



Sustainable upscaling of seaweed farming in Indonesia

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What impact is intended?

We propose a sustainable business model for upscaling seaweed farming where mechanisation is introduced to improve the economics and quality, strengthening the sector and maintaining social cohesion. Farming should also be done in an environmentally sustainable way. Local seaweed species will be used, and fertilisers will be avoided to ensure environmental sustainability. Universities and local NGOs can cooperate in advising on sustainable cultivation processes.

Scaling up production is a challenge for small scale producers in Indonesia. Sufficient investment is difficult to find by a single farmer. In cooperation with local authorities and NGOs, so-called "Centers of production" can be organised where producers group together and get access to financing, training and support for the further expansion of their business. Through the introduction of cultivation machines and use of modern cultivation techniques, yield and quality can be improved.

IHC will lead setting up a pilot farm in a strategic location (e.g. poor areas where seaweed cultivation exists, or where upscaling is the next step) engaging partners with adequate competences; local seaweed farmers and fishermen communities and local authorities. The advantages of modern cultivation techniques will be experienced, while improving the welfare of local communities.

Royal IHC is currently developing seaweed harvesting mechanisation, which already proved numerous advantages for cultivation of seaweed in European farms even at a prototype stage. Reduction of harvesting costs by about 50 % is possible and harvesting time by 90 % are feasible (what contributes to a higher quality of the seaweed). This pilot would allow IHC to set her seaweed harvester in the Indonesian market and also learn practical aspects from experienced farmers. IHC's partner would also have the chance to build expertise in this area. This pilot means also good publicity for all partners, as we become involved in a sustainable project that aims at fighting climate change and poverty.

What financial leverage can be realised?

- A business case will be possible.
- For setting up a 10 hectares seaweed farm, one harvester has to be purchased. Two harvesting seasons are possible.
- The seaweed produced (2667 tones/year) is harvested and processed into food products, that are sold directly on the market.
- Market value of the local seaweed-based food product is estimated at € 4000/ton (based on an FAO report). Current assumptions are that the seaweed product is worth at least € 2000/ton.
- After costs, tax and depreciation, the owners have a net profit of € 150.000
- This includes the full ownership of the farm and one harvester with a depreciation of 10 years.

What are the strengths of this instrument?

- It is concrete, actionable
- A clear business case is expected
- It contributes to climate adaptation, and indirectly to reduced land use change and associated emissions.

Requested input:

The input we request is:

- Input on business case details and implementation approach;
- Scan of local strategic partners to join the pilot on the side of seaweed processing;
- Suggestion on suitable financing partners;
- Assistance in selecting the right location and permits;
- Assistance on the environmental side of the impact of (scaling up) seaweed harvesting.