- Japan SDGs Innovation Challenge for UNDP Accelerator Labs -

Igniting the Ocean Economy in South Africa: Seaweed, Blue Innovation, and Enterprise Development

UNDP Accelerator Lab South Africa

Identified SDGs issues by UNDP Accelerator Lab

This project has the potential to address multiple SDGs
The diagram below demonstrates the multiple potential impacts of seaweed / macroalgae

- Sustainable food source for human consumption
- Access through foraging and harvesting

- Seaweed biofuel

- Fertilisers restoring nutrients to soils
- Sustainable livestock feed

- Absorbing pollutants from ocean water
- Providing safe habitats for juvenile marine species
- Regenerative ocean farming

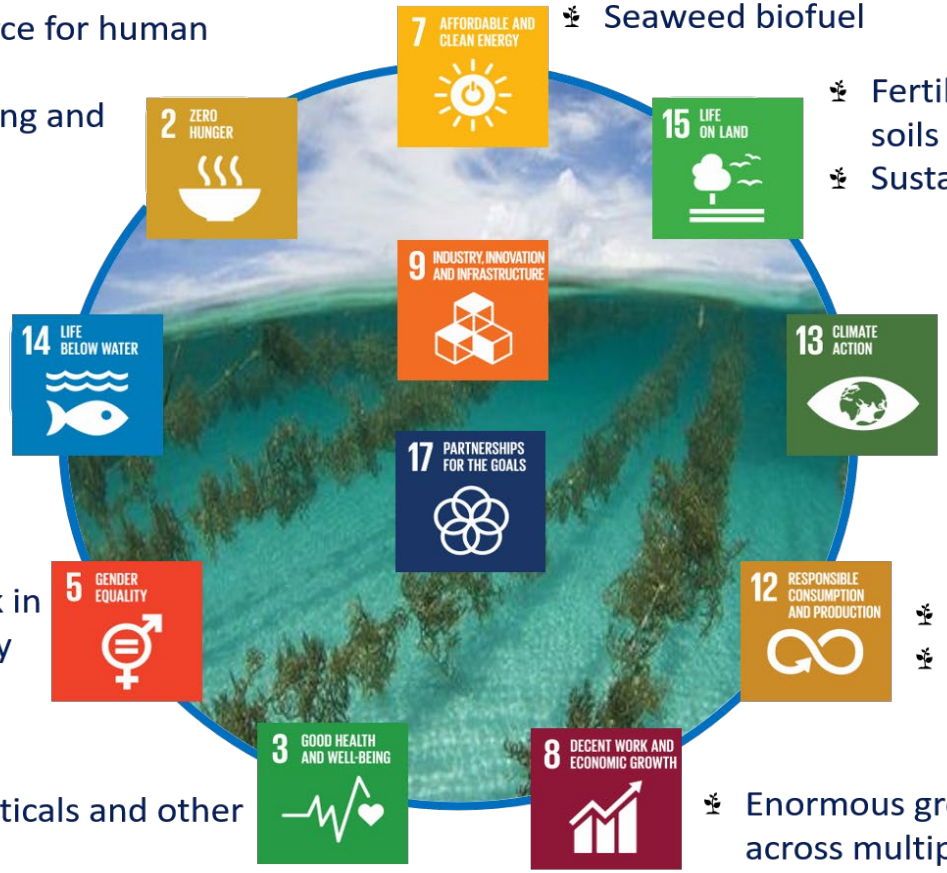
- Carbon sequestration and storage
- Ocean deacidification
- Reduced methane emissions from livestock farming

- Currently majority of work in this sector is carried out by women

- Biodegradable packaging
- Suited to local processing

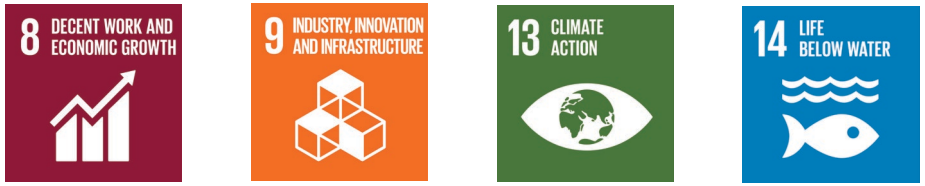
- Vitamins, pharmaceuticals and other health products

- Enormous growth potential of sector across multiple markets



Identified SDGs issues by UNDP Accelerator Lab

Specific SDGs which will guide this project include:



- One in five South Africans live in extreme poverty, and the unemployment rate is 34.4% with 63% of youth aged 15 – 24 years old unemployed.
- The economic potential of South Africa's oceans have not yet been unlocked, and the blue economy could contribute up to R177 billion to the GDP by 2033, and between 800 000 and 1 million direct jobs.
- The known seaweed diversity in South Africa includes approximately 900 species, making the country one of the richest marine floras in the world
- Internationally, seaweed aquaculture has grown faster than any other marine production sector over the last 20 years, and there is a growing body of literature that suggests that seaweed will become a major component of global marine aquaculture
- Seaweed farming can offer the most vulnerable sectors in society alternative livelihood options, increased health and food security, and adaptation strategies to the changing climate. With the length of coastline and number of endemic species, South Africa has an uncapitalised comparative advantage in this sector. Blue innovation and enterprise development could have enormous impact, particularly unemployed youth in coastal communities.

Image Source

Planned Solutions by UNDP Accelerator Lab South Africa

OBJECTIVE

Unlock the potential of the ocean economy for marginalised communities in South Africa

INTERVENTIONS

- Research, development and innovation to identify solutions for ocean-based farming
- Enterprise development for unemployed youth to create blue economy businesses
- Increase production of macroalgae and other resources through ocean farming and multi-trophic aquaculture solutions
- Develop value chains and market for blue economy products

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Expertise/technologies expected from Japanese partners

- Japan has a long history of the cultivation, harvesting and use of seaweed, and with it, an established industry and value chains.
- Japan has at least 15 seaweed genera of economic importance which are produced through various cultivation methods, including open-sea cultivation.
- The Lab's work could be greatly enhanced by drawing on the knowledge and expertise of organisations involved in this established sector.

As such, we request the following support:

1. **Technical capabilities to design and build low-tech, ocean-based, macroalgae and multitrophic farms along the South African coastline;**
2. **Knowledge and experience regarding established macroalgae value chains and aquaculture sectors;**
3. **Access to international markets while the country and region's value chains are in development.**

Image Source

Resources the Accelerator Lab can provide

The AccLab will take the project lead, and will provide: Project Leadership and Coordination; Human Resources; Infrastructure; Technical and Advisory Skills; Data Collection, Validation, and Analytics; Project Monitoring and Evaluation Support; as well as competencies and skills as per the examples below.

EXPLORATION	Ecosystem Mapping Partner and Stakeholder Identification and Relationship Development Baseline Study Data
SOLUTIONS MAPPING	Resource Mobilisation Community Engagement Ethnographic Research
EXPERIMENTATION	Hypotheses testing Solution Experimentation and Validation

Stakeholders of the project

forestry, fisheries & the environment
Department: Forestry, Fisheries and the Environment
REPUBLIC OF SOUTH AFRICA

National Government Department; Relationship established with key Aquaculture Advisors

AUDA-NEPAD
AFRICAN UNION DEVELOPMENT AGENCY

Regional Organisation; Relationship established with Head of Industrialisation; Proposal submission planned

BRANSON CENTRE OF ENTREPRENEURSHIP
SOUTH AFRICA

Private Sector; Partnership established; Relationship with Executive Director; Proposal submission planned

indalo inclusive

NGO; Partnership established; Relationship with Executive Director; Proposal submission planned

safe seaweed coalition

Global Coalition; Relationship established with Senior Advisor, Ocean, United Nations Global Compact and Director, Food Programme, Lloyd's Register Foundation

UNIVERSITY OF CAPE TOWN
IYUNIVESITHI YASEKAPA • UNIVERSITEIT VAN KAAPSTAD

National Academic Institution; Relationship established with Emeritus Professor and Senior Research Scholar

Food and Agriculture Organization of the United Nations

UN Agency; Relationship will be established with relevant colleagues

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Expected outcomes and follow-up activities to the project

OUTCOMES

- Validated innovations for seaweed ocean-based farming and multitrophic farming
- Established SMMEs led by youth entrepreneurs
- Increased number of ocean-farmed products available and linked to markets

ACTIVITIES

- Launch of project and showcasing innovations;
- Profiling new enterprises across the country and region;
- Community roadshow for awareness raising and replication;
- Academic publication in collaboration with key partners;
- Replication to other Accelerator Labs in Africa;
- Knowledge products, including case studies;
- Expanded coalition for a Technical Working Group for Seaweed in Africa.

UNDP Accelerator Lab Team

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