

KLH Bioreactor

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



Get in touch :

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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.

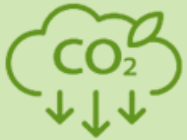


KLH Bioreactor :

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



- Aquaculture farms
- Government agencies & environmental organizations
- Research institutions & universities
- Manufacturing & engineering firms
- Wastewater treatment companies
- Impact investors & sustainability-focused funds

Key Activities



- Design & manufacturing
- Research & development (R&D)
- Sales & marketing
- Customer support & technical assistance
- Regulatory compliance & certification
- Partnership development

Key Resources



- Technology & intellectual property
- R&D expertise
- Manufacturing facilities & supply chain
- Financial capital
- Customer network

Value Proposition



- 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



- Personalized consultations
- After-sales support & maintenance services
- Technical training & workshops
- Collaborative R&D with customers
- Community engagement programs

Channels



- Direct B2B sales & partnerships
- Online & offline marketing campaigns
- Distributor & reseller networks
- Government & institutional collaborations
- Sustainable technology grants

Customer Segments



Primary Target:

- Shrimp & fish farming industries
- Food and Beverage Industry
- Integrated aquaculture businesses

Secondary Target:

- Government & NGOs
- Industrial wastewater treatment

Cost Structure



- Raw materials & production
- Logistics & distribution
- Maintenance & technical support
- Operational workforce & training
- Marketing & customer acquisition

Revenue Streams



- 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



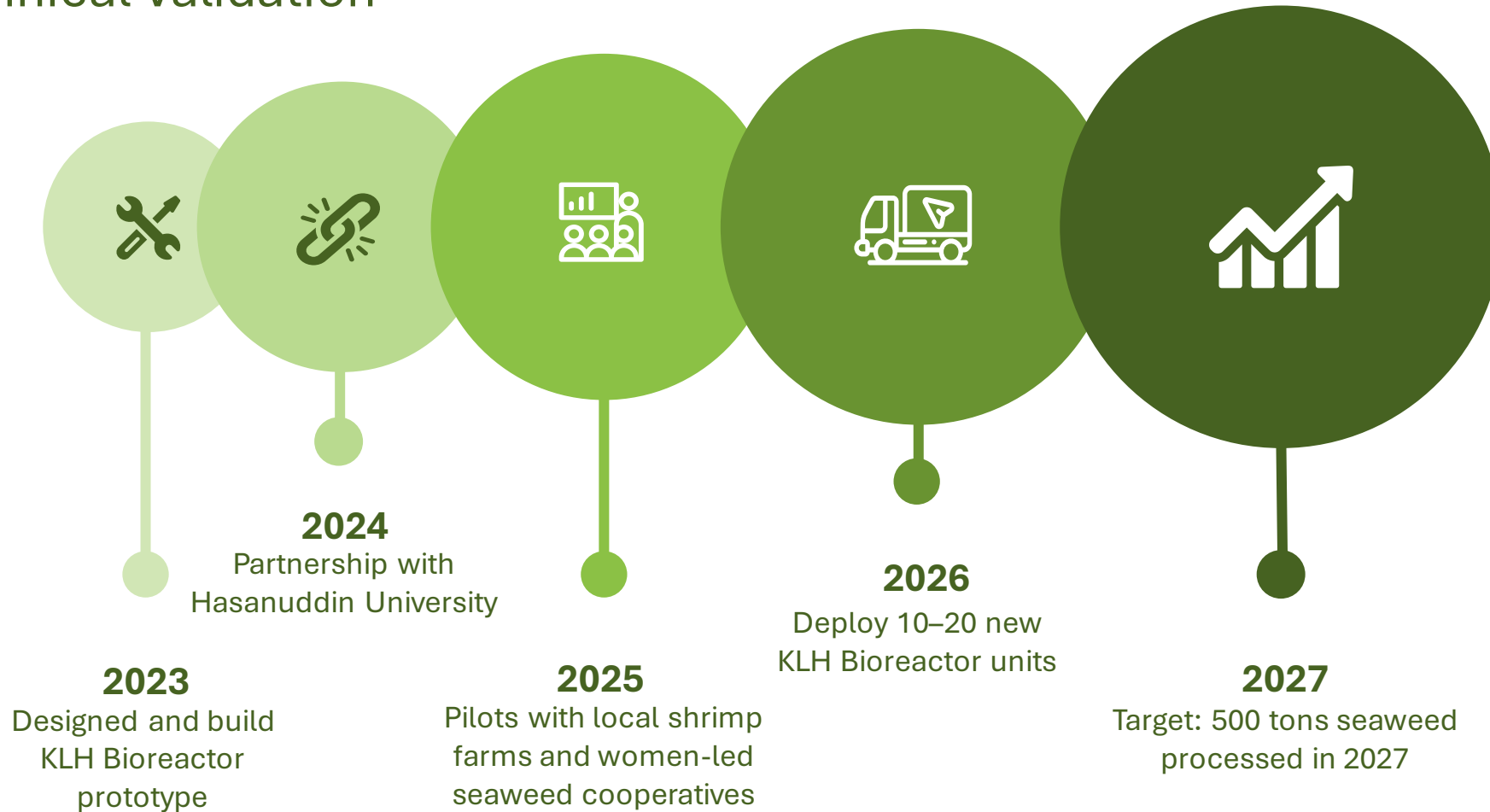
Dr. Mudian Paena

Advisory board for regulation - National Aquaculture Researcher (BRIN)

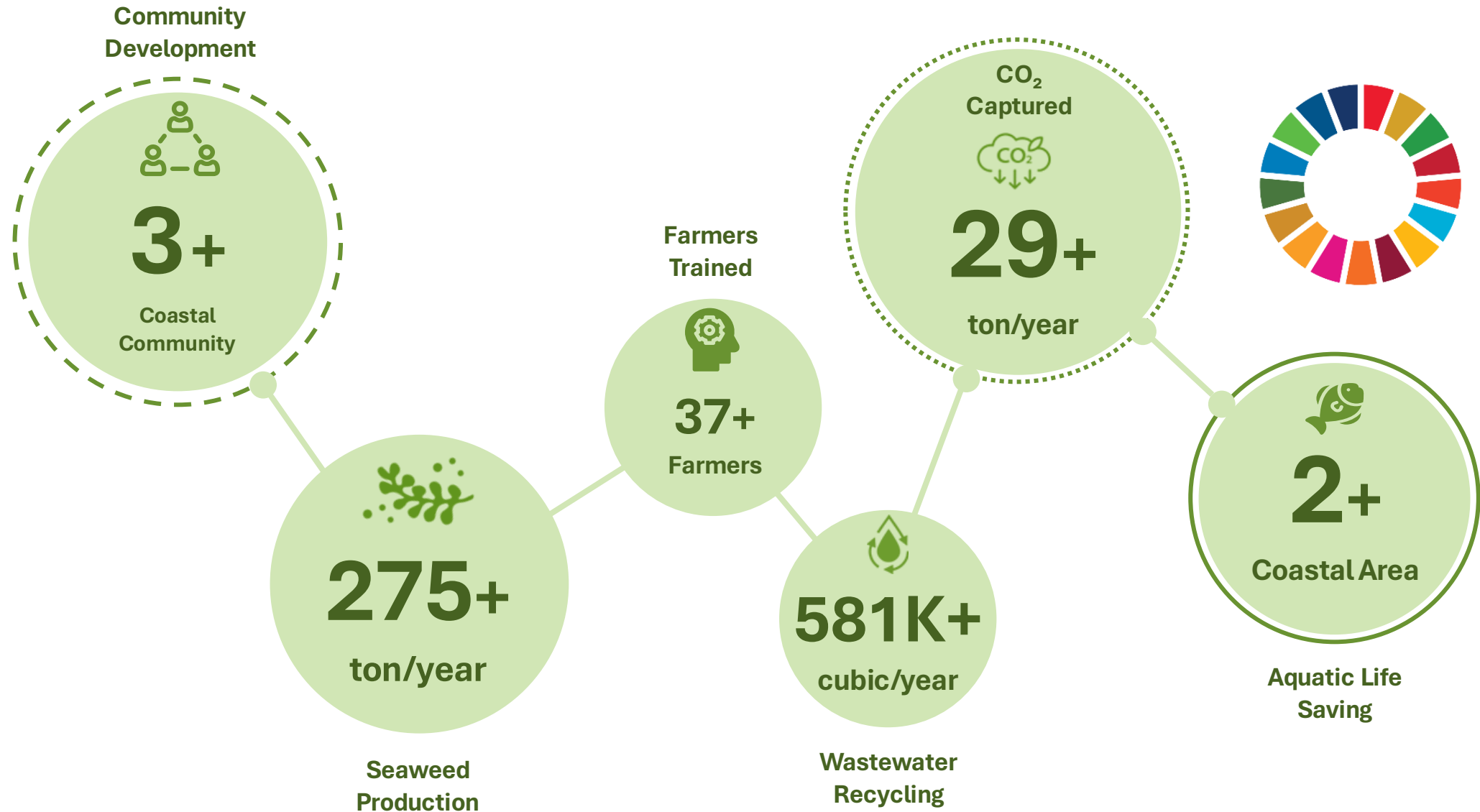


Traction & Milestones

Proven Impact, Community Adoption, and
Technical Validation



KLH in NUMBERS



Empowering Coastal Communities



Target Beneficiaries:

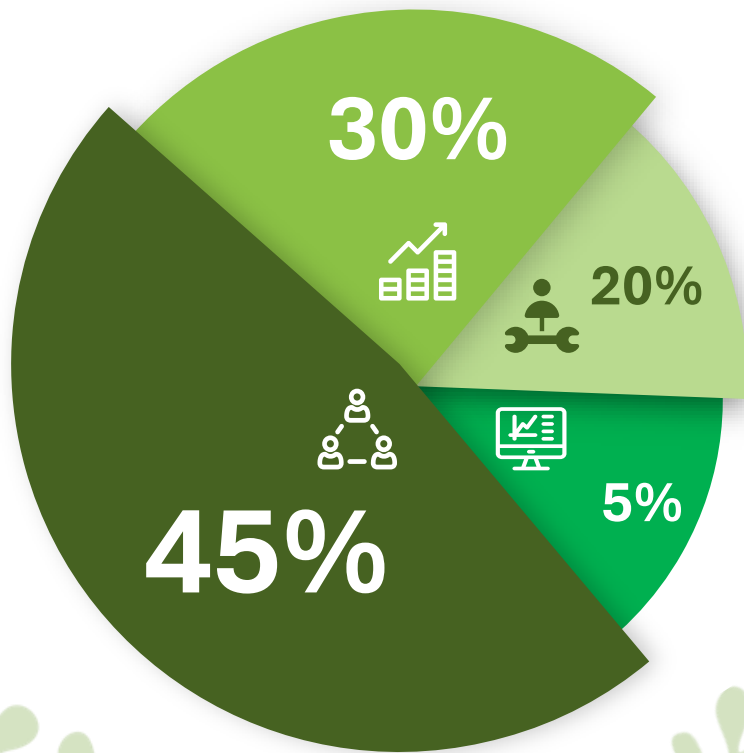
- Shrimp/fish farmers: Benefit from sustainable wastewater solutions.
- Seaweed farmers: Access to natural fertilizer for enhanced growth.
- Coastal ecosystems: Reduced pollution and environmental restoration.

Alignment with SDGs:



Join Us in Scaling Impact

Your Support Will Help Us Expand, Innovate, and Empower



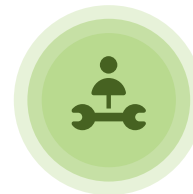
Funding Ask Seeking USD 100,000 to:



Expand community-based seaweed farming programs



Scale KLH Bioreactor production units



Support operations and working capital



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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