toco community.

8.5.6 Facilitate communication and collaboration with stakeholders.

8.6 Importantly, the framework and methodologies are publicly available with the intention to drive broader benefits for carbon market participants, including:

8.6.1 *Increase demand for mitigation outcomes* - The framework offers suppliers of CMAs with insight into the how the Foundation assigns mitigation value. This, combined with clear price signals, is expected to provide a demand stimulus as the Foundation ramps up investment in CMAs.

8.6.2 *Lower barriers to entry* - The use of a standardised risk-based approach to determine MV will lower barriers to new entrants and help develop carbon markets.

8.6.3 *Facilitates due diligence* - The framework and methodologies offer guidance to stakeholders on common and accepted assessment practices to determine MV of CMAs with greater transparency.

8.6.4 *Comparability and benchmarking* - MVs offer a tool to compare mitigation outcomes and will improve fungibility over time.

8.6.5 *Quality improvement* - The ability to compare and benchmark mitigation actions will guide the prioritisation of design and implementation improvements.

8.6.6 *Benefits to toco holders* - Finally, the use of a framework offers transparent assurance to toco holders on the MV assignment of CMAs held in the Foundation portfolio and increases confidence in the long-term viability of toco ownership.

9. Framework principles

9.1 Broad application

9.1.1 This framework can be applied to determine the MV of any mitigation outcome, whether from existing or new markets.

9.2 Transparency

9.2.1 Data used for the purposes of MV assessment is limited to data that is publicly available.

9.2.2 MV raters are required to publish findings and commentary that support ratings in a transparent manner, such that the broader market can interpret the key areas of risks factored into the MV and rating determination.

9.3 Objectivity

9.3.1 Ratings should be based on objective data and evidence rather than subjective judgement. Assessors apply professional judgement when required.

9.3.2 Independent audits or reviews (both ad-hoc and periodic) are leveraged to validate risks assessments.

9.4 Conservative, risk-based approach

9.4.1 MV is determined based on a structured process of risk factor scoring.

9.4.2 As risk factor scoring is an imperfect process, a more conservative approach to risk scoring is adopted to reduce the risk that MV is overstated.

9.5 Ordinal ranking

9.5.1 MV is not an absolute determination of mitigation in tCO_2e, but probabilistic. When MV is assigned to a range of CMAs, following a consistent, risk-based approach, it therefore allows for the relative ranking of CMAs in terms of MV.

9.5.2 Ordinal ranking of CMAs is appropriate where the reference point for zero or low risk is likely to change. The ever-evolving integrity landscape in the VCM serves as an example, with the overall average integrity of CMAs from the VCM likely to improve over time.

9.6 Independent, skilled and accountable MV rating institutions

9.6.1 The foundation should not rely solely on, nor be biased towards its own assessment of MV.

9.6.2 A key part of establishing a robust mitigation value risk assessment framework is to look for suitable institutions to participate in the mitigation value assessment process.

9.6.3 Rating institutions should be independent, free from real or perceived conflicts of interest.

9.6.4 The Foundation encourages multiple organisations to become MV assessment agencies. The greater number of suitable raters there are, independently performing MV assessments, the greater the reliability of the MV assessment process will be.

9.6.5 MV raters are required to meet minimum standards of competence and skill, as defined by the Foundation from time to time and ideally subject to regulatory supervision.

9.6.6 MV rating institutions are accountable. Accountability is ensured via transparency obligations coupled with periodic audits.

9.6.7 Remuneration of MV assessment agencies should be structured to avoid potential conflicts of interest.

9.6.8 Until such time as suitable institutions exist, the Foundation will persist to perform MV assessments in line with this framework to achieve its mandate.

9.7 Useful, affordable and scalable

9.7.1 The cost to assign MV should be negligible in the larger ecosystem and have no bearing on the CMA producers' willingness to undertake a mitigation action.

9.7.2 MV assessment methodologies should be published and accessible. MV raters can enter the rating ecosystem with ease if the independence and skill criteria is met. Overall, reduced barriers allow for scalability of the MV raters ecosystem.

Part 3

The mitigation value assessment risks

10. Overview

10.1 The objective of the MV assessment is to quantify the overall mitigation value risk (R) of a CMA.

10.1.1 R is a function of the key risk factors that impact mitigation value realisation. These risk factors are the result of various areas of risk that arise during their creation.

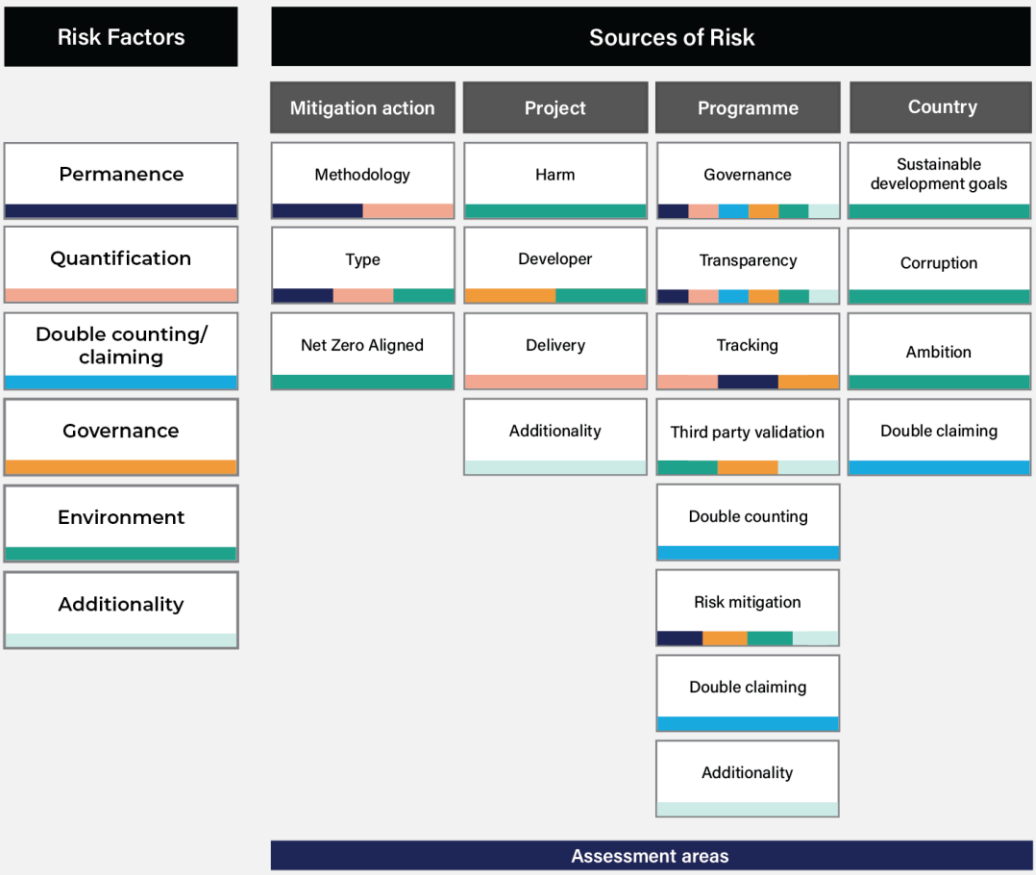
10.1.2 To ensure that risks are comprehensively identified, the framework requires a logical and structured approach to risk factor identification and assessment. As depicted in Figure 1:

10.2 Sources of mitigation value risk are the fundamental drivers that cause or contribute to the occurrence of a risk. This framework identifies four sources as depicted in Figure 1 and includes 1) the mitigation action, 2) the project, 3) the programme and 4) the country.

10.3 Risk areas are categories or types of risks that pertain to each source of risk. The framework offers guidance on the evaluation criteria used to assess the risks in each area.

10.4 The key risk factors are the risks that impact mitigation value and derive from each risk area. As depicted in Figure 1 they are the risks that impact permanence, quantification, double counting/claiming, governance, environment and additionality.

Figure 1: Mitigation value risks



11. Sources of risk

11.1 The following CMA attributes give rise to sources of MV risk:

11.1.1 The mitigation action, by its nature, inherently, has an impact on the MV of the mitigation outcome

11.1.2 Project specific actions and project developer influence have an impact on the MV of the mitigation outcome.

11.1.3 The programme (accreditation body) requirements, oversight and control environment have an impact on the MV of the mitigation outcome.

11.1.4 The country (project location) or jurisdictional enabling environment has an impact on the MV of the mitigation outcome.

12. Assessment areas

12.1 An assessment of risk originating from the mitigation action requires an assessment of the following risk areas:

12.1.1 *Methodology* - the risk that the applied methodology results in incorrect quantification of the mitigation outcomes or has inadequate measures to address permanence risk.

12.1.2 *Type* - the risk that the inherent nature of the mitigation action can result in reversal, increase the likelihood of quantification error or have a negative impact on the environment.

12.1.3 *Net zero align* - the risk that the mitigation action (technology and/or practice) is not aligned to a net zero approach, e.g. including mitigation activities that directly leads to an increase in the extraction of fossil fuels or indirectly will require reliance on fossil fuels or coal-fired electricity generation.

12.2 An assessment of risk originating at a project level requires an assessment of the following risk areas:

12.2.1 *Harm* - the risk that the project creates harm to the broader environment and has a negative environmental or social impact.

12.2.2 *Developer* - the risk that the project developer negatively impacts the mitigation outcome e.g. poor past performance, a lack of skills and experience and/or evidence of fraud / misconduct related to CMA projects.

12.2.3 *Delivery* - the risk that a mitigation outcome is not delivered to the buyer.

12.2.4 *Additionality* - the risk that the project fails to adequately assess the additionality of the mitigation action, with reference to barriers, financial attractiveness and/or market conditions.

12.3 An assessment of risk contributed by the related programme requires an assessment of the following risk areas that have an indirect impact on the validation of mitigation outcomes:

12.3.1 *Governance* - the risk that the accrediting body lacks proper general governance, policies and procedures.

12.3.2 *Transparency* - the risk that the accrediting body lacks robust transparency in terms of its programme and registry operations.

12.3.3 *Tracking* - the risk that the accrediting body lacks policies and procedures to adequately track the issuance, transfer and/or cancellation of carbon credits.

12.3.4 *Third party validation* - the risk that accrediting body requirements applicable to third party validators and the validation process is inadequate to ensure reasonable validation of mitigation outcomes.

12.3.5 *Double counting* – the risk that the programme level measures fail to avoid the double counting of mitigation outcomes, including the registration of projects on more than one registry or issuance of credits on more than one registry.

12.3.6 *Risk mitigation* - the risk that carbon crediting body lacks robust risk mitigation measures. Risk mitigation measures include (but not limited to) e.g. maintenance of buffer pools to compensate for reversals.

12.3.7 *Double claiming* – the risk that the carbon crediting body fails to implement processes that identifies / avoids double claiming with the project's host country.

12.3.8 *Additionality* – the risk that the carbon crediting body requirements related to additionality fail to identify mitigation outcomes that are not additional.

12.4 An assessment of risk originating from the country requires an assessment of the following risk areas:

12.4.1 *Sustainable Development Goals* - the risk that the country level commitment/ability to achieve progress towards achieving the sustainable development goals has an indirect negative impact on the enabling environment in which mitigation action takes place.

12.4.2 *Corruption* - the risk that perceived country level corruption has an indirect negative impact on the enabling environment in which mitigation action takes place.

12.4.3 *Ambition* - the risk that country level ambition to achieve climate goals (as expressed in its nationally determined contributions) has an indirect negative impact on the enabling environment in which mitigation action takes place.

12.4.4 *Double claiming* – where double claiming with the host country should be avoided, the risk that the lack of host country measures to avoid double claiming results in improper recognition of mitigation outcomes.

13. Risk Factors

13.1 Mitigation risks are impacted by risk factors that arise from the assessment areas.

13.2 The risk factors are:

13.2.1 *Permanence* - the risk that the greenhouse gas emission reductions or removals achieved by a mitigation activity are reversed or undone in the future.

13.2.2 *Quantification* - the risk that a mitigation outcome is inaccurately quantified or inflated.

13.2.3 *Double counting/claiming* - the risk that a mitigation outcome is counted or claimed more than once.

13.2.4 *Governance* - the risk that poor governance at the programme level (including related to tracking, transparency and independent validation) impact the mitigation value of a mitigation outcome.

13.2.5 *Environment* - the risk that the mitigation action has a negative direct or indirect impact on the broader physical environment and/or society.

13.2.6 *Additionality* - the risk that a mitigation outcome was generated in the presence of financial or regulatory incentives.

14. Consideration of risk in the context of Foundation portfolio management

14.1 The key risk factors as outlined in Figure 1 have relevance in the context of:

14.1.1 the Foundation's definition of mitigation value.

14.1.2 The Foundation's approach to prioritisation of CMAs for inclusion in its portfolio.

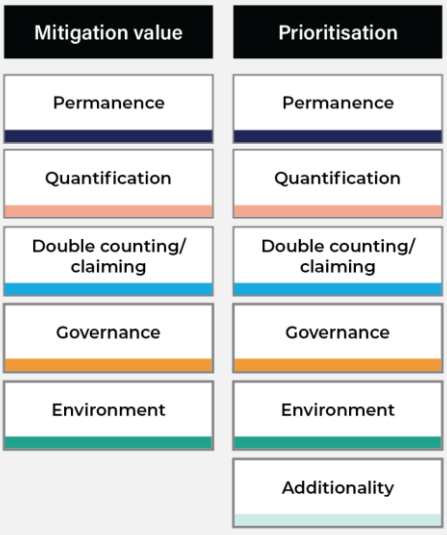
14.2 *Mitigation value* – the mitigation value of a CMA is determined in relation to mitigation risk (R). As outline in figure 2, the key risk factors that contribute to mitigation risk is permanence, quantification, double counting/claiming, governance, responsible and environment.

14.3 *Prioritisation* – Prioritisation of CMAs for inclusion in the portfolio of the Foundation is considered with the inclusion of a view on additionality risk (excluded from the definition of mitigation value).

14.3.1 Additionality risk is defined as the risk that a mitigation outcome was generated in the presence of financial or regulatory incentives.

14.3.2 It is the view of the Foundation that additionality risk does not impact the carbon integrity or mitigation value of a CMA and is therefore only included when prioritising CMAs for inclusion in its portfolio. The Foundation prefers inclusion, in its portfolio, of CMAs with higher additionality, specifically when considering that lower additionality risk has a favourable impact on the financial and compliance values of CMAs, factors that impact broader portfolio management.

Figure 2: Risk relevance



Part 4

The mitigation value assessment methodology

15. Overview

15.1 The MV assessment methodology follows a 5-step approach and is performed with the use of the standardised assessment tool.

16. Step 1: Score

16.1 Areas of risk are assessed against criteria with the use of a set of pre-defined questions.

16.2 Question responses require a score assignment, based on the following standardised scoring system:

16.2.1 1 = very low confidence

16.2.2 2 = low confidence

16.2.3 3 = moderate confidence

16.2.4 4 = high confidence

16.2.5 5 = very high confidence

17. Step 2: Weight

Assessment areas

17.1 The score of each assessment area is calculated based on a weighted average of the scores achieved for each question.

17.2 Questions are ranked and weighted based on relative importance to the area being assessed.

Sources of risk

17.3 Assessment area scores contribute to the score per source of risk.

17.4 Inverse weighting of assessment area scores are used. Inverse weighing means that as the score of a criterion increases, the overall weighing of the criterion decreases. This ensures that a low score for one area cannot be overcome by high scores in other areas. At the same time, a high score in one area cannot by itself guarantee a high overall score. Guidance on the approach on inverse weighing is taken from Trexler (2019) and is adopted by CCQI.

Risk factors

17.5 Assessment areas contribute to the risk factor scores. Assessment areas are mapped to risk factors.

17.6 Inverse weighting of risk factor scores are used as outlined in 17.4.

17.7 An overall score for risk factor is calculated using inverse weighing a outlined in 17.4.

18. Step 3: Rank

18.1 The score offers guidance to the assessor of the overall mitigation risk (R).

18.2 The assessor is required review the high-level scores assigned to risk components and sources of risk, forming the basis for an overall risk assignment.

18.3 The assessor should also take care to identify areas of significant weakness that may need to be considered in arriving at a final risk rating (see figure 3). The assessor evaluates the relative mitigation risk of a CMA to arrive at ordinal ranking for CMAs.

Figure 3: Ratings guideline

Mitigation risk	Rating	Interpretation
>95%	AAA	CMA with the highest probability of achieving 1 tonne of CO_2e mitigation
85% - 94%	AA	CMA with a very high probability of achieving 1 tonne of CO_2e mitigation
75% - 84%	A	CMA with a high probability of achieving 1 tonne of CO_2e mitigation
60% - 74%	BBB	CMA with a medium probability of achieving 1 tonne of CO_2e mitigation
50% - 59%	BB	CMA with a lower medium probability of Achieving 1 tonne of CO_2e mitigation
40% - 49%	B	CMA with a low probability of Achieving 1 tonne of CO_2e mitigation
30% - 39%	C	CMA with a very low probability of Achieving 1 tonne of CO_2e mitigation
<39%	D	CMA with the lowest probability of Achieving 1 tonne of CO_2e mitigation

18.4 The assignment of a rating allows for ordinal ranking of CMAs and is a tool to compare CMAs in terms of quality. Individual area and component scores provide the granular detail to motive why CMAs differ in rank.

18.5 Ordinal ranking allows for the assignment of a CMA rating against a reference point of zero or lowest risk.

The assignment of a rating is a convenient method to compare CMAs in terms of quality. Individual area and component scores provide the granular detail to motive why CMAs differ in rank and/or rating.

19. Step 4: Review

19.1 Step 4 requires that assigned ratings are benchmarked with 3rd party ratings or other sources of data.

19.2 In most cases, benchmarking will be suitable at the level of assessment areas or risk component level.

19.3 Internal Review committee and/or or independent analysts evaluate the preliminary ratings for any biases or errors before final MV assignment.

20. Step 5: Assign MV

20.1 Use the ranking results from step 3 and benchmarking from step 4 to calibrate across the universe of assessed CMAs.

20.2 Assign a final MV (where MV = CMA x R) and rating to a CMA.

20.3 Publish report on the MV and assigned rating.

Part 5

Implementation and future developments

21. Implementation arrangements

21.1 Figure 4 illustrates the implementation roadmap targeted by the Foundation.

21.2 In the absence of a developed rating environment, the Foundation plans to internally manage the assignment of MVs to its portfolio of CMAs, with the intention to evolve to an externally driven MV ratings ecosystem over the long term.

21.3 MV is intended as an industry accepted mechanism to compare heterogenous assets, allowing markets to prioritise, select and benchmark mitigation actions.

21.4 Internal MV assessment will take place within the proposed Foundation governance structure, with distinct separation in terms of roles and responsibilities:

21.4.1 Foundation Board of Trustees - overall responsibility for the approval and amendment of this framework and appointment of an independent and skilled CMA Advisory panel.

21.4.2 CMA advisory panel - Delegated responsibility to assign final MVs and ratings.

21.4.3 Analysts (led by Chief CMA Portfolio Officer) - preparation of MV assessments and proposal of MVs and ratings to the CMA advisory panel.

21.5 External MV raters will be considered at any time provide they can fulfil the following criteria:

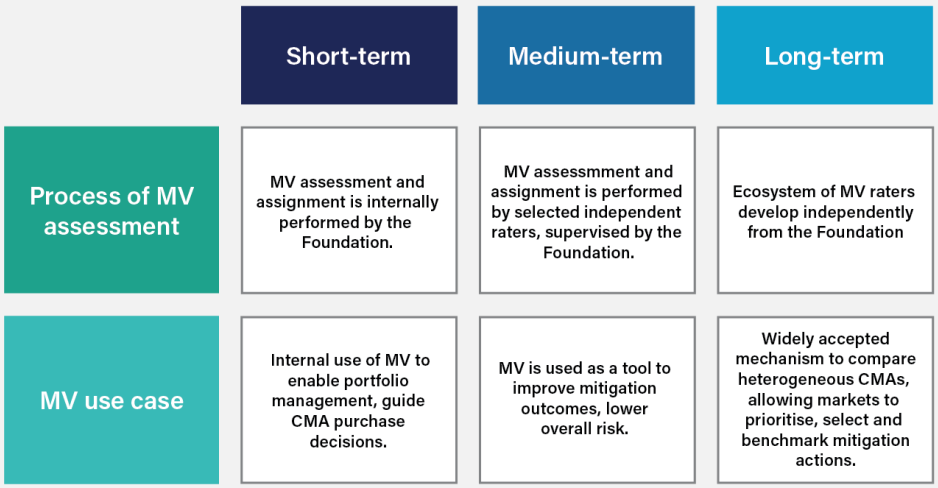
21.5.1 The 3rd party raters are independent and free from real or perceived conflicts of interest.

21.5.2 The raters meet minimum standards of competence and skill, as defined by the Foundation from time to time.

21.5.3 A multitude of raters are available to the Foundation to reduce the risk of dominance of a single rater.

21.5.4 The 3rd party raters are for profit organisation, with an appropriate payment model to mitigate against conflicts of interest. In this regard the Foundation is prepared to propose a suitable alternative to the “issuer pay” model.

Figure 4: Implementation roadmap



22. Roadmap

22.1 Framework implementation will follow a phased approach as illustrated below (Figure 5).

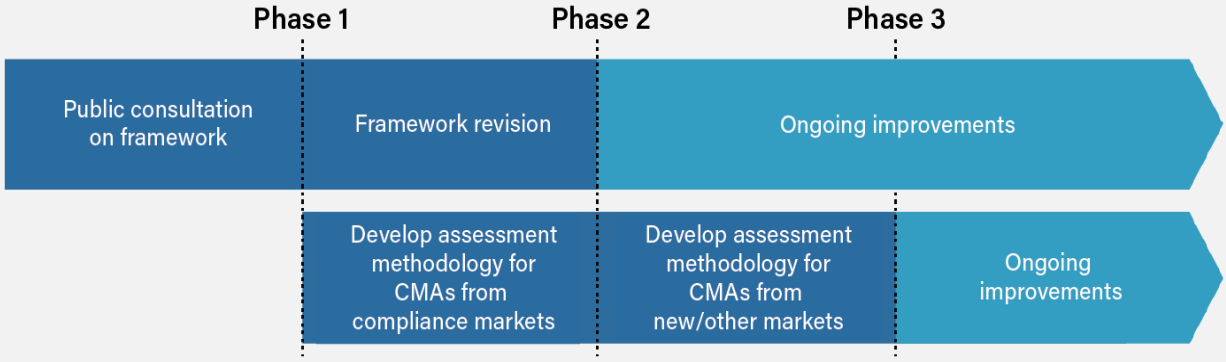
22.2 This framework is subject to public consultation during phase 1 of its implementation.

22.3 The CMA advisory panel is responsible for the collation and review of commentary from the public consultation and may recommend a revision to this framework during phase 2, subject to Board of Trustees approval.

22.4 The development of an assessment methodology for CMAs from compliance markets is planned for finalisation during phase 2.

22.5 The development of an assessment methodology for CMAs from new/other markets is planned as phase 3.

Figure 5: Implementation phases



Appendices

Appendix 1: How to use the MV assessment tool (Excel-based, version 1)

- A mitigation value assessment tool is available at www.thecarbonreserve.org.
- The assessment tool includes 3 parts, including:
    - An “inputs” sheet;
    - An “output” sheet; and
    - A “check” sheet.
- How to use the “inputs” sheet of the assessment tool:
    - The “inputs” sheet includes a range of questions that allow for assessment of all areas of risk as defined in Section 12.
    - The assessment tool allows the assessor to select responses to the questions from a pre-defined list of responses and automatically assigns scores based on the responses.
    - Scores are automatically mapped to the appropriate area of risk and contributes to the appropriate risk component scores. These mappings are pre-defined and cannot be amended.
    - All questions should be completed before reviewing/interpreting the results of the assessment on the “output” sheet.
    - Where appropriate, the option to select “not applicable” is provided and should be selected to ensure that the appropriate score is assigned for such questions.
    - Guidance notes are published to guide assessors to complete the questions on the “input” sheet. Comprehensive guidance is published on the Foundation website and periodically updated.
    - See Appendix 2 for a sample of the guidance notes.
- How to use the “check” sheet of the assessment tool:
    - The assessment tool includes a “check” sheet. The assessor is required to review the “check” sheet and ensure that all checks are marked as “true”. This confirms the integrity of the results on the “outputs” sheet.
- How to use the “outputs” sheet of the assessment tool:
    - The “output” sheet provides the results of the assessment.
    - Benchmarking to MV data or ratings prepared in line with methodologies not accredited by the Foundation is acceptable, however, caution should be applied. Analysts are required to have a sound understanding of applied methodologies / data processing and aim to benchmark at the level of key risk components.

Appendix 2: Sample guidance notes

Q #	Area of risk	Question	Guidance
1	Corruption	What is the country (project location) Transparency International Corruption Perceptions Index score?	• Visit link. • Search for the country where the project is located to determine score. • If the project is in more than one country, select the country where the project office is located.
2	Developer	Has the project developer been linked with poor/corrupt/poor quality projects in the past?	• Base assessment on publicly available media articles. • Where available, review 3rd party developer assessments, such as prepared by MSCI Carbon Markets or Abatable.
3	Developer	Experience and qualifications of the project team. Assign score between 1 and 5. 5 = highly experienced and qualified.	• Review project team profiles on the project developer website. • Review team profiles on LinkedIn. • Where available, review 3rd party developer assessments, such as prepared by MSCI Carbon Markets or Abatable.
4	Developer	Does the project developer have a track record in developing projects?	• Where available, review 3rd party developer assessments, such as prepared by MSCI Carbon Markets or Abatable. • Determine how many projects the developer has registered on the various registries and the stage of completion thereof.
5	Delivery	Is this an ex-ante credit, subject to delivery risk? If yes, what is the CRISP score?	• Review the CRISP framework here: https://docsend.com/view/gripvw4wvth87fjn
6	SDGs	What is the country score per the Sustainable Development Report?	• Review link. • If the project is in more than one country, select the country where the project office is located.

121 - 142	Risk mitigation	Permanence risk.	The following mitigation activities have a material risk of reversal: Storage and protection of carbon in biogenic reservoirs, including 1) conservation and avoided conversion (e.g. grassland/rangeland management, avoided deforestation); 2) agricultural soil carbon sequestration; 3) forestry sequestration (improved forest management, afforestation/reforestation, agroforestry); 4) wetland and marine ecosystem restoration/management (including seagrasses, salt marshes, mangroves and peatland). The following mitigation activities have a risk ff reversal: 1) Biochar; 2) CCS with geological storage; 3) Enhanced weathering; 4) CCS with mineralisation; 5) CO2 in concrete utilisation.

Glossary of terms and acronyms

A/R	afforestation / reforestation
Baseline / BAU	A fixed, initial reference point or starting value used for comparison purposes. It serves as a benchmark or standard against which changes, progress, or performance can be measured over time.
BAT	best available technology
Board of Trustees	Trustees of the Foundation, as duly listed on the Swiss commercial registry.
CCS	carbon capture and storage
CCQI	The Carbon Credit Quality Initiative
CDM EB	Clean Development Mechanism Executive Board
claimed reduction	Defined as the face value or stated value of a carbon credit or allowances, in tCO_2e.
CMA	Any instrument generated as part of a scheme, project or program, the purpose of which is mitigation of carbon emissions, usually measured in base units of tonnes of carbon dioxide equivalent greenhouse gases (tCO_2e).
CMA advisory panel	The expert panel, appointed by the Board of Trustees, responsible for MV and ratings determination.
CO_2e	carbon dioxide equivalent
compliance markets	Jurisdictional carbon markets, including cap-and-trade schemes.
compliance value (CV)	In compliance markets, compliance value is defined as the value ascribed by the regulator to a unit of a CMA, at the time it is surrendered for compliance purposes under that regulator's scheme. In the voluntary market, compliance value is defined as the value ascribed by an individual or organisation to a unit of a CMA, at the time it is retired for the purpose of claiming an emissions offset.
ETS	emissions trading system

GHG	greenhouse gas emissions
IAF	Internation Accreditation Forum
ICVCM	The Integrity Council for the Voluntary Carbon Market
IRR	internal rate of return
ITMOs	internationally transferred mitigation outcomes
financial value (FV)	The price a buyer is willing to pay for a unit of a CMA.
the Foundation	The Carbon Reserve, a Swiss non-profit foundation.
LEDS	Low emission development strategy
mitigation action	A mitigation action includes any action to limit, reduce or avoid GHG emissions, or; preserve or enhance sequestration sinks.
Mitigation outcome	Carbon mitigation assets (CMAs) represent mitigation outcomes.
mitigation value (MV)	Mitigation value represents the expected mitigation impact measured in tonne CO2e after discounting for all the risks associated with any unit of reduction claimed (e.g. credit issued, or allowance to emit a ton of CO_2e).
NDCs	nationally determined contributions
Mitigation risk	Mitigation risk quantifies the probability that 1 tCO_2e is achieved with consideration of all risk factors that impact its creation.
PA	Paris Agreement
Programme	Programme refers to the accreditation body that certified the mitigation outcomes, including the applicable standard.
Project	Project level refers to the unique project, with project ID or other identifier, responsible for creating mitigation outcomes.
SDGs	sustainable development goals
tCO_2e	tonnes of carbon dioxide equivalent.

toco	Global digital unit, issued by the Carbon Reserve, representative of the value of a portfolio of high-quality, verified CMAs.
Toco holders	Individuals or organisation that own units of toco.
UNFCCC	United Nations Framework Convention on Climate Change
VCM	voluntary carbon market
venture CMAs	CMAs based on new and untested methodologies, technologies, and/or standards.
v & v	verification and validation

Updates and reviews

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