



SCORE – Sinkit Carbon Offset Rating & Evaluation

Table of content

Why SCORE	3
What is SCORE	5
Value of SCORE	6
How to SCORE	7
SCORE examples	16



Why SCORE?

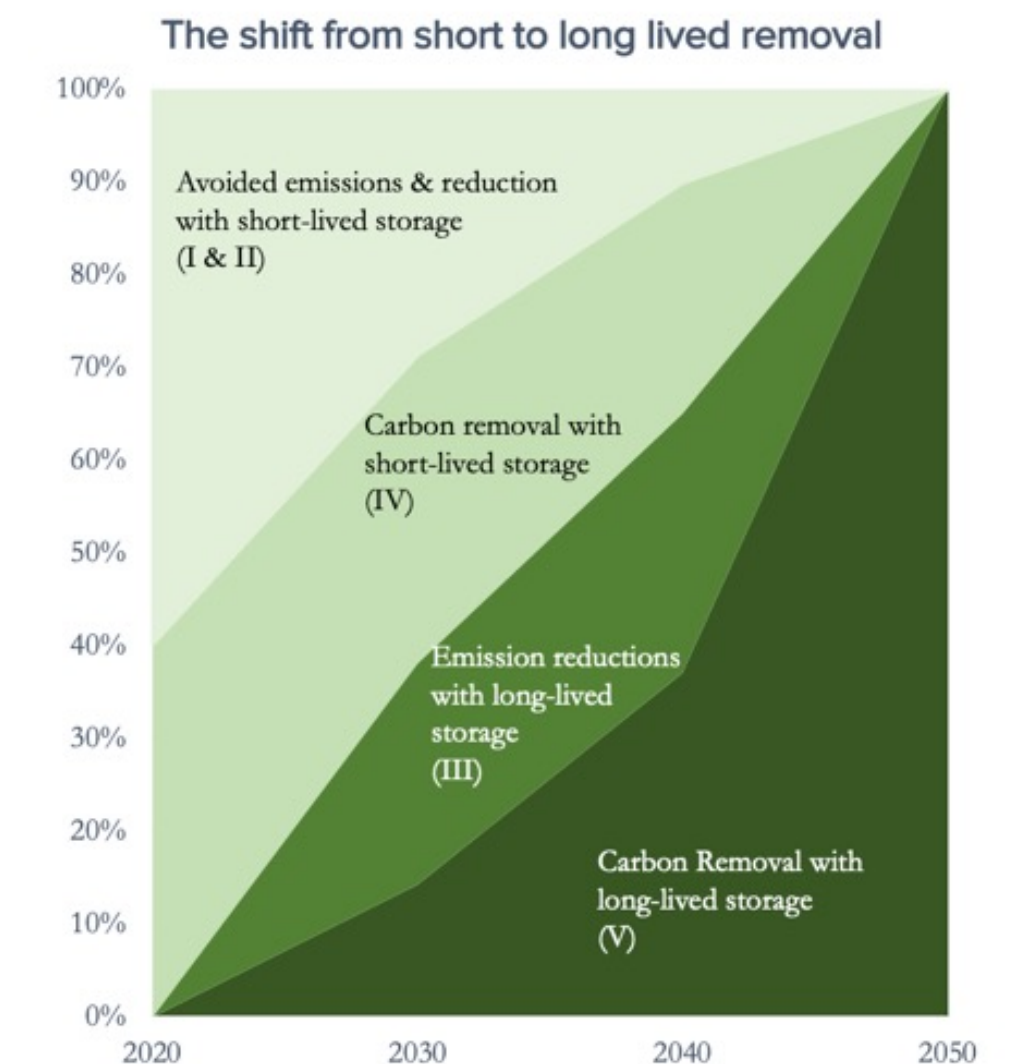
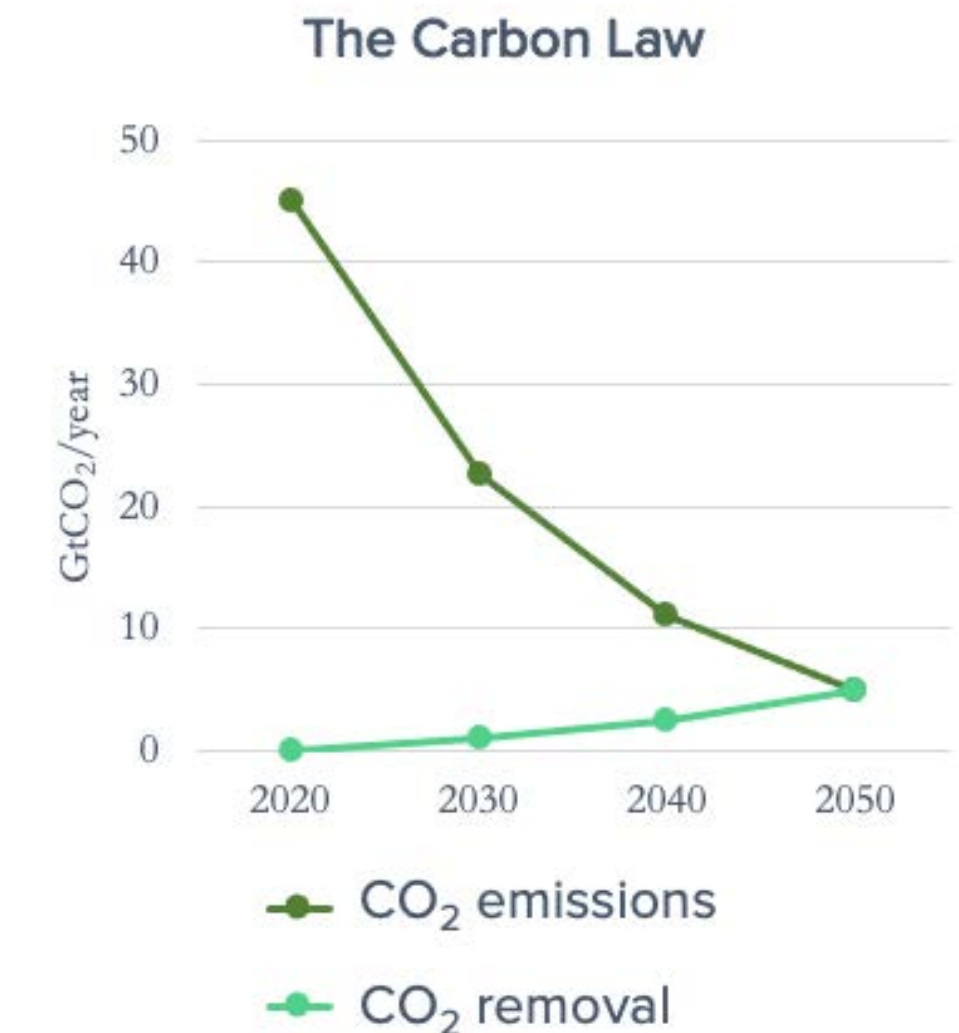
Preventing further and very disruptive climate change and achieving the Paris objectives requires a radical transition towards net zero emissions and large-scale reduction of global greenhouse gas emissions in a relatively short period of time.

In short, we need to obey the **Carbon Law**. Which means we need to reduce our emissions by 50% every decade and in parallel start removing CO₂ from the atmosphere.

There is consensus that one important instrument to reduce greenhouse gas emissions is through carbon offsets. These are carbon credits obtained from an underlying (physical) emission reduction or removal project. Market players are using CO₂ offsetting measures elsewhere to reduce their own CO₂ footprint. Since the introduction of the 'carbon offsets' instrument, there are many doubts and uncertainties about this instrument and public debate focuses on several issues. Short-lived storage offsets help buy time to reduce emissions and invest in long-lived storage, but this is not a long-term solution for achieving net zero emissions.

Therefore, a shift to long-lived carbon removal and storage is required.

Long-lived storage refers to methods of storing carbon that have a low risk of reversal over centuries to millennia, such as storing CO₂ in geological reservoirs or mineralizing carbon into stable forms.



Carbon storage

To make this complex new area of different technologies and terminology understandable, Sinkit introduces **4 types** of carbon offsets that relate to the permanence of carbon storage.



Avoid-it: Carbon is not removed but is avoided from being emitted. Like clean cookstoves and renewable energy.



One Generation: Carbon is removed and stored for one generation. Like planting of trees and ecosystem restoration.



Four Generations: Multigenerational storage of carbon by biochar and deep sea storage.



Seven+ generations: Carbon is stored for eternity in depleted gas fields or via mineralisation.

What is SCORE

At its core, SCORE categorizes and rates the quality of carbon credits generated by carbon offset projects.

The methodology rates only projects that meet a minimum threshold of transparency on how the carbon credits are generated. In addition, and other than existing credit trading platforms, it also rates units from pre-certified projects (or units that could become carbon credits).

SCORE does not rate compliance units (for example, EU ETS, LCFS) and carbon credits for trade between countries (under Paris Agreement Article 6.2).

SCORE considers 4 elements of a project

- 1 The Type** of project defines whether the project avoids, reduces, or removes carbon. Several carbon offsetting best practices have been developed over the past decades (e.g., Gold Standard, VCS, and REDD+). Most offsets available today are emissions reductions, which are necessary, but not sufficient to achieve net zero in the long run. By making the type of project transparent we aim to create more demand for carbon removals. The categorization (I-V) has been defined by the Oxford University¹.
- 2 The Carbon Credit Rating** (AAA to D) defines the likelihood that the carbon project will generate the intended volume of carbon offsets and schedules will be achieved and maintained. Most offset projects today present the total of carbon credits they intend to generate, whereas they may not be (fully) successful in achieving this. In carbon projects there is always a risk that the offset project will not deliver the specified volumes or continue to deliver over the specified time. The carbon credit rating makes this risk transparent and considers both technical and governance aspects.
- 3 The SDG benefits** (++ to -) describe how many other (than climate action) Sustainable Development Goals (SDGs) are supported, or possibly would be violated, by the carbon offset project. This rating builds on the work done by Gold Standard. The certification status (pre-certified, certified) describes whether the carbon offset project is certified by an accredited verifier².
- 4 The verification status** (pre-certified, certified) describes whether the carbon offset project is certified by an accredited verifier.

(1) The Oxford Principles for Net Zero Aligned Carbon Offsetting, Oxford University, September 2020
(2) <https://www.goldstandard.org/articles/gold-standard-global-goals>

Value of SCORE

SCORE brings transparency and supports buyers of carbon offsets in making more informed decisions. It also accelerates the market for long term carbon removal projects. SINKIT regards carbon offsets as an essential instrument for meeting the climate mitigation goals.

It activates powerful global market mechanisms and enables motivated consumers to take ownership of and offset their carbon footprint, recognizing that the development of low or zero carbon consumer alternatives will take considerable time during the transition period.

The value drivers

1

Creates transparency in decision-making and purchase of high quality and effective carbon offsets in the global market.

2

Offers a normative ranking by showing the offset's potential to contribute to carbon removal with long-term storage, incl. the risks of failures, or undesirable side-effects.

3

Connects to existing certification schemes and definitions, adding and introducing new terminology to the extent required.

4

Is publicly available and self-controlling, in such a way that the application of the methodology will create self-improvement.

How to SCORE

This chapter details the SCORE, that consists of four elements:

1. Type of Project

2. Carbon Credit Rating

3. SDG Benefits

4. Certification

1. Type of Project

The type **I to V** of project defines whether the project avoids, reduces, or removes carbon. Several carbon offsetting best practices have been developed over the past decades (e.g., Gold Standard, VCS, and REDD+). Most offsets available today are emissions avoidance or reductions, which are necessary, but not sufficient to achieve net zero in the long run. Aim of making the type of project transparent is to create more demand for carbon removals.

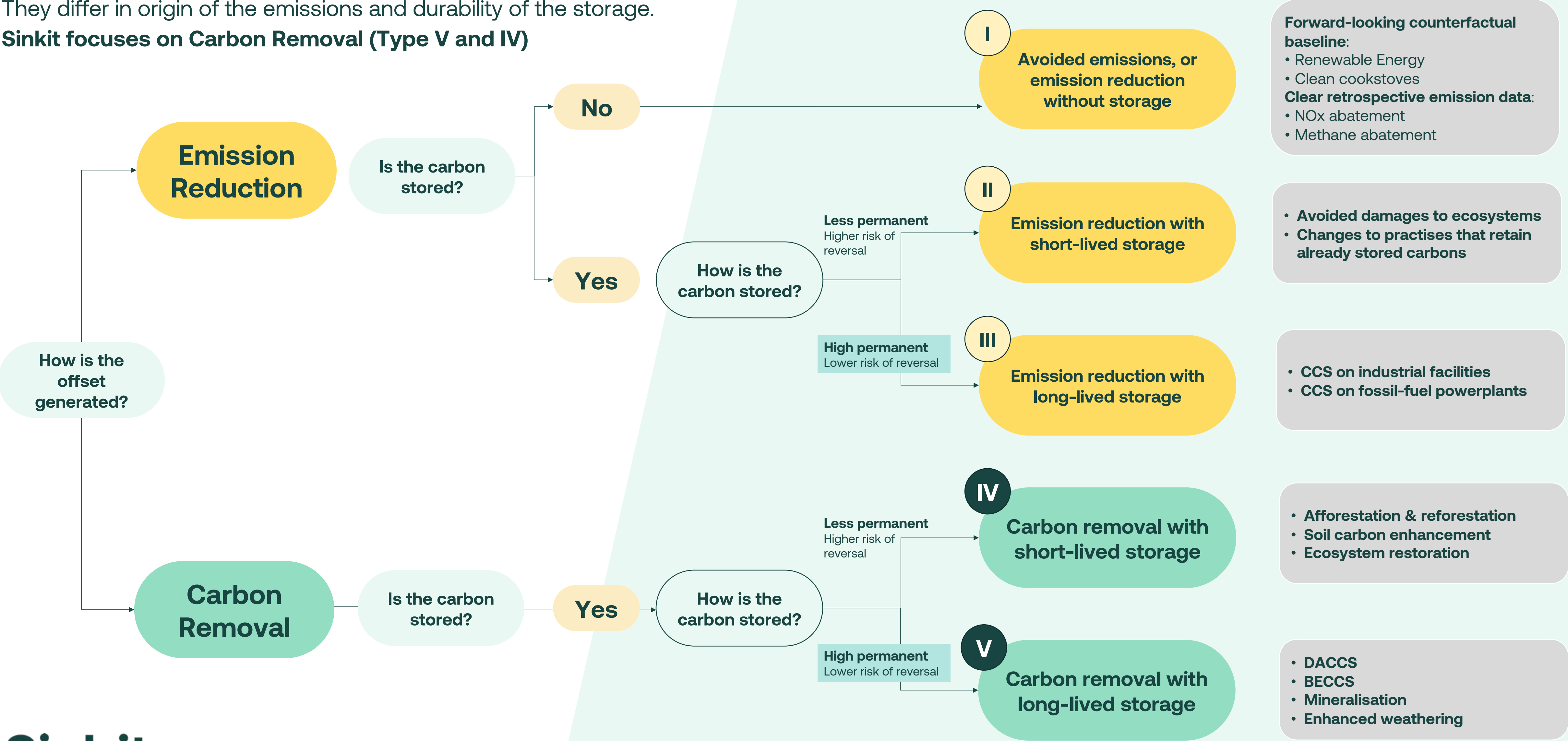
The type categorization is based on the taxonomy as defined under the Oxford Principles³.



(3) The Oxford Principles for Net Zero Aligned Carbon Offsetting, Oxford University, September 2020

There are 5 types of projects

They differ in origin of the emissions and durability of the storage.
Sinkit focuses on Carbon Removal (Type V and IV)



Our scoring model

The carbon removal category in this model represents short-lived and long-term storage.

Typical short-lived storage is bio-based afforestation. A key question is whether carbon removal with short lived storage (cat IV) like afforestation should be valued higher than carbon reduction with long-lived storage like Carbon Capture and Storage (CCS).

The authors of the Oxford paper suggest shifting to long-lived storage, but SCORE does not intend to be prescriptive between these two, and as can be seen from Figure 1 both types will provide valuable contribution before shifting entirely to carbon removal with long-lived storage.

By making the type of project transparent SCORE aims to create more demand for carbon removals. Creating demand for short- and long-lived removals today sends a signal to the market to increase the supply of such offsets.

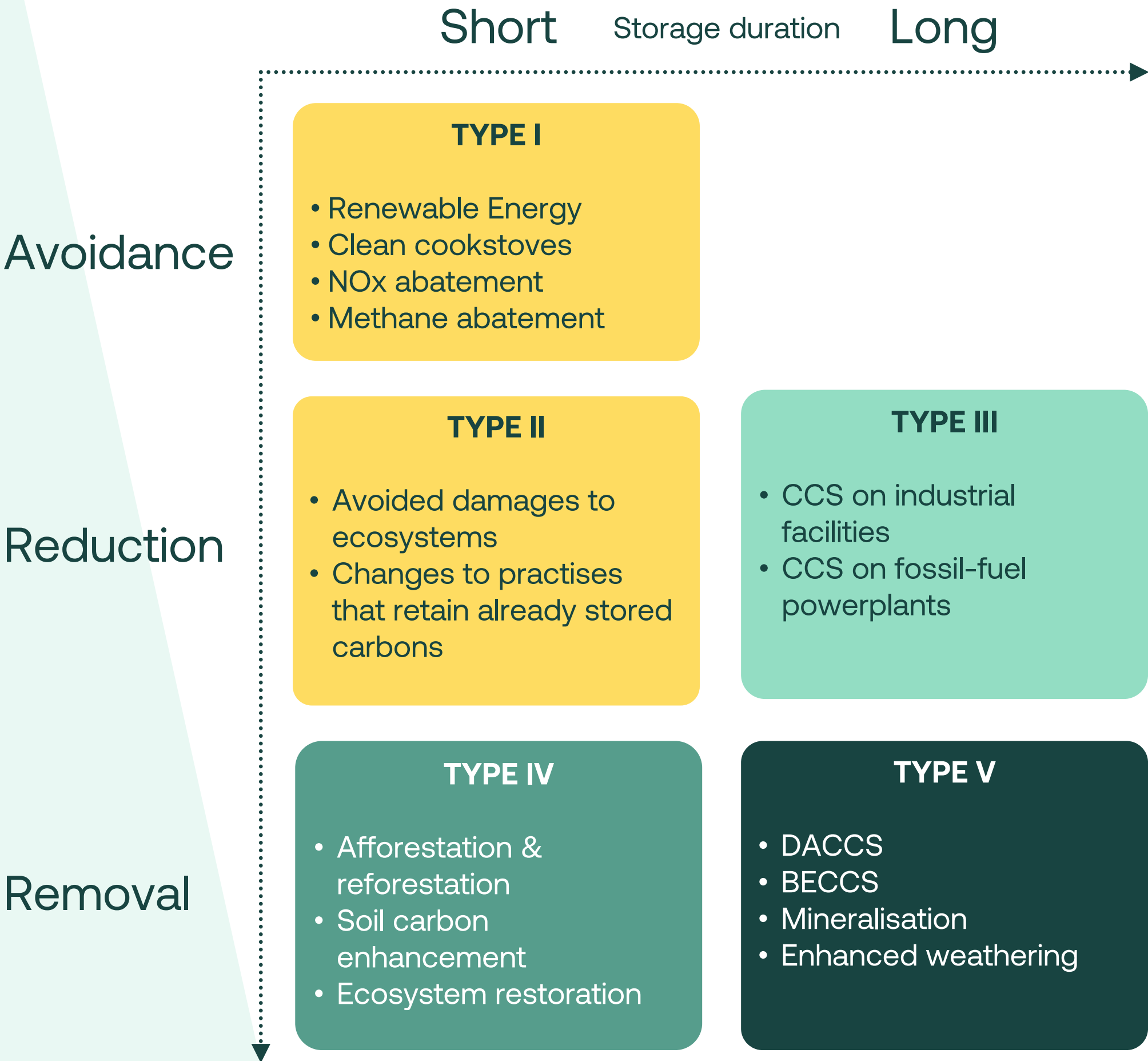


Table 1: Description of type (I to V) of carbon offset projects and relation to Sinkit

2. Carbon credit rating

The carbon credit rating (AAA to D) defines the likelihood that the carbon project will generate and maintain the volume of carbon offsets, and that time schedules will be achieved.

Most offset projects today present the total of carbon credits they intend to generate, whereas they may not be (fully) successful in achieving this. In carbon projects there is always a risk that the offset project will not deliver the specified volumes or continue to deliver over the specified time. The carbon credit rating builds on the work done by Öko-Institute, WWF⁴, and IDEACarbon⁵.

The carbon credit rating makes this risk transparent and considers both technical and governance aspects.

When scoring the technical aspects of projects, we include seven technology aspects and three governance elements.

(4) What makes a high-quality carbon credit? WWF, June 2020

(5) Making Carbon Markets Work, The Missing Element, IDEACarbon, 2006

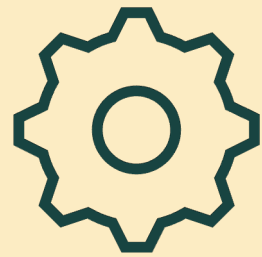
Technology aspects

1. Effectiveness
2. Additionality
3. Methodology
4. Market leakage
5. Double counting
6. Risk of failure
7. Mitigation technology

Governance aspects

1. Description
2. Monitoring
3. Auditing

Technology aspects



Effectiveness

Enhancing adoption of low, zero or negative emissions technologies: This criterion assesses the degree to which the project employs a technology or practice that is consistent with a zero/ low carbon economy, avoids carbon lock-in, fosters, innovation, and or leads to transformational change. This criterion simply assesses whether the project itself uses a technology type or practice that will be transformational and is consistent with the net zero goal.



Additionality

In the context of crediting mechanisms, emission avoidance, reductions or removals from a carbon offset project are additional if the carbon offset would not have taken place in the absence of the added incentive created by the carbon credits.



Methodology

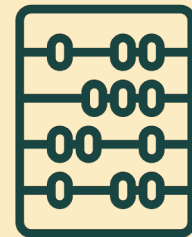
Robust quantification of emission reductions and removals. This requires assessment of various aspects, including that (i) no ex-ante crediting is permitted, (ii) that selection of emission sources and sinks for the calculation of emission reductions and/or removals is appropriate, (iii) that a credible and conservative crediting baseline is used, and (iv) that leakage is appropriately considered in the calculation of emission reductions.



Market leakage

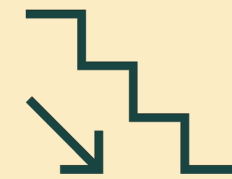
The net change of greenhouse gas emissions or removals that are attributable to the carbon offset but occur outside the boundary of that activity. These include, for example, indirect emission changes upstream or downstream of the mitigation activity or rebound effects.

Technology aspects



Double counting

Avoiding double counting of emission reductions, avoidances or removals, i.e., avoiding that the same emission reduction or removal is used more than once to achieve climate targets or goals. The forms of double counting that are relevant depend on the purpose for which a carbon credit is used.



Risk of failure

The risk of non-permanence differs among projects. Reversal risks depend on several factors, including how project owners manage these risks and address the underlying drivers for reversals. A sound risk assessment can help manage reversal risks.



Mitigation failure

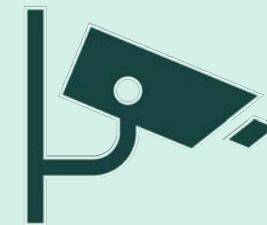
Carbon crediting programs pursue varying approaches to reduce non-permanence risks and to compensate for any non-permanence. Key factors include establishment of liability for reversals, the duration for which the occurrence of reversals is monitored and accounted, whether and how any reversals are compensated, and whether the compensation mechanisms are robust enough to also address disastrous events.

Governance aspects



Project description

Good project governance is an important safeguard for the quality of credits. This includes whether the carbon crediting program has transparent rules and procedures in place that regulate how the program is governed to effectively support its mission, and whether there were past cases of non-compliance with program standards and procedures.



Monitoring

The emissions and/or removals from the carbon offset project are robustly monitored and validated by a third-party for prolonged periods of time following project installation.



Auditing

Accredited third-party auditors must confirm that a project fulfils all requirements of the crediting program. Auditing is typically conducted for the initial approval of a project, often referred to as “validation”, and the monitoring of emission reductions, often referred to as “verification”. Project documentation and auditing reports should be available as part of the project control measures.

Definition of the range statements

The carbon credit rating is the key new component of SCORE. Various parties (e.g., IDEACarbon) have stressed the importance of grading carbon projects and determining risks.

To normalize the scores and make projects comparable, range statements have been applied. These ensure that the same factors are considered for assessment of each project. Range statements are also used to clarify evidence requirements and/or assessment conditions.

The range statements are of general character and applicable to each type of project and methodology.

Credit Rating	Explanation	Quality
AAA	The risk of the asset not generating emission reductions is very low and there is a high expectation that the specified volumes are mitigated permanently.	Highest Rating
AA		Very High Rating
A		High Rating
BBB	There is a low risk of the asset not delivering emissions reduction, however, there remains a certain risk that the specified volume is not mitigated permanently	Medium + Rating
BB		Medium Rating
B		Medium - rating
CCC	There is a high risk that the asset does not deliver the specified emission reductions	Low Rating
CC		Very Low Rating
C		Lowest Rating
D	Failure - the asset cannot deliver any emission reductions	Failure

3. SDG benefits

Buyers may prioritize projects or activities that support Sustainable Development Goals (SDGs) and avoid projects that potentially undermine SDGs. This criterion is used to assess the degree to which the project supports SDGs (other than climate change).

Also, there might be projects that potentially have a negative impact on the environment and/or local community. These projects are rated with a ‘minus’ because buyers would want to limit exposure to the potential negative liability of these projects.

The SDG co-benefits are scored as follows:

- ++ for positive impact on 4 to 8 SDG’s;
- + for projects with positive impact on 1 to 3 SDG’s;
- 0 for projects without SDG co-benefit and
- - for projects that have negative effect on SDG’s

SDG Score	Number of SDG’s
++	4 to 8
+	1 to 3
0	None
-	Negative effect





4. Certification status

The certification status (pre-certified, certified) describes whether the carbon offset project is certified by an accredited verifier. Ideally, carbon offset projects undergo a registration, validation, and verification process before they are certified within an offset program or standard, such as the Gold Standard, Verra (VCS), American Carbon Registry (ACR), or Climate Action Reserve (CAR).

These programs require independent third-party verification. For some regions or new technologies, third-party verification might not be available or be very cumbersome as the methodology for emission reduction quantification needs to be developed and approved first.

SCORE also includes carbon offsets that intend to register but are in the pre-certification stage. These projects can rely on a transparent self- or third-party verification. The required depth for the verification depends on the size and the technology of the carbon offset project (see range statements). The verification report needs to be publicly available. Projects that do not have the intention to certify are beyond the scope of SCORE

Certification	Explanation
Pre-Certified	Transparent Self Verification
Certified	Verified CDM, VCS, GS

Table 4: Description certification type

SCORE examples

To illustrate how rating of projects according to this methodology works out, an example for each type of offsets has been rated.

TYPE I: Vietnam Wind Project

SINKIT Rating	0 (none) - 3 (high)	Rating
Technical (0-21)		
1. Effectiveness	2	T= 90%
2. Additionality	3	
3. Methodology	3	
4. Market Leakage	3	
5. Double Counting	3	
6. Risk Failure / Leakage	3	
7. Mitigation Technology aspect	2	
Governance (0-9)		
1.Program	3	G=100%
2.Monitoring	3	
3.Auditing	3	
Overall quality rating (TxG)		90% - AAA
Category (I-V)		I
SDG (0-++)		++
Methodology		Gold standard



TYPE II: Red Cross Coastal Tacloban Project

SINKIT Rating	0 (none) - 3 (high)	Rating
Technical (0-21)		
1. Effectiveness	1	T= 52%
2. Additionality	3	
3. Methodology	1	
4. Market Leakage	3	
5. Double Counting	3	
6. Risk Failure / Leakage	0	
7. Mitigation Technology aspect	0	
Governance (0-9)		
1.Program	1	G=56%
2.Monitoring	2	
3.Auditing	2	
Overall quality rating (TxG)		29% - C
Category (I-V)		II
SDG (0-++)		++
Methodology		Pre registration



TYPE III: Marquis US Blue H2 Project

SINKIT Rating	0 (none) - 3 (high)	Rating
Technical (0-21)		
1. Effectiveness	3	T= 95%
2. Additionality	3	
3. Methodology	3	
4. Market Leakage	3	
5. Double Counting	3	
6. Risk Failure / Leakage	2	
7. Mitigation Technology aspect	3	
Governance (0-9)		
1.Program	2	G=89%
2.Monitoring	3	
3.Auditing	3	
Overall quality rating (TxG)	85% - AA	
Category (I-V)	III	
SDG (0-++)	0	
Methodology	LCFS	



TYPE IV: 100.000 Trees in Porto Project

SINKIT Rating	0 (none) - 3 (high)	Rating
Technical (0-21)		
1. Effectiveness	2	T= 67%
2. Additionality	2	
3. Methodology	1	
4. Market Leakage	3	
5. Double Counting	3	
6. Risk Failure / Leakage	1	
7. Mitigation Technology aspect	2	
Governance (0-9)		
1.Program	1	G=78%
2.Monitoring	3	
3.Auditing	3	
Overall quality rating (TxG)		52% - B
Category (I-V)		IV
SDG (0-++)		++
Methodology		Pre-registration



TYPE V: BECCS Exergi Project

SINKIT Rating	0 (none) - 3 (high)	Rating
Technical (0-21)		
1. Effectiveness	3	T= 90%
2. Additionality	3	
3. Methodology	1	
4. Market Leakage	1	
5. Double Counting	3	
6. Risk Failure / Leakage	3	
7. Mitigation Technology aspect	3	
Governance (0-9)		
1.Program	1	G=78%
2.Monitoring	3	
3.Auditing	3	
Overall quality rating (TxG)	70% - A	
Category (I-V)	V	
SDG (0-++)	00	
Methodology	Pre-registration	





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