

Improving seaweed production and processing opportunities in Indonesia



Key details

Location

Indonesia

Duration

Start Aug 2016

End Jan 2021

Budget

AUD 1,600,000

Commissioned organisation

University of the Sunshine Coast

Partners

Agency for Marine and Fisheries Research and Development; Centre for Seaweed Culture Research and Development; Hasanuddin University; Research Centre for Marine and Fisheries Product Processing and Biotechnology; University of the Sunshine Coast

Project Leader

Nicholas Paul

Program

Fisheries

Project code

FIS/2015/038

Overview

This project aimed to transform and modernise the Indonesian seaweed industry by taking a whole-of-value-chain approach.

Indonesia is the world's second-largest seaweed producer, and seaweed culture is one of the few available income-generating opportunities for coastal communities in eastern Indonesia.

Although production is increasing by about 30% annually, problems with seaweed quality, processing procedures and utilisation of waste streams from processing, have been identified. Also, processors have identified an issue of declining quality in carrageenan-producing seaweeds, particularly reduced gel strength and problems with the colour of the processed product.

Specifically, this project aimed to: analyse value chains to identify constraints and knowledge gaps for seaweed production in Indonesia; improve the quality of seaweeds produced at the farm level, and create innovative products from seaweeds and their processed waste streams.

Project outcomes

- Improved quality of seaweed produced at farm level.
- Increased household income in coastal communities due to improved productivity.



- Generation of a new income source for pond farmers through expansion of Caulerpa farming in coastal ponds.
- Income generation for women's groups that undertake the processing and marketing of new products, through the development of processing techniques.
- Reduced reliance of seaweed farmers on the fluctuating commodities markets for carrageenan and agar gels.
- National economic benefits from increased proportion of seaweed processing in Indonesia, leading to local employment and retention of a greater share of the seaweed's total value.
- Positive environmental effects from the increased growth of seaweeds that utilise dissolved nutrients for growth that would otherwise enter the sea.
- Utilisation of solid and liquid waste streams from seaweed processing.



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