

**From:** Matt Adams <Matt.Adams@mfe.govt.nz>  
**Sent:** Friday, 20 February 2026 11:03 am  
**To:** Matthew.Barbati-Ross@mfe.govt.nz  
**Cc:** Bonnie.Hartfield@mfe.govt.nz  
**Subject:** RE: CLASSIFICATION 25-BRF-00199 Marine Carbon Dioxide Removal

Hi Matthew,

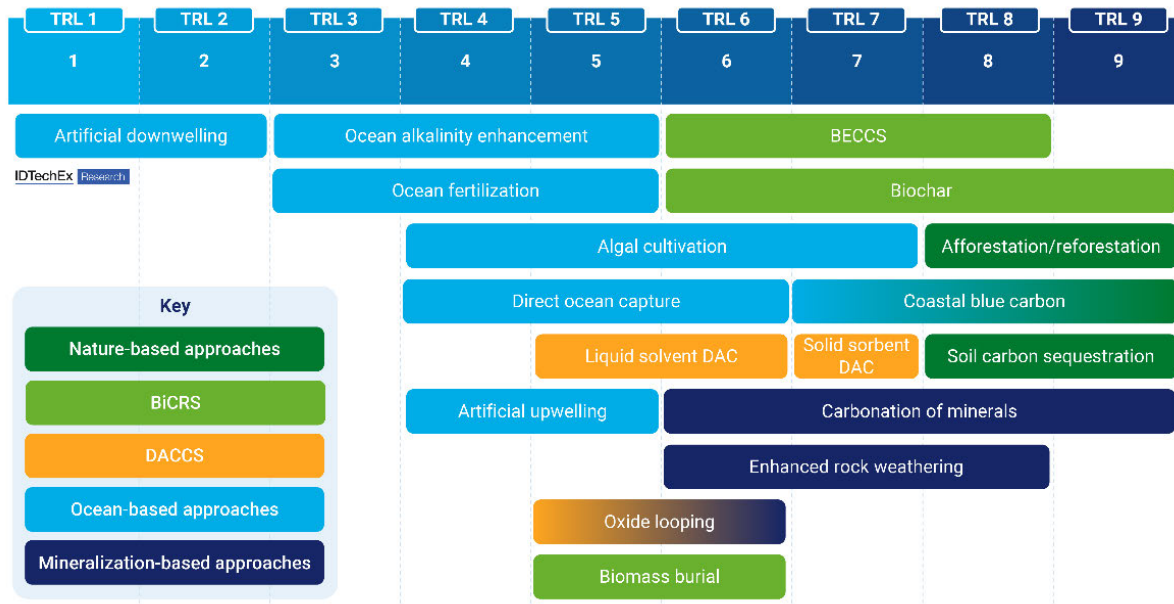
Looks like this was just not passed on between offices. The removals team have been in touch today about this, as they must have had some similar questions.

Our comments are below. Can boil these down more if you want.  
Cheers,

Matt

- (Nice to have) What's the size of the prize for NZ?
  - Carbon prize: If effective, marine carbon dioxide removals could sequester significant amounts of carbon dioxide from the atmosphere. Blue carbon activities have co-benefits, as they also restore coastal environments that could mitigate some effects of climate change (e.g. mangroves protecting against storm surge). Gigablue aim to remove a gigaton of carbon dioxide by 2035, and already has contracts in place to remove 200,000 tons of CO<sub>2</sub> over the next four years.
  - Economic prize: Gigablue have been asked to provide some economic analysis to assess their impact in New Zealand, but has not been forthcoming. Gigablue is focussing on the accessing the voluntary carbon market, but we do not know whether their operations will be solely focussed in New Zealand waters (they have companies in a number of countries where they are making enquiries).
- (Desirable) How proven/ready are some categories (eg mangroves vs ocean fertilisation?) See diagram below
  - Blue carbon activities are more proven than marine geoengineering activities. Methods are available to confirm additionality and measure the amount of carbon stored for blue carbon activities. Coastal blue carbon has been proven through successful operations.
  - Ocean fertilisation, like many of the marine geoengineering techniques, currently lack evidence of effectiveness (very difficult to show a carbon drawdown from the atmosphere and to monitor, report, and verify sequestration) and their environmental impacts.
  - The following diagram shows the readiness of a range of technologies (a score of 3-5 indicates the technology is still in development, whereas a score of 8-9 indicates systems are tested and ready to launch at commercial scale):

## Technology Readiness Level (TRL): Carbon Dioxide Removal Methods



- (Nice to have) What are different stakeholders' positions on this matter?
  - Scientists/eNGOs: Marine geoengineering technology is not yet proven to be effective or safe. Concerns about environmental effects include nutrient robbing, shading the water column, algal blooms, ingestion effects, smothering the seabed, water chemistry changes. There is potential for regional or global effects from marine geoengineering activities. Scientists are interested in the ability to research how these activities could work and their effectiveness.
  - Iwi/Māori: Gigablue have contracted someone from Ngai Tahu to provide a cultural assessment (which has not been shared with MfE). We are uncertain of this person's ability to speak on behalf of Ngai Tahu, 9(2)(ba)(i)
 

We have not engaged with wider iwi groups, but understand there is a strong desire to avoid pollution of the marine environment.
  - Pacific Island neighbours: vocal opposition to marine geoengineering in the Pacific
- (Critical) What is the pathway for these kinds of removals?
  - Is it really the VCM - which Ministers Hoggard and Watts are doing something about VCM appears to be the most viable pathway (apart from those activities occurring close to shore, such as coastal blue carbon). There is no international framework to support marine carbon dioxide removal activities being included in the national GHG inventory. Andrea Brandon has been providing advice to Aaron on how this works.
  - How does this interact with the removals framework about to go live? 9(2)(g)(i)
 

Marine policy team have been working with the team developing guidance for removals framework. We are making it clear that removal activities need to be consistent with international law and our domestic legislation in order to be in scope. 9(2)(h)
- (Critical) What does this mean for the Minister? Eg stimulating economic activity/markets?
  - 9(2)(h)
  - Eg there are still some categories that are for the next 10-20 years? They are x y z?
  - Where are his opportunities to make progress?
    - Greater participation at international fora (such as the London Protocol) to progress science and regulation of marine geoengineering activities. This could also cover ratifying an amendment to the Protocol that enables research on particular methods and embedding research assessment frameworks in our domestic regime
    - Amend domestic regulations to better enable research in line with our international obligations

- Develop or fund a national assessment of mCDR techniques in New Zealand (the Aotearoa Marine Carbon Forum has proposed undertaking this). This could inform future regulation and help develop a strategy/framework for responsible research and use

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**From:** Matthew Barbati-Ross <Matthew.Barbati-Ross@mfe.govt.nz>  
**Sent:** Thursday, 19 February 2026 4:32 pm  
**To:** Matt Adams <Matt.Adams@mfe.govt.nz>  
**Subject:** FW: **CLASSIFICATION** 25-BRF-00199 Marine Carbon Dioxide Removal

Kia ora Matt

See below – Climate GMs catching up with this advice – perhaps in response to your recent discussion with climate? Can you give me a bullet to highlight the link?

Kā mihi, Matthew

**Matthew Barbati-Ross (he/him)**

*Manager | Kaiwhakahaere*

*Marine Policy Team | Kaupapahere Moana*

Ministry for the Environment | Manatū Mō Te Taiao

**9(2)(a)** | [matthew.barbati-ross@mfe.govt.nz](mailto:matthew.barbati-ross@mfe.govt.nz) | [mfe.govt.nz](https://mfe.govt.nz)

*Ministry staff work flexibly by default. For me, this means I work from Te Pātaka-o-Rākaihautū/Banks Peninsula.*