



Carbon Avoidance to Carbon Removal

Travis Caddy, Evident Global

03/11/23



1997

Carbon offsetting was born...

ALL THE NEWS WITHOUT FEAR OR FAVOR

1997年12月12日 星期五

TO EUROPE
Daily Non-stops from Tokyo
Tel. 0120-678-101
SAS
SCANDINAVIAN AIRLINES

The Japan Times

A Dynamic City;
A Progressive Hotel
Chiyoda Kanko Hotel
(052)231-7711
Tokyo Office
(in Imperial Tower)
(03)3501-7588

101ST YEAR NO. 35,474 ISSN 0289-1956 ©THE JAPAN TIMES, LTD., 1997 Friday, December 12, 1997 5TH EDITION ¥160 Consumption tax included

TODAY

► **NATIONAL**
Nago sets plebiscite
The Nago Municipal Government formally announces that a plebiscite will be held Dec. 21 on whether the Okinawa city should support construction of an offshore heliport for the U.S. military.
Page 2

► **ASIA-PACIFIC**
Taiwan on the record
Winners and losers in Taiwan's local elections seek to reassure U.S. officials they expect no change in dealings with the U.S. or China.
Page 6

► **WORLD**
What human rights?
Hillary Clinton highlights the lack of progress for many women in a speech at a U.N. ceremony marking the 50th anniversary of the Universal Declaration of Human Rights.
Page 7

► **BUSINESS**
Japan T-bond seller
In a sharp reversal, Japan becomes a net seller of U.S. Treasury securities.

160 nations adopt Kyoto Protocol
Developed countries to cut their gas emissions by 5.2%

By SUMIKO OSHIMA and ASAKO MURAKAMI
Staff writers

KYOTO — Some 160 nations on Thursday adopted a historic agreement to fight global warming that calls on industrialized nations to cut the total volume of their greenhouse gas emissions by 5.2 percent between 2008 and 2012.

After an all-night negotiating session, the Third Conference of Parties to the United Nations Framework Convention on Climate Change produced the Kyoto Protocol, which for the first time ever sets legally binding targets for industrialized nations to reduce emissions of greenhouse gases, is required to reduce emissions by 7 percent, the European Union by 8 percent and Japan by 6 percent.

The enforcement issue was pushed aside, but parties to the convention will meet in the future to determine how to penalize countries that fail to meet their targets.

An article on developing nations' "voluntary" participation in the fight against global warming — strongly demanded by the U.S. at the Kyoto conference — was deleted. Developing nations opposed the clause, fearing an eventual mandate that they be required to curb emissions.

The six types of gases singled out for reductions are carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons and sulfur hexafluoride.

Whether to include all six was a main point of contention; initially, only the U.S. wanted all listed in the protocol.

It was also agreed that a "clean development mechanism" will be established, under which "credits" will be given to developed countries that provide financial assistance to developing countries in their efforts to reduce gas emissions.

In addition, a country will be allowed to subtract the amount of greenhouse gases absorbed by forests within its borders from its emissions.

The protocol allows the European Union to keep its "bubble" scheme, under which its 15 members will have different targets but will work together toward a common emissions-reduction goal.

Ritt Bjerregaard, head of the EU negotiating team, said that although an 8 percent reduction for the EU was agreed to, how the target will be achieved remains to be worked out.

"It's clear that we will have to go back and analyze the results of the conference," she said.

Hashimoto vows efforts

Gist of Kyoto Protocol



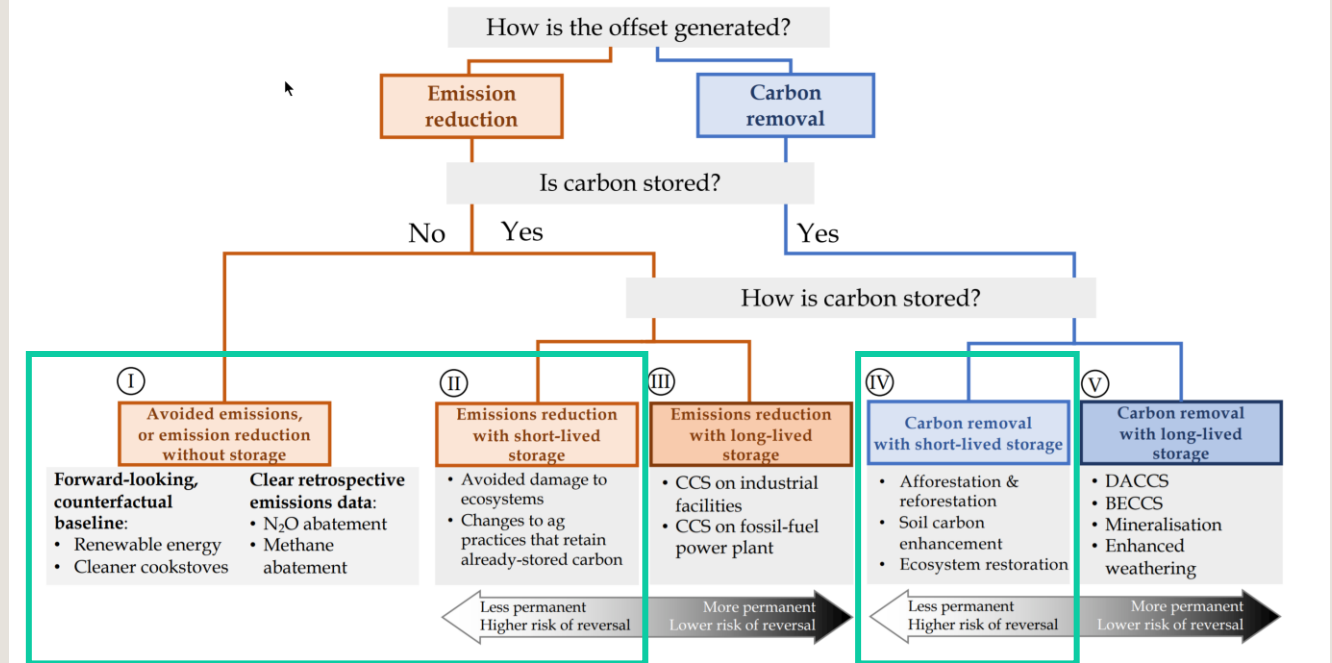
RAUL ESTRADA-OYUELA (center), chairman of the Committee of the Whole at the global warming conference that ended Thursday in Kyoto, is congratulated after the committee approved a draft protocol for gas emissions cuts. KYODO PHOTO

2005

The Clean Development Mechanism (CDM) is operationalised, and multiple asset classes were created:

- Carbon Avoidance
- Carbon Reduction
- Short-term Carbon Removal

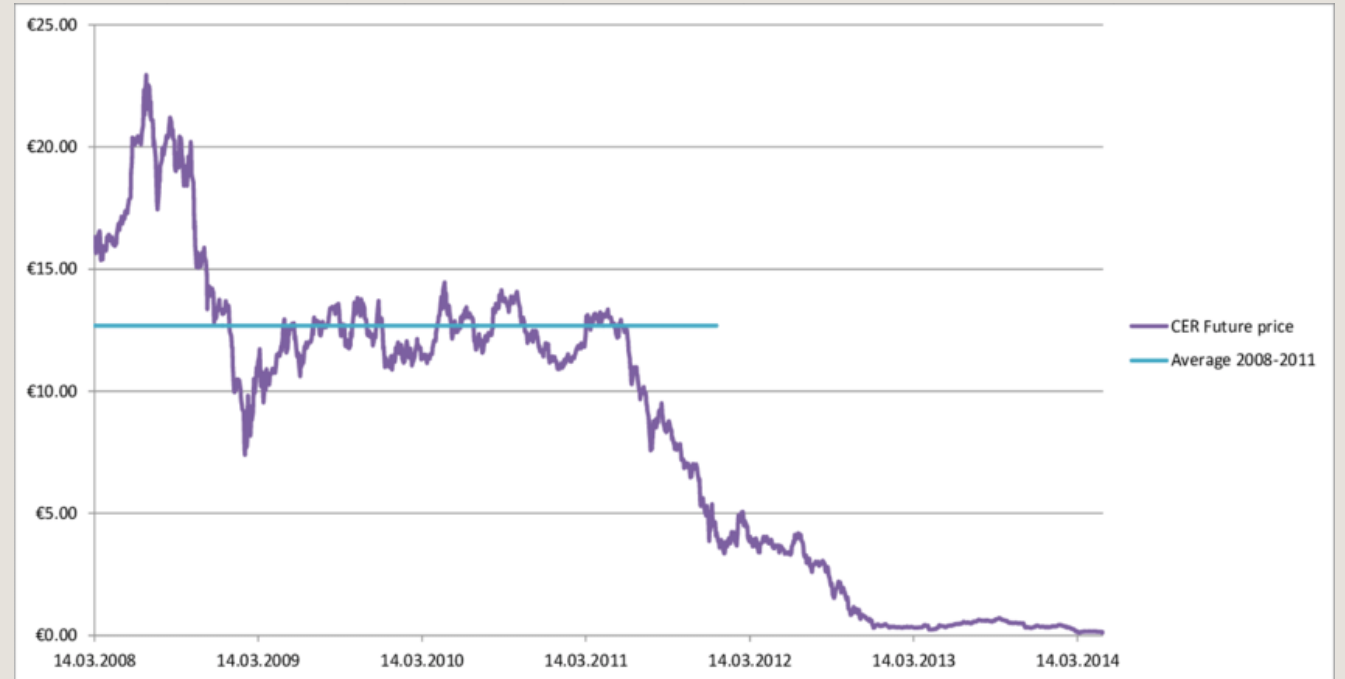
Figure 1: Taxonomy of Carbon Offsets



Oxford Offsetting Principles, 2020

2012

The CDM collapses...

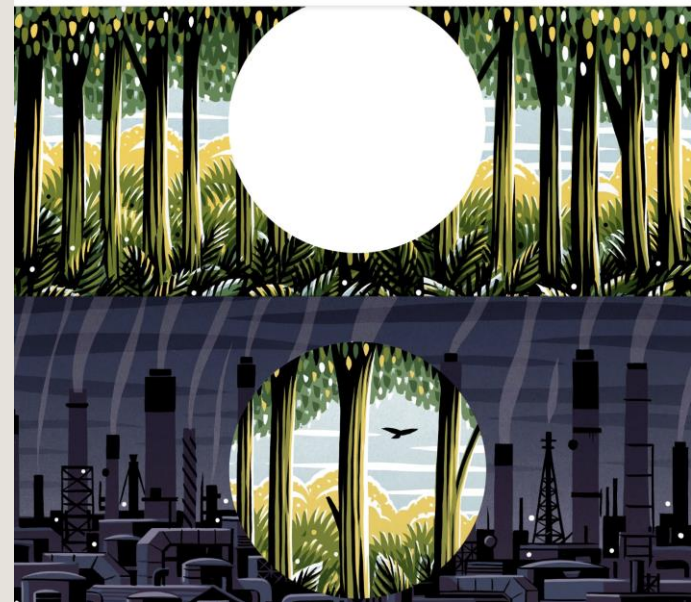


Perspectives, 2015

2023

The Voluntary Carbon Market (VCM) took over, but has failed to deliver meaningful action...

The screenshot shows a Guardian article from January 2023. The main headline is "Revealed: more than 90% of rainforest carbon offsets by biggest certifier are worthless, analysis shows". The sub-headline reads "Investigation into Verra carbon standard finds most are 'phantom credits' and may worsen global heating". The author is Patrick Greenfield, and the article was published on Wednesday, January 18, 2023. The article is categorized under "The age of extinction" and "Carbon offsetting". A yellow banner at the top right indicates "This article is more than 9 months old". The article is supported by the Guardian.org. The article is part of a subscription offer for \$29.99 per week for 12 weeks. The article is also featured in "The age of extinction" series by the Guardian.org.



The screenshot shows a Guardian article titled "THE GREAT CASH-FOR-CARBON HUSTLE" by Heidi Blake, published on October 16, 2023. The article is categorized under "A REPORTER AT LARGE". The sub-headline reads "Offsetting has been hailed as a fix for runaway emissions and climate change—but the market's largest firm sold millions of credits for carbon reductions that weren't real." The article is supported by the Guardian.org. The article is also featured in "The age of extinction" series by the Guardian.org.

Why?

The structural problem is simple:
the business model of traditional
offsets is **false equivalency**



2003–2020: compensation through
conventional carbon offsetting

Carbon Removal: A New Era for Carbon Markets?



2015

Net Zero is born...

We must balance residual emissions with removals



Paris Agreement, COP21

**“Can’t we just
plant more trees?”**



Zonguldak City Forest in Fall

High Risk of Reversal

Increasingly susceptible to:

- Wildfire
- Disease
- Humans

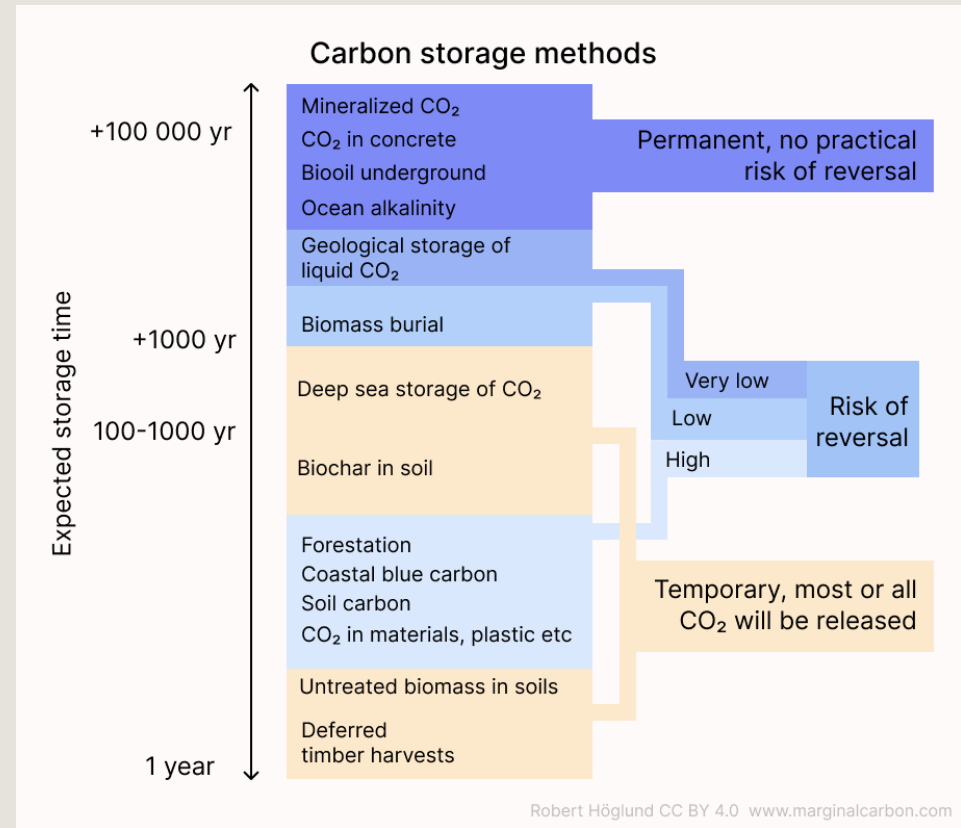
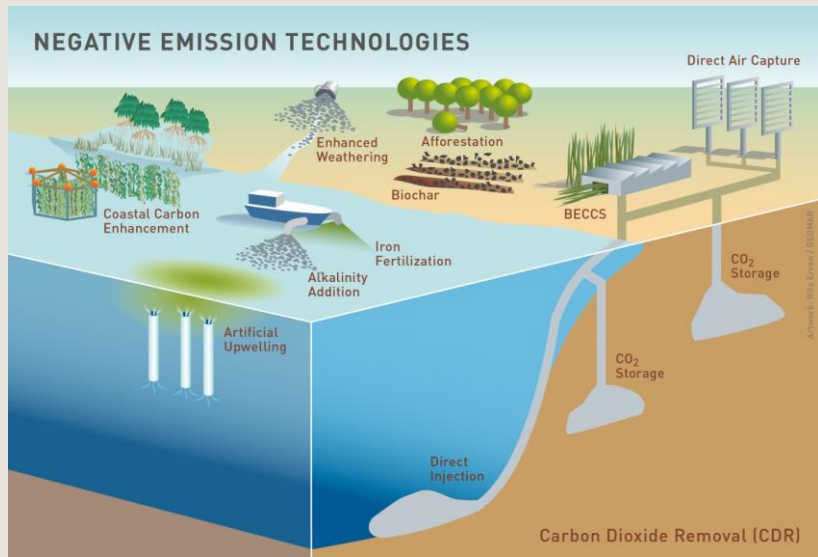
Also, requires lots of land



Wildfires in Çanakkale, 2023

Durable Carbon Dioxide Removal (CDR)

All carbon removal is equal, but some are more equal than others



Robert Hoglund, Medium

Benefits

- No baselines
- High additionality
- High environmental integrity

Post 2020: compensation through carbon removal in line with net-zero

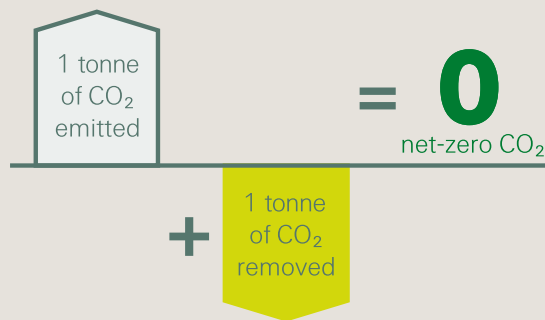
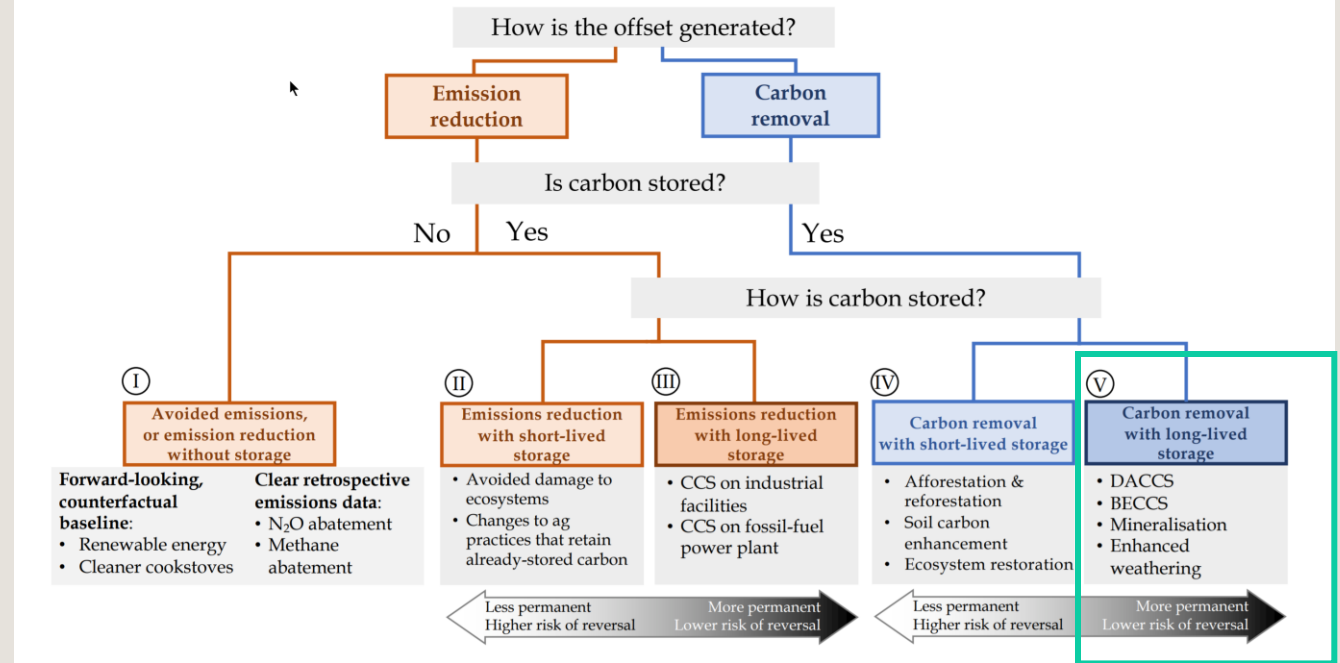


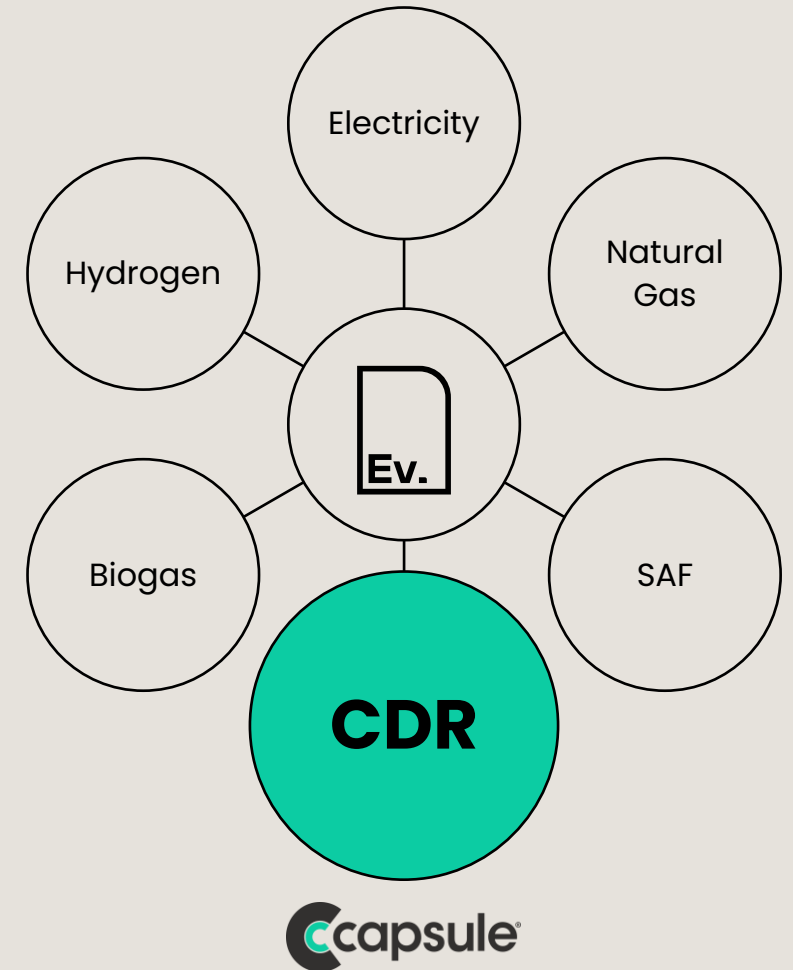
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Oxford Offsetting Principles, 2020

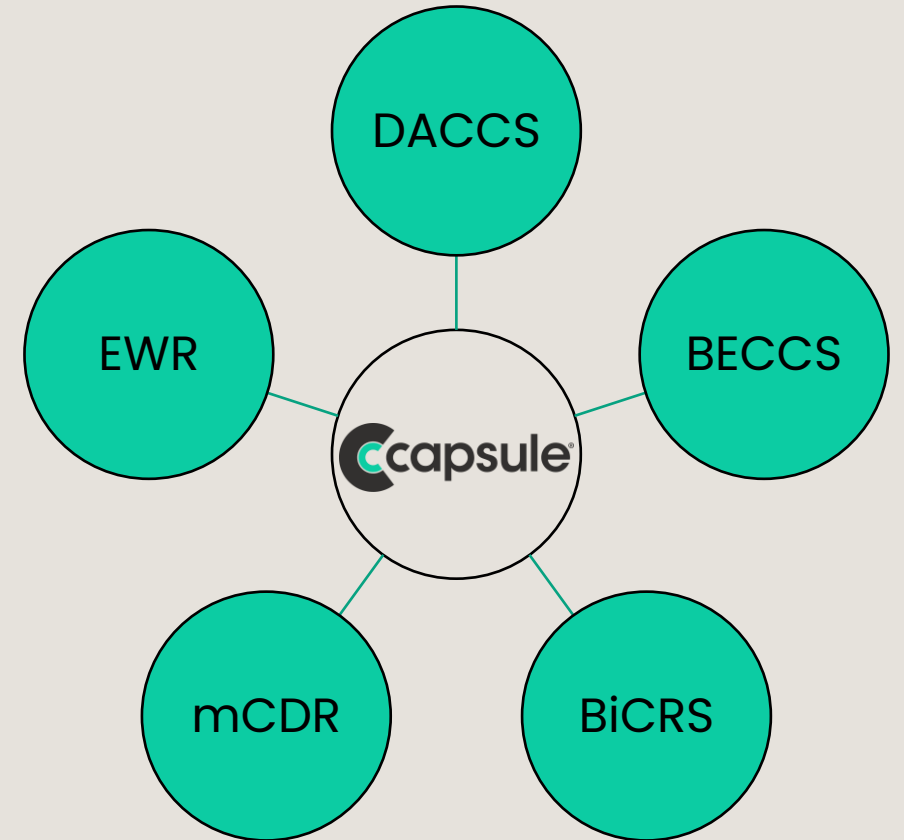
Product Multiverse

- Paving the way for a fully certified **Clean Economy**
- Providing a **centralised registry** for all types of tradeable environmental assets
- Evident's **vision** is that all activities within the **global** Clean Economy, from materials to energy, are independently certified



No Net Zero Without CDR

- Evident co-founded C-Capsule in **2021** to certify durable CDR
- Supporting emergent methodologies for CO₂ removal for at least **100 years**
- In December 2022, C-Capsule gained preliminary Accreditation to the **International Attribute Tracking Standard**



How much Durable CDR is needed?

According to the IPCC (Intergovernmental Panel on Climate Change), we'll need to remove **10 gigatons/yr** of CO₂ from the atmosphere by 2050.

...we're **0.0481%** there.

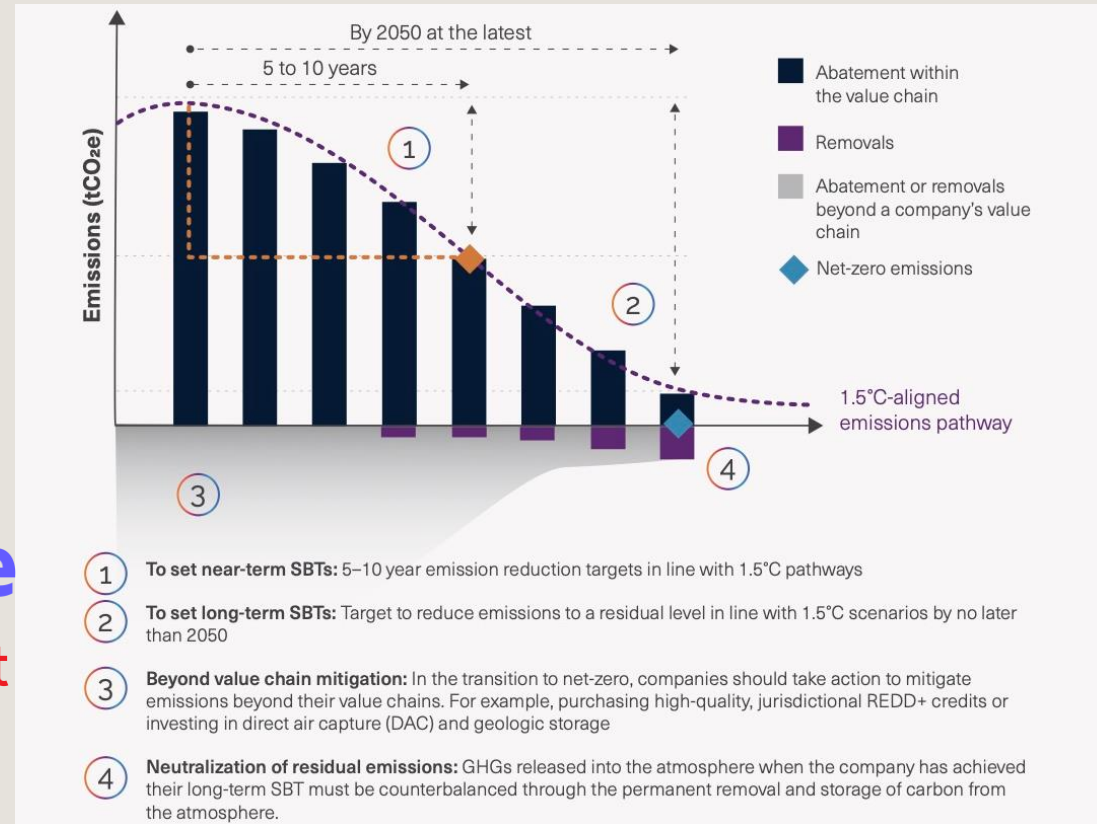


2023 Outlook

- 0.5% of SBTi signatories have bought durable CDR
- 4.8m tonnes CO2 purchased
- 2.4% delivered



Mitsui O.S.K. Lines



Need Compliance Markets

Primary driver of CDR will be compliance:

- i) High cost makes voluntary action less likely
- ii) Large scale of markets
- iii) Government Net Zero Ambitions

Market acceptance through government recognition



EU CRCF



Article 6



CBAM