

KLH Bioreactor

Turning Aquaculture Waste into a Solution
for Seaweed Cultivation and Carbon Mitigation



Get in touch :

PT. Karya Lingkar Hijau - KLH
Jl. Raya Kebayoran Lama No. 4
Permata Hijau, Kec. Kebon Jeruk
Jakarta Selatan - 11560
E. admin@lingkarhijau.com
M. +62 815 2410 2075
www.lingkarhijau.com

Challenges in Coastal Aquaculture



Seawater
Pollution



Increase
Carbon Emission



Inefficient
Waste Management

Target Location:

Aquaculture in Coastal areas, for shrimp/fish farming and seaweed cultivation.

KLH Bioreactor:

A Game-Changer for Coastal Sustainability



Recycling
The Wastewater



Reducing
Carbon Emissions



Producing
High-Protein Biomass



A closed-loop bioreactor system designed to convert aquaculture wastewater into natural fertilizer for seaweed and microalgae cultivation.

Land-Based Seaweed Farming:

Bringing the Ocean's Bounty to Land

The **closed-loop circulation system** ensures continuous water treatment, mimicking the natural ocean wave movement to optimize seaweed growth.

This system allows seaweed farming to be conducted **on land**, using simple pond or tank infrastructure. By eliminating dependency on unpredictable **ocean conditions, extreme weather, and marine disturbances**, this innovation empowers **coastal and women-led seaweed farming communities** with a **stable, efficient, and sustainable aquaculture solution**.

Furthermore, this process contributes to global climate action by **absorbing CO₂** through algae cultivation, making aquaculture more **environmentally friendly and resilient**.



Uniqueness & Advantages of KLH Bioreactor

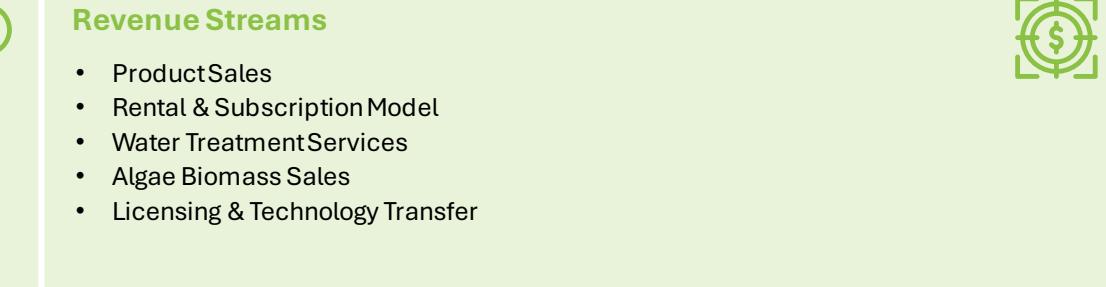
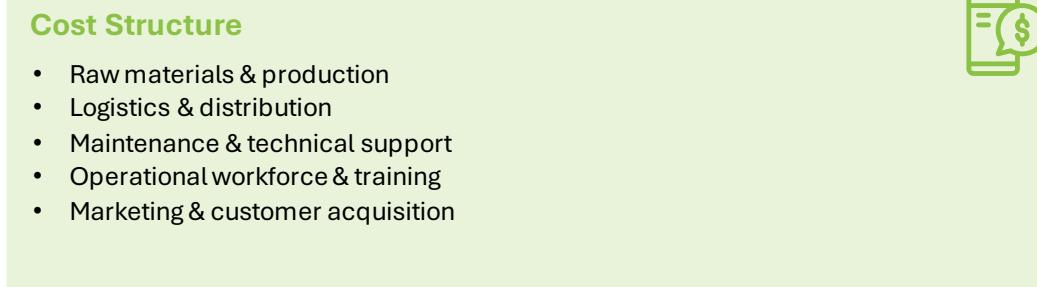


- 1. Energy-Efficient** : Uses Venturi and static mixing technology, eliminating the need for electricity.
- 2. Controlled Environment** : Enables land-based seaweed farming, independent of weather and ocean conditions.
- 3. Circular Economy** : Transforms aquaculture waste into a valuable resource for seaweed and microalgae production.
- 4. Enhancing Local Economy** : Provides opportunities for seaweed farmers, especially women, to cultivate seaweed in a stable and predictable environment, free from marine disruptions.

KLH Bioreactor revolutionizes land-based aquaculture, making seaweed farming more **efficient, sustainable, and climate-resilient**!

Business Model Canvas : KLH Bioreactor

Key Partnerships  <ul style="list-style-type: none"> • Aquaculture farms • Government agencies & environmental organizations • Research institutions & universities • Manufacturing & engineering firms • Wastewater treatment companies • Impact investors & sustainability-focused funds 	Key Activities  <ul style="list-style-type: none"> • Design & manufacturing • Research & development (R&D) • Sales & marketing • Customer support & technical assistance • Regulatory compliance & certification • Partnership development 	Value Proposition  <ul style="list-style-type: none"> • Sustainable wastewater treatment • Energy-efficient technology • Circular economy integration • Cost savings for aquaculture farms • Eco-friendly and chemical-free process • Regulatory compliance & ESG benefits 	Customer Relationships  <ul style="list-style-type: none"> • Personalized consultations • After-sales support & maintenance services • Technical training & workshops • Collaborative R&D with customers • Community engagement programs 	Customer Segments  <p>Primary Target:</p> <ul style="list-style-type: none"> • Shrimp & fish farming industries • Food and Beverage Industry • Integrated aquaculture businesses <p>Secondary Target:</p> <ul style="list-style-type: none"> • Government & NGOs • Industrial wastewater treatment
Cost Structure  <ul style="list-style-type: none"> • Raw materials & production • Logistics & distribution • Maintenance & technical support • Operational workforce & training • Marketing & customer acquisition 	Revenue Streams  <ul style="list-style-type: none"> • Product Sales • Rental & Subscription Model • Water Treatment Services • Algae Biomass Sales • Licensing & Technology Transfer 			



Unlocking Economic Value

A Growing Demand for Green Solutions



The global seaweed market is valued at approximately **USD 17 billion (2023)** and is projected to reach **USD 30 billion by 2030**, growing at a **CAGR of 8-10%**.

Indonesia, as the second-largest seaweed producer, contributes over **8 million metric tons annually**, yet traditional ocean-based cultivation faces environmental risks



Meet Our Team

The Man behind the scene



Ferry Sugandhi

CEO – strong background in environmental entrepreneurship, forge strategic partnerships and scale impact-driven solutions for a sustainable blue economy.

Awan Rimbawan

CMO – passionate advocate for social impact, specializing in community engagement and empowerment.



Amanda Larashati

CBD – specialist in developed business strategies, established exclusive partnerships, and managed customer relationships.

Advisor Profile



Septian Suryo

Advisory board of innovation in water tech and biotech-based circular economy solutions.



Dr. Roslinda Ibrahim

Advisory board of bioreactor system, focusing on water quality monitoring and system optimization

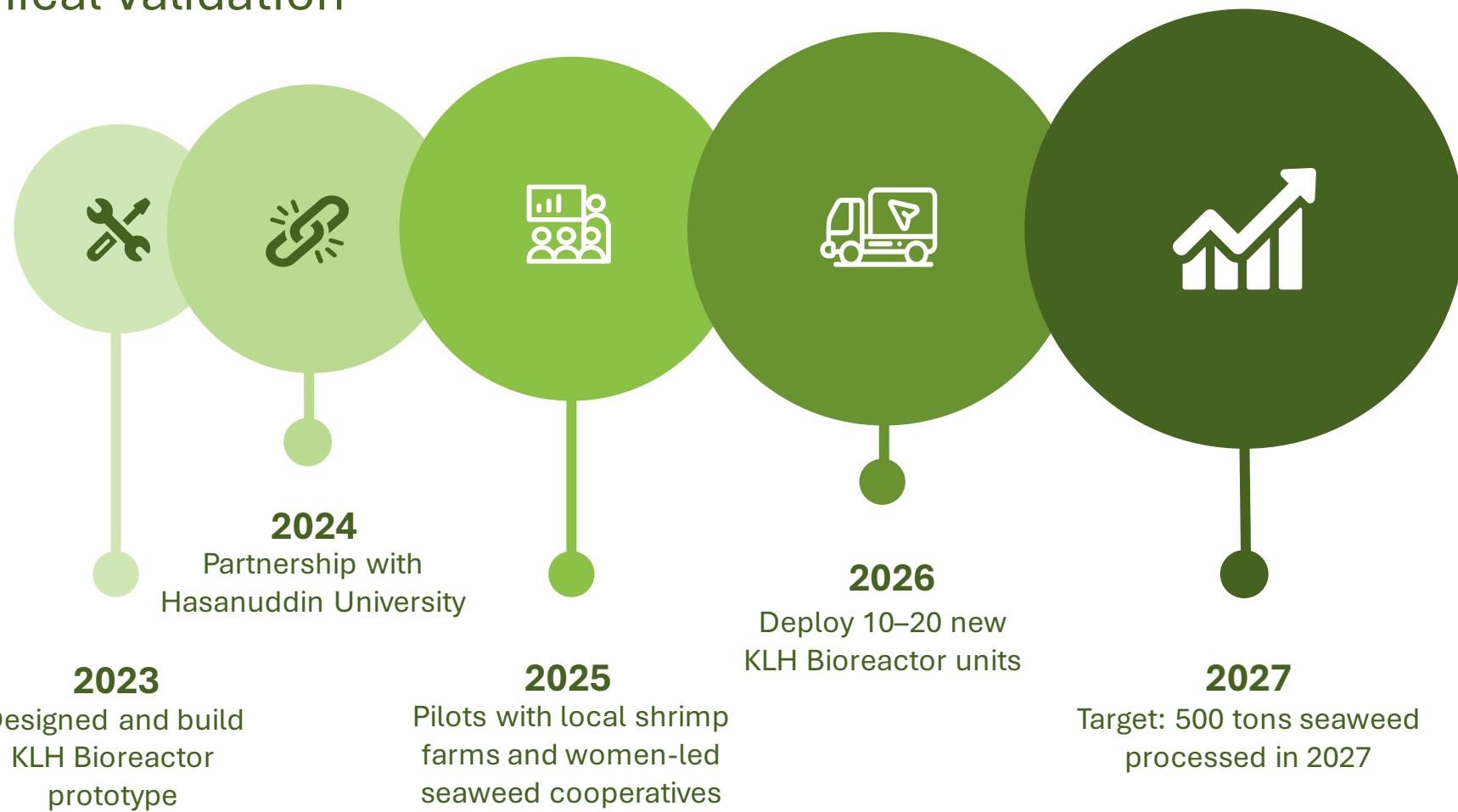


Dr. Mudian Paena

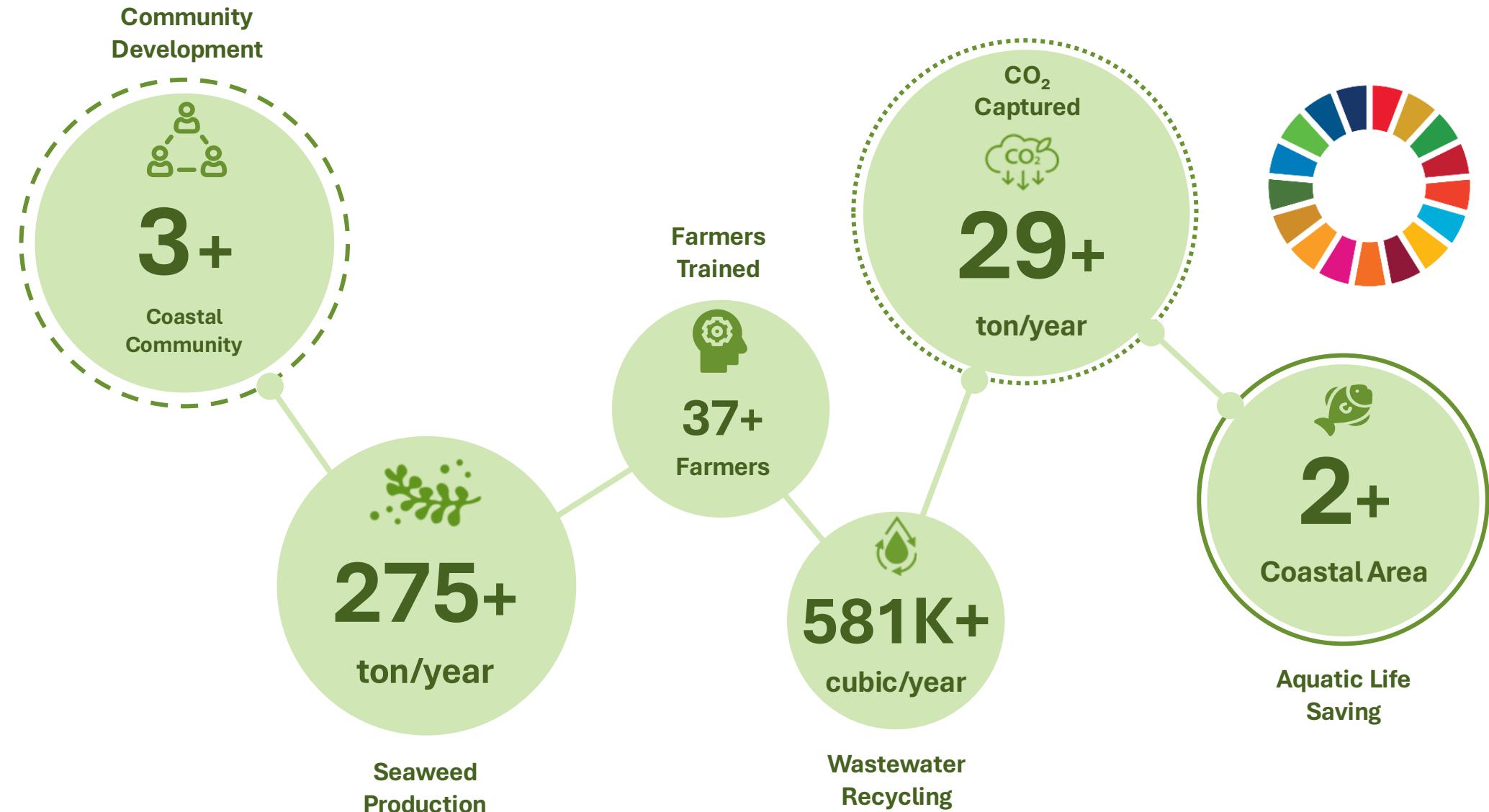
Advisory board for regulation - National Aquaculture Researcher (BRIN)

Traction & Milestones

Proven Impact, Community Adoption, and Technical Validation



KLH in NUMBERS



Empowering Coastal Communities



Target Beneficiaries:

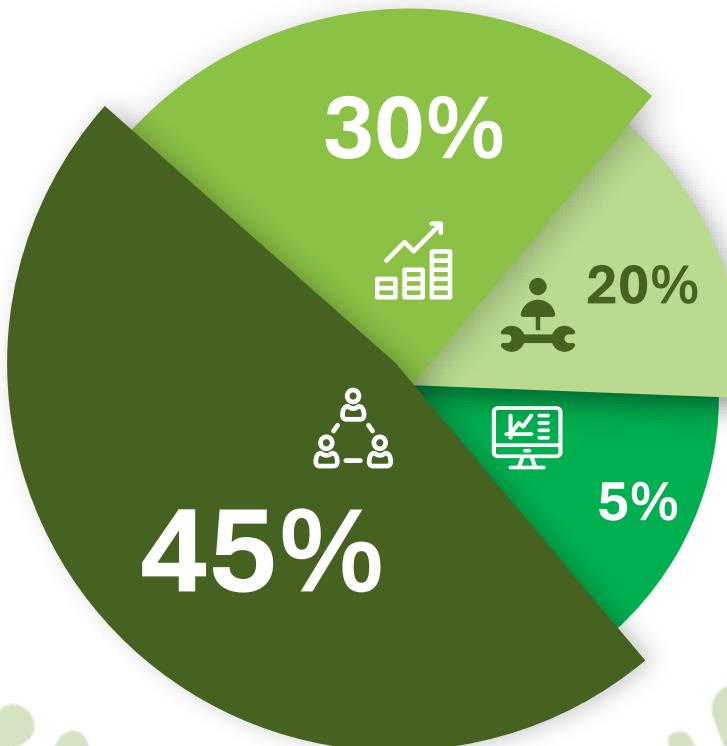
- Shrimp/fish farmers: Benefit from sustainable wastewater solutions.
- Seaweed farmers: Access to natural fertilizer for enhanced growth.
- Coastal ecosystems: Reduced pollution and environmental restoration.

Alignment with SDGs:



Join Us in Scaling Impact

Your Support Will Help Us Expand, Innovate, and Empower



Funding Ask Seeking USD 100,000 to:



Expand community-based seaweed farming programs



Support operations and working capital



Scale KLH Bioreactor production units



Enhance AI monitoring platform



Contact us at :

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**Let's support our mission to
empower the community**



**Join Us to Protect the
Coastal Ecosystem and
livelihood**

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