Chapter 5

Conclusions for South Australia From the Analysis

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ABSTRACT

South Australia has comparative advantages in the early stages of the macroalgal value chain. This provides a foundation for building a macroalgal aquaculture and high-value products processing industry. To make this happen, there needs to be a coordinated effort between stakeholders to further the sustainable development of the South Australian bio-economy based on the cultivation of macroalgae biomass. This chapter explores this conclusion.

OVERVIEW

South Australia has comparative advantages in the early stages of the macroalgal value chain. This provides a foundation for building a macroalgal aquaculture and high-value products processing industry. To make this happen there needs to be a coordinated effort between stakeholders to further the sustainable development of the South Australian bio-economy based on the cultivation of macroalgae biomass.
Conclusions for South Australia From the Analysis

Work needs to be done to identify suitable locations for production facilities (e.g. aquaculture sites or land based production sites) as well as in developing the platform technologies and production systems, either locally or through establishing relationships with existing technology and equipment providers and processes\(^1\) to maximise both the economic and the biomass yield of whatever species are selected.

To develop a viable and vibrant macroalgal industry in South Australia, it is imperative that we create an industry capacity to value-add to locally produced biomass. This will likely be through the application of advanced, clean manufacturing systems, capable of producing multiple high-value macroalgal products aimed at the international market.

It is expected that this will leverage our comparative advantages in both resources and innovation capacities and will seek to increase product quality and consumer safety whilst maximising utilisation and monetisation of the biomass. Such developments need to focus on the medium-high price range of value-added products incorporating food ingredients, cosmeceuticals and some technical industrial application products.

In the process of establishing a South Australian macroalgae industry it is critical that the scientific and technical development work is complemented with expert knowledge around markets and prices as well as foresighting their future developments. This includes the capacity to develop “go-to-market” strategies and to identify critical lead customers. Grounded in successful product development combined with efficient logistics solutions throughout the entire value chain, South Australia will lay the foundation for a competitive macroalgal industry.

To enable the establishment and development of the industry, conducive boundary conditions must be put in place. This will include legal frameworks supported by scientific and technical knowledge but will also need to take account of the legitimate desires of the public and other stakeholders.

LINKING VALUE CHAIN TO INDUSTRY DEVELOPMENT STRATEGIES

Understanding the key elements of the macroalgal value chain leads us to an appreciation of the industry development challenges and associated strategies. Key amongst these is an appreciation of the major steps in domesticating target species and the development of associated processing technologies.
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