

Regulatory priorities



Seaweed regulatory success

Aspirational success



Seaweed regulations support sector innovation and collaboration and enhance environmental, social, cultural, and economic values.

Success components



Coastal activities	Land-based activities
Local Management System (LMS)	
Strategic Planning Framework which identifies areas where some seaweed activities are more enabled, and some are less enabled	
Clear pathways for priority species/product forms and adaptive management for new innovations	
Regulatory priorities guided by and in collaboration with the sector and Māori Pathways from research to commercialisation Standards that support premium positioning Protected taonga species and intellectual property	

Main user groups and needs



Cross Sector

A transparent supply chain with a variety of seaweed species grown in a way that is ethical, fair trade, environmentally positive, and considers local communities and other resource users.
Fit for purpose standards for priority species and product forms which position Aotearoa New Zealand products in premium markets.



Hatchery Operator

A consenting pathway suited to seaweed, access to broodstock, and ability to transition from research to commercialisation.



Seaweed Operator

A consenting pathway suited to seaweed, recognition for ecosystem benefits, access to broodstock, ability to transition from research to commercialisation.



Processor

Product format standards and market access pathways that position and protect Aotearoa New Zealand as a premium seaweed product producer.



Wholesaler/Retailer



Current state of regulations

Relevant areas and purpose

Activity	Regulation
Farming seaweed on an existing marine farm in the CMA	Resource Management Act (RMA)
	RMA
Establishing a new farm in the CMA	Fisheries Act Māori Commercial Aquaculture Claims Settlement Act (MCACS) Marine and Coastal Area Act (MACA) Biosecurity Act
Establishing a land-based farm	Freshwater Fish Farming Regulations RMA
Establishing a farm in the EEZ	Exclusive Economic Zone Act (EEZ) Fisheries Act
Stocking a seaweed farm	Fisheries Act
Wild harvest of seaweed	
Seaweed food products	Australia and New Zealand Food Standards Code
Seaweed agricultural products	Agricultural Compounds and Veterinary Medicines Act
Seaweed nutraceutical products	Dietary Supplements Regulations Food (Supplemented Food) Standard
Organic seaweed products	Organic Products Bill (not yet regulation)



Main regulatory barriers to seaweed sector vision

Activity	Regulation
	Seaweed growing and wild harvesting is currently regulated under the Fisheries Act and the Resource Management Act and there is a disconnect between the two.
	The current wild harvest framework focusses on protecting wild seaweed stocks and it has done this well. However, some of those protections are now restricting innovation in seaweed aquaculture – for example, there is a restrictive pathway for aquaculture ventures to access wild seaweed for broodstock.
	The current marine aquaculture framework is focused on managing effects of shellfish and finfish and approaches in each region are different despite similar settings in regional plans.
	The current marine framework creates an arbitrary disconnect between the territorial sea and the Exclusive Economic Zone (EEZ).
	There is also a disconnect between seaweed grown for research purposes and commercial seaweed which discourages commercialisation trials – for example, seaweed held by research facilities cannot be used to test the value chain for new products.
	It makes sense for Aotearoa New Zealand to focus its seaweed future away from wild harvest and toward aquaculture. However, a carefully planned and species-specific transition from existing wild harvest to aquaculture is needed. Streamlined aquaculture trials are essential to test and refine approaches, from growing to production to commercialisation and market access.
	The Freshwater Fish Farming Regulations for land-based aquaculture are not fit for seaweed and require a review.



Growing and harvesting

Activity	Regulation
 <p>Production and marketing</p>	<p>Aotearoa New Zealand has a unique opportunity to create high value products including functional foods, dietary supplements and agricultural compounds including veterinary medicines. However, early adopters are experiencing high costs to entry and there isn't a clear pathway to enable the value chain to be tested prior to full commercialisation. Regulation needs to be flexible to recognise that different species may have different regulatory requirements</p> <hr/> <p>Seaweed production and marketing is regulated under requirements that have been developed for more traditional industries and early innovators are expending considerable resources navigating these - for example:</p> <ul style="list-style-type: none"> » Seaweed as a food is seen as 'high risk' because it is new, which means each operator requires a comprehensive Food Control Plan which will likely restrict innovation. » Brown seaweeds have naturally high iodine content and don't fit within current food standards. This inhibits market access. » Iodine regulations are not well defined in food standard and inhibit market access for seaweed. <hr/> <p>The international regulatory settings create misalignments with Aotearoa New Zealand's aspirations - for example:</p> <ul style="list-style-type: none"> » International markets don't recognise our unique Aotearoa New Zealand species. » Imported ACVMs e.g., biostimulants can have lesser quality requirements which can undermine our product competitiveness.

 **Required regulatory responses**
Urgent responses - 2022/2023

Intent	Regulatory response	Agency
Enable marine-farm access to naturally settled seaweeds on farm structures	Replace schedule 8A of the Fisheries Act to a more flexible gazette notice to facilitate the addition of species that may be used as harvestable spat (e.g., <i>Ecklonia radiata</i>).	MPI
Enable access to wild stock for marine and land-based aquaculture	Amend the Fisheries Act to create new special permit purposes for 'commercial aquaculture' (which enables a limited harvest of wild seaweed resources for land-based and marine aquaculture purposes), and the sale of this 'farmed' seaweed, subject to conditions and policy.	MPI
Enable access to research stocks for growing/commercialisation trials	Amend s192A of the Fisheries Act or grant an exemption by notice in a gazette to enable an entity to directly receive seaweed (or specific seaweed species) from a research provider/facility who operates under a special permit.	MPI
Support council decision making for adding seaweed to existing marine farms, particularly in the Waikato and Auckland	Carry out a broad scale ecological assessment to support the addition of seaweed to existing shellfish farms in the Hauraki Gulf.	MFE, MPI, DOC

 **Medium-term regulatory responses**
2023/32

Intent	Regulatory response	Agency
Enable development of high value seaweed products	Enable protection of Aotearoa New Zealand's unique seaweed intellectual property including for native species. Include seaweed in consideration of Plant Variety Rights Act amendments.	MBIE
	Develop standards and market mechanisms for algal bioremediation.	MPI, MBIE
	Develop organic seaweed standards and include in market access initiatives.	MPI, MFAT
	Review the Dietary Supplements Regulations and Food (Supplemented Food) Standard with key seaweed species/formats in mind.	MPI (Food Safety)

Intent	Regulatory response	Agency
Enable development of high value seaweed products cont.	Create template 'food control plans' which can be adapted for innovation in development of seaweed food products.	MPI, NZTE, MFAT
	Develop standards for key seaweed species product formats including high value nutrition and ACVMs such as biostimulants. Facilitate recognition of these in key markets	
	Work with Australian counterparts to review the Australia and New Zealand Food Standards Code to include seaweed.	
	Create a framework to identify and review key species/formats for future market recognition initiatives.	
Enable new marine based seaweed aquaculture	Simplify the aquaculture regime in the upcoming review of the Resource Management Act.	MFE, MPI, DOC
	Develop national guidance and strategic marine spatial planning which recognises the specific requirements and ecosystem benefits of seaweeds.	
	Develop a set of measures and policies which enable consideration of ecosystem benefits of seaweed aquaculture including any carbon benefits, restorative aquaculture, EBM principles, and participatory processes.	
	Review aquaculture settings in the Exclusive Economic Zone (EEZ) to facilitate efficient offshore aquaculture development including classifying the discharges related to aquaculture activities (including seaweed).	
	Amend the 9A Subpart 2 of the Fisheries Act to enable registration of EEZ fish farmers.	
Facilitate managed access to wild seaweed to enable aquaculture to test growing, product formats, and commercialisation	Potentially review Māori Commercial Aquaculture Claims Settlement Act settings to include future seaweed aquaculture developments in the settlement forecasts and gazetted areas as well as considering Māori aquaculture rights and interests in the EEZ.	MPI, TOKM
	Amend schedule 4C (permit moratorium) of the Fisheries Act to remove key seaweed species of interest (by seeking a s17B determination). Allow managed access to wild seaweeds for aquaculture (e.g. under an LMS as opposed to the Quota Management System (QMS)) which recognises local knowledge, manages effects, ensures Māori rights/participation and creates a mechanism for operators to access wild stocks they have enhanced. Include review of beach cast seaweed settings.	MPI
Enable land-based seaweed aquaculture	Prioritise a review of the Fresh Water Fish Farming Regulations including explicit consideration for seaweed and macroalgae and potentially a separate land-based aquaculture regime.	MPI, MfE, DOC
	Develop methodology and policies to account for neutral or positive effects of algal facility discharges.	
Create a pathway for restorative seaweed aquaculture	Develop a set of measures and policies which enable consideration of ecosystem benefits of seaweed aquaculture including any carbon benefits.	MPI, MfE, DOC
Protect and enhance seaweed ecosystems	Include key seaweed ecosystems in marine spatial planning frameworks.	MPI, MfE, DOC
	Continue overarching review of all elements of the marine biosecurity framework while recognising and supporting best practices in aquaculture.	
	Carry out a review of the 2010 Biosecurity Act Undaria Policy in partnership with industry and Māori. Include consideration of appropriately located and managed wild harvest of <i>Undaria</i> which may provide both ecosystem and economic benefits.	MPI (BNZ)

For more information on this project, visit:

www.sustainableseaschallenge.co.nz/our-research/building-a-seaweed-economy



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