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# What can OAE do for marine ecosystem recovery?



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15<sup>th</sup> International Seaweed Conference EU

**Seagriculture**

16 - 18 JUNE 2026  
GOTHENBURG, SWEDEN

An underwater photograph showing a vibrant blue ocean. In the foreground, there are large, green, leafy seaweed plants. Several fish are visible, including a large, dark fish in the upper left and a smaller, lighter fish in the lower right. The text is overlaid in the center in a bold, white, sans-serif font.

**We can hit our carbon  
targets and still lose our  
oceans**



Direct Air/Ocean Capture



Ocean Alkalinity Enhancement



Biomass Sinking

# THE GIGATON SCALE GOAL

- Emissions Reduction is the Primary Driver
- 7 to 10 Gigatons to be removed by 2050 (or earlier)
- **The ocean has a key role**, absorbing 26% CO<sub>2</sub> and 90% of excess heat. ([World Resources Institute, 2025](#)).

An underwater photograph of a coral reef. The foreground is dominated by large, rounded, yellowish-brown coral structures with a porous, honeycomb-like texture. In the background, the reef continues with various other coral species, including some with reddish and purple hues. Small fish are visible swimming in the clear blue water above the reef.

**Carbon removal slows down  
degradation.**

**Restoration grows the reef  
back.**

**Ocean Alkalinity Enhancement (OAE):** *adding alkaline minerals to seawater to buffer pH and remove CO<sub>2</sub>.*

Designed for tons of carbon removed per dollar

Uses mining products (olivine, magnesium hydroxide)

Hard to visualise and trace

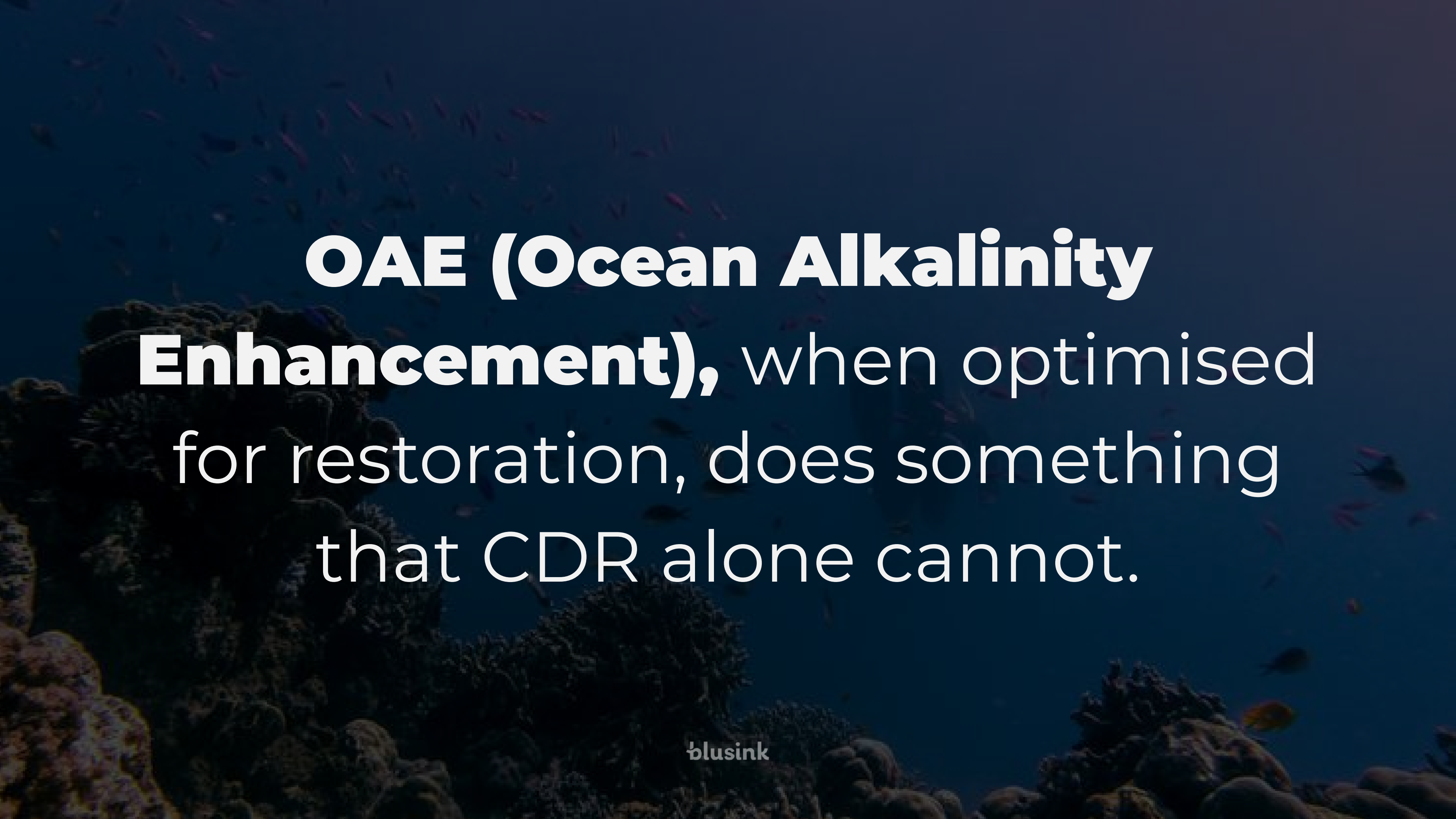
Deployed far from ecosystems (indirect effects only)

Highly reactive ground powders → increased turbidity

Deployments at scale face pushback; proving OAE at scale takes long

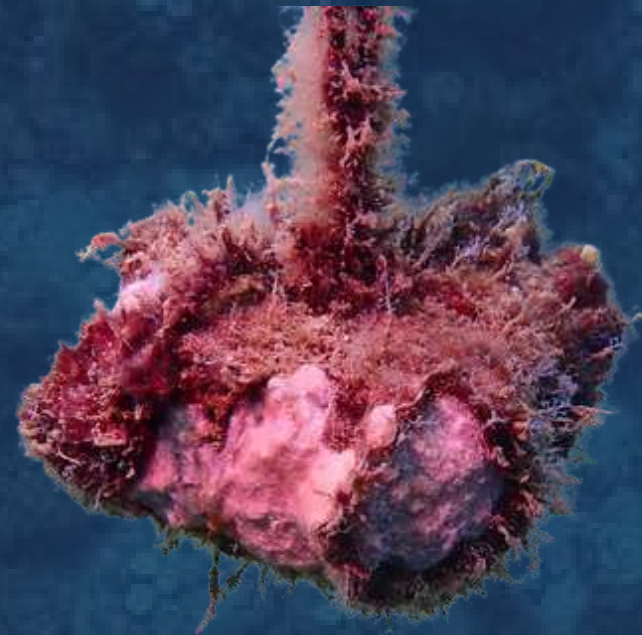


**Fast, pulsed, far from ecosystems...**

An underwater scene featuring a large, dark coral reef structure on the left side. The water is a deep blue, and numerous small, dark fish are swimming throughout the scene. The text is overlaid in the center, with the first part in bold white and the second part in regular white.

**OAE (Ocean Alkalinity Enhancement),** when optimised for restoration, does something that CDR alone cannot.

WHAT WE ARE CREATING **FSB-OAE. FIXED-STRUCTURE BIOGENIC OCEAN ALKALINITY ENHANCEMENT**



Madeira, Portugal.

PATENT FAMILY **US20250074828**  
**EP4464156**

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# WHAT WE ARE CREATING **FSB-OAE. FIXED-STRUCTURE BIOGENIC OCEAN ALKALINITY ENHANCEMENT**

Upcycled industry by-products: porcelain shards, marble waste

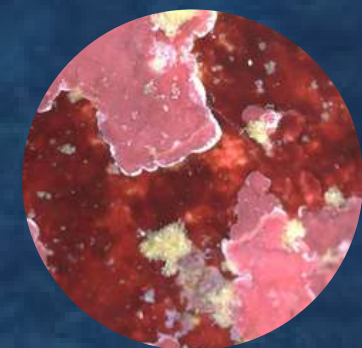
Alkaline mineral form **dolime/lime (CaO·MgO)**  
Almost twice olivine. Still above MgOH<sub>2</sub>. Upcycled.



Scales like manufacturing a ceramic cup or plate

Engineered and optimised for habitat builders

**Gives fast-track advantage to crusts & coralline algae over green generic turf**



Derby University, UK

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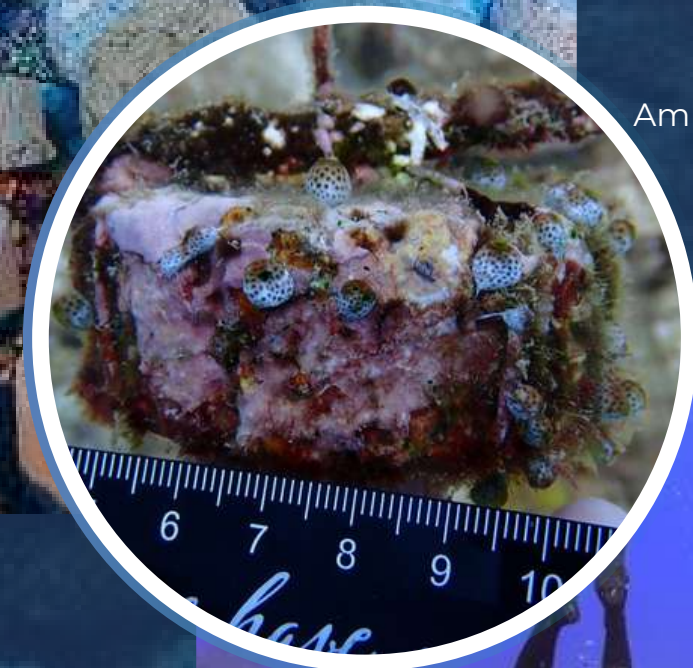
# Why spend time creating rocks? Because it works.

- Madeira reached the 2-year mark in 2026: still releasing alkalinity. Local alkalinity remains high.
- Pressure + temperature swings → more efficient carbon capture. Higher reactivity.
- Structure becomes luxury housing for organisms and frames effective restoration as an *unavoidable consequence*.

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Ambon Island, Indonesia.



The background of the slide is an underwater photograph of a coral reef. A large, dark, and somewhat blurry coral structure is in the center, with a vertical line of coral extending upwards from it. The water is a deep blue color.

**Carbon markets built the  
engine.**

**Biodiversity markets will  
drive it forward.**

That's the natural evolution of the market.

# Ambon Island, Indonesia

October 2025; 4 hectares



## Fifth month mark/400 Blusink units inspected

- Coral recruits on 30+ units
- Sponges on 50 units (>40% cover)
- Crusts/Coralline algae: 60–80% cover

# San Andrés Island, Colombia

February 2026; 16 hectares



**5,000+**

biodiversity credits

**2,7**

OAE tonnes removed

**4**

tonnes of minerals upcycled

**1600 project unit areas**

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# Global Deployments

## Indian Ocean and Arabian Gulf Deployments

2024

Magoodhoo,  
*Maldives*

Blusinkies enhance biodiversity and resilience for coral reefs in warming oceans.

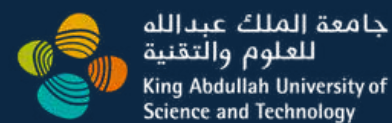


Deployed in April 2024  
Image from monitoring campaign in Nov 2025 - rhodolith formation

2025

Red Sea,  
*Saudi Arabia*

Coralline algae restoration for coral larvae settlement at scale.



Deployment of 40  
Blusinkies in early Dec  
2025

Next monitoring  
campaign in January  
2026

# Caribbean Deployments

2023

## Santa Marta, *Colombia*

Blusinkies showed rapid coralline algae growth, first deployment styles tested



FUNDACIÓN  
CIM  
CARIBE



Deployed in early 2023, images from monitoring in late 2024, highly positive results.

2025

## San Andres, *Colombia*

Seagrass restoration potential testing with new Blusinkie shapes.



CEMarin



UNIVERSIDAD  
NACIONAL  
DE COLOMBIA



Deployed in Sept 2025, next monitoring campaign to be decided by UNAL.

# European Deployments

2024

Madeira,  
*Portugal*

Rhodolith bed resilience  
and seafloor restoration.

AMACO

Associação Madeirense  
para a Conservação Marinha



Deployed in June 2024,  
carbon estimates  
created and biodiversity  
restoration pictures in  
June 2025.

TBC

La Spezia,  
*Italy*

Pioneering technology for  
mussel farming.



In preparation

500 Blusinkies delivered  
to Genoa, Italy, waiting  
for the Italian team to  
deploy.

# East and Southeast Asian Deployments

## Tioman Isl., *Malaysia*

Testing enhancing biodiversity and carbon capture in tropical waters.



2025

200 Blusinkies deployed in Sep 2025, monitored in Dec 2025 with the suspended Blusinkies showing the best growth. Netx monitoring capaign in Feb 2026.

## Ambon Isl., *Indonesia*

Strengthening **local partnerships** to rebuild coral ecosystems.



2025

400 Blusinkies deployed in Sep 2025, next monitoring campaign in late Feb 2026 after the monsoon season.

## Shenzhen Sea, *China*

Scaling local restoration efforts.



2025

Site assessment done in Dec 2025, deployment of 240 Blusinkies to be completed by Dive4Love before the end of the year.

# In-lab Essays

## Carbon Quantification

Through a mesocosm experiment led by Plymouth Marine Labs, UK

CCMAR

PML Applications Ltd



2025

200 Blusinkies deployed in Sep 2025, monitored in Dec 2025 with the suspended Blusinkies showing the best growth. Next monitoring campaign in Feb 2026.

## Coral fragmentation

Science-backed data on efficiency for microfragmentation



2025

40 Blusink coral bases will be tested by NYU Abu Dhabi for success rate in coral microfragmentation approaches.

# Our Global Deployment Network

From Colombia to Indonesia

blusink



CONSERVATION  
INTERNATIONAL



AMACO

Associação Madeirense  
para a Conservação Marinha



KAUST

CMA CGM



MARHE

DISLICORES

• STORE •



Reef Check



ROYAL GROUP

*Three things you can do tomorrow with us*

# Three asks

## **Co-locate**

deploy Blusinkies near your seaweed farm or restoration site

## **Co-define**

restoration metrics. Tell us what "recovery" means for your system.

## **Co-create**

tech-to-nature credits. Help us build the market the ocean needs.

# Contact us

**blusink**

Thank you



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