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Chapter 3. Farming of Seaweeds

Ricardo Radulovich¹, Amir Neori², Diego Valderrama³, C.R.K. Reddy⁴, Holly Cronin⁵ and John Forster⁶

Summary

Seaweed farming at sea is proving an increasingly competitive biomass production alternative for food and related uses. Farmed seaweed output has been growing exponentially, reaching 24 million tons by 2012. Remarkably, 99 % of this production occurred in merely eight Asian nations. Most of the remaining 150 countries and territories with coasts are yet to begin seaweed farming. With current technology and extensive available sea areas, requiring no land, freshwater or fertilizers, seaweed production can expand sustainably to the scale of agriculture, while providing a variety of valuable ecosystem services. Following a deductive or principle-based approach, that establishes seaweed primary productivity as a basis for food production, this chapter describes the fundamentals of seaweed farming, harvest and post-harvest techniques, ecological and economic considerations and a perspective on opportunities and challenges. The objective is to provide both an overall account of the state-of-the-art on seaweed farming as well as a contribution to the industry's sustainable development.

Key words

Agriculture, Aquaculture, Climate change, Coastal, Cultivation, Food production, Macroalgae, Nutrition, Ocean, Off shore, Sea farming, Seaweed, Water shortage.

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9. Ecological and environmental impacts of seaweed farming
10. Economic and social considerations of seaweed farming
11. Opportunities and challenges
12. Conclusions: an idea whose time has come

¹ Department of Biosystems Engineering, University of Costa Rica, San José, Costa Rica.

² Israel Oceanographic and Limnological Research Ltd., National Center for Mariculture, Eilat, Israel.

³ Food and Resource Economics Department, University of Florida, Gainesville, Florida, USA.

⁴ CSIR-Central Salt and Marine Chemicals Research Institute, Bhavnagar, Gujarat, India.

⁵ Dept. of Geography, McGill University, Montreal, Canada; and Smithsonian Tropical Research Institute, Panama.

⁶ Forster Consulting Inc., Port Angeles, Washington, USA.