

Building the world's largest value chain for regenerative seaweed while strengthening the economic resilience of small-scale farmers

In our Insights Series, TRANSFORM shares successes and learnings from our projects to:

- Help the SME and entrepreneur community gain knowledge and learn from our projects
- Showcase to funders what can be achieved through impact-led initiatives

PROJECT AT A GLANCE:

MEETING THE GROWING DEMAND FOR QUALITY, RESPONSIBLY SOURCED SEAWEED

Coast 4C is on a mission to build the world's largest value chain for regenerative seaweed. By providing high-quality equipment, seedlings, and on-farm management support, it is restoring productivity in seaweed farming while strengthening the economic resilience of small-scale farmers.

THE CHALLENGE

Seaweed, along with other micro and macro algae, plays a key role in oxygen production, contributing to the ocean's ability to generate over half of the oxygen we breathe. It is also a key ingredient in cosmetics, pharmaceuticals, and food products, where its colloids act as gelling agents, thickeners, and stabilisers. Most of the global supply comes from small-scale farmers in the Philippines and Indonesia, many of whom live at or below the poverty line. For these farmers, seaweed cultivation is a crucial income source. Demand for seaweed is rising, yet, the seaweed farming sector has remained largely unchanged for decades, leading to marine plastic pollution, coral reef degradation, and declining productivity. Complex value chains further limit profitability, keeping many farmers trapped in poverty.

Find out more

Collaboration is key to scaling impact enterprises. Learn more about the successful programmes that other enterprises and funders have delivered together. [Read more stories here.](#)

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THE INNOVATION

With TRANSFORM's support, Coast4C tested a new farm input package to enhance efficiency and scale production. This package, the GROW programme, equips farmers with high-quality inputs, on-farm management support, and technology to improve yields and crop value. This enabled farmers – many of them women – to sell seaweed at higher prices and increase their incomes. TRANSFORM's funding also supported research to build the business case for impact investors, helping Coast 4C validate the social and environmental benefits of regenerative seaweed farming, particularly within improved Marine Protected Areas (iMPAs).

- The highest grade of seaweed under Coast 4C's definition is "regenerative". This means the seaweed is cultivated in a way that contributes to reviving marine life and prevents plastic pollution.
- Its regenerative seaweed is also traceable to the site where it is produced, and grown within an improved Marine Protected Area (iMPA).
- iMPA is Coast 4C's proprietary model for increasing the size and effectiveness of community-based marine protected areas, which integrate zones for regenerative seaweed farming, sustainable fishing and habitat restoration.

THE IMPACT

Coast 4C has supplied 286 farming families with regenerative GROW farm input packages, reducing poverty and improving financial stability. Among these farms, yields have quadrupled, while seaweed quality has increased by 15% in carrageenan strength and 10% in moisture content and carrageenan yield. The initiative has also contributed to the protection of nearly 6,000 hectares of coastal waters, with Marine Protected Areas expanding by 4,500% on average. Regenerative farming has further increased local fish stocks, reduced coral reef damage, and curbed marine plastic pollution. In 2024, Coast 4C was named a prestigious Earthshot Prize finalist.

WHAT'S NEXT?

Looking ahead, Coast 4C is focused on increasing revenue, transitioning more of its supply chain from traditional to regenerative practices, and growing its total seaweed supply. It is also strengthening systems, processes, and capabilities, and improving digital and financial inclusion, to enable efficient long-term scaling, with another fundraising round planned.

INSIGHTS:

UNLOCKING OPPORTUNITIES FOR SMALL-SCALE FARMERS AND SUPPLIERS



1. BUILD A STRONG, LOCALLY EMBEDDED SUPPORT TEAM

Seaweed farmers operate within an informal, widely dispersed value chain, making it difficult to provide consistent support.

Coast 4C established small, locally embedded teams to work directly with farmers across remote coastal areas. These teams provide hands-on assistance, ensuring farmers receive the technical support, training, and resources needed to improve productivity and adopt more sustainable practices.

2. USE TECHNOLOGY TO MANAGE THE NETWORK MORE EFFICIENTLY

Managing a fragmented farming network without a structured system makes it difficult to track performance, optimise decision-making, and scale operations.

Coast 4C implemented the Oceanfarmr app, mapping 285 farms with coordinates and training 15 field staff on its use. This technology enables real-time data collection, helping Coast 4C monitor farm performance, provide targeted support, and develop a web-based dashboard to improve overall efficiency.

3. ENSURE SMALL-SCALE FARMERS ARE INCENTIVISED TO PARTICIPATE

Farmers are less likely to engage if they don't see direct benefits from participation.

To encourage participation, Coast 4C provides GROW farm input packages, which include advanced technologies, improved materials, seedlings, and financial support. These packages are offered through a credit facility, allowing farmers to repay gradually as their yields and incomes increase, creating a sustainable path for long-term engagement.



4. GENERATE EVIDENCE TO VALIDATE REGENERATIVE IMPACT

To validate the social and environmental benefits of regenerative seaweed farming, one must find ways to compare these practices with more traditional approaches.

This can be difficult to do in communities where farmers quickly adopt successful techniques from their peers, affecting control groups.

Yet, reliable data is essential as it enables an enterprise to demonstrate effectiveness, legitimacy and accountability, creating a strong business case for follow-on funding. Allocate a portion of your funding – even if only small – to explore different methods to generate impact data and show value of the work you are doing. It is essential for validating your business and guiding future decisions.

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TRANSFORM is an impact accelerator that unites corporates, donors, investors and academics to support visionary enterprises across Africa and Asia. Together, we test and scale new market-based solutions that build inclusive, sustainable economies, empower marginalised communities, and drive climate-resilient growth.

Combining grant funding, business insight and research, TRANSFORM is advancing the development of innovative business models to help solve global challenges. It was established in 2015 and is led by Unilever, the UK's Foreign, Commonwealth and Development Office, and EY.