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CONDITIONS FOR SUCCESSFUL SEAWEED VALUE CHAIN DEVELOPMENT: LESSONS FROM INDONESIA

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Since the 1980's the farming of seaweeds in Indonesia has developed fast and is now an industry that provides livelihood and income for tens of thousands of coastal households, producing around 10 million metric tons of fresh seaweeds per year. Part of this production leaves the country to be used to produce hydrocolloids which are ingredients for the food and cosmetic industry. The remaining part is locally processed and used in a wide variety of food and other products. We will describe the present status of seaweed culture, processing and markets for Indonesian seaweed products, realizing that its development is one of the most significant examples of successful alternative or complementary income for small-scale tropical coastal communities. Having few or no alternatives, such communities often do rely on capture fisheries as their main or only source of income. However, they are confronted with decreasing catches which result into decreased income. Seaweed farming is then an interesting additional source of income for smallholder fishermen. However, how sustainable can it be in the long term? From literature and interviews with the stakeholders in the Indonesian seaweed industry we

- extracted and analyzed the factors that have contributed to the successful uptake of seaweed farming by Indonesian coastal communities,

- looked into the sustainability of the supply chain as a whole from farm to the market and

- identified the hotspots and potential transition pathways to overcome the challenges the Indonesian seaweed supply chain is facing.

Indonesia’s geographic nature with more than 17,500 islands and an impressive coastline offers plenty opportunities for seaweed production. However, its geographical location is not only a blessing, it is also a disadvantage. The logistic chains from the production on often remote islands to the factories on the main island in Java is long and fragmented, therefore inefficient, costly, and often not transparent. Also, the relationship with the suppliers is weak. Many smaller and bigger middlemen are orchestrating the supply chain. Getting reliable quality and quantity raw material is a constraint for the majority of the Indonesian processors. Most of them operate on a capacity of about 60%, and in 2020 several companies went bankrupt.

The developments as observed in Indonesia contain valuable lessons for policy makers, seaweed stakeholders, and others interested in providing sustainable sources of income for tropical coastal communities.

Keywords: seaweed, zero hunger, transition pathways, supply chain design