

# SEAWEED DOWNUNDER Overview of the seaweed industry in Australia

Jo Lane Sea Health Products

Seagriculture - USA Alaska September 2024













# Kelp water container from Tasmania made from bull kelp (*Durvillaea potatorum*), dated 1850.



Source: National Museum of Australia, © Trustees of the British Museum





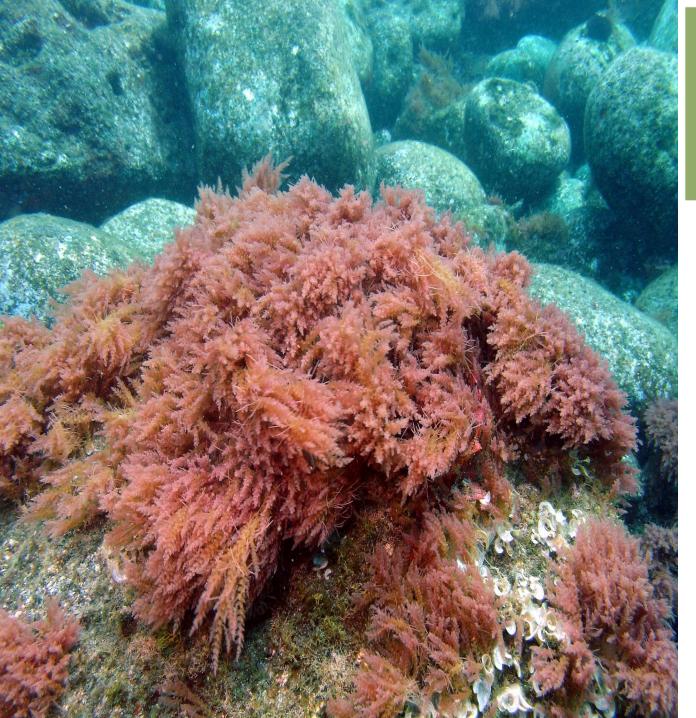
#### Australian Seaweed Industry Blueprint

A Blueprint for Growth

by Jo Kelly Australian Seaweed Institut

August 2020







**•** 

**\*** \*

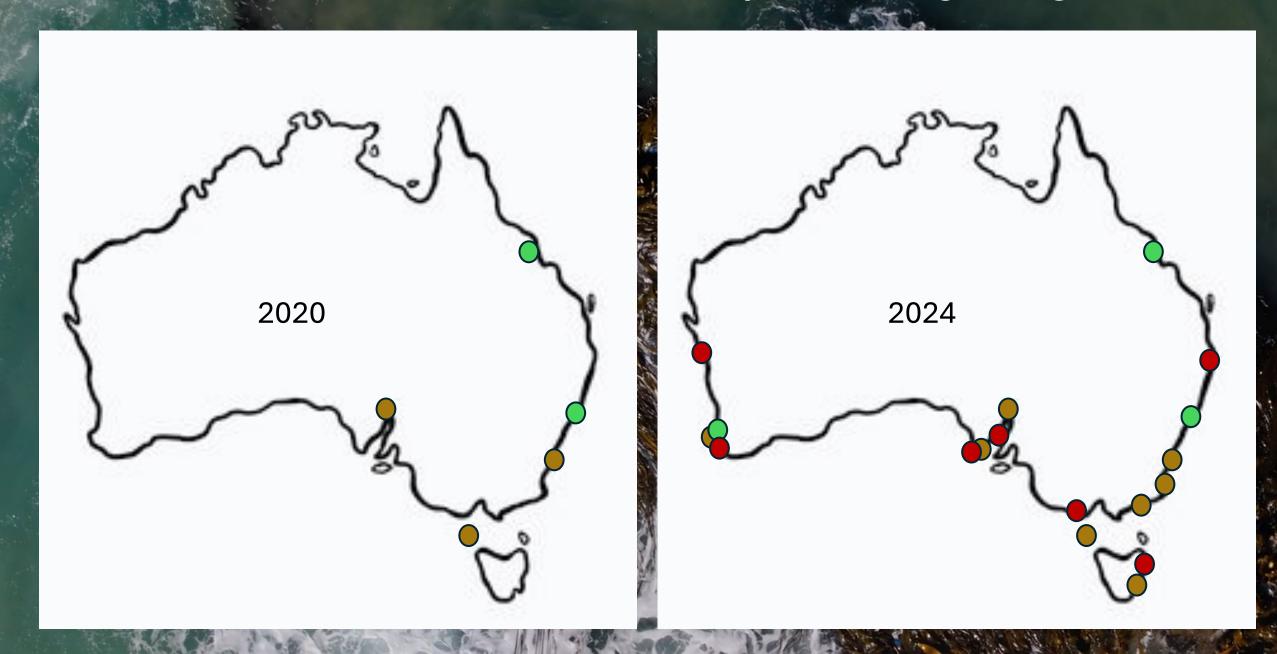
Australian Sustainable Seaweed Alliance

Asparagopsis identified as reducing methane emissions and became major focus in Australia

Development of NHN to assist growth of the industry and knowledge gaps

Other potential species to focus on next include **kelps**.

#### Australian seaweed industry small but growing











Fremantle

Seaweed

Brown - Ecklonia/Macrocystis/ Durvillea and Wakame



Australian Kelp Products



MARINOVA



Kai Ho Tasmanian Sea Vegetables .oceantreasure.com.au

REGENERATIVE SEAWEED FARMING





Fremantle Seaweed

#### Red Asparagopsis





CleanEyre Global.

FEEDING THE LAND FROM THE SEA FOR CLEAN AIR



Fremantle

Seaweed









# AUSTRALIA IS DEPENDENT ON SEAWEED IMPORTS

**\$40** MILLION Australian Seaweed Market

\$14 BILLON Global Seaweed Market (AUD)

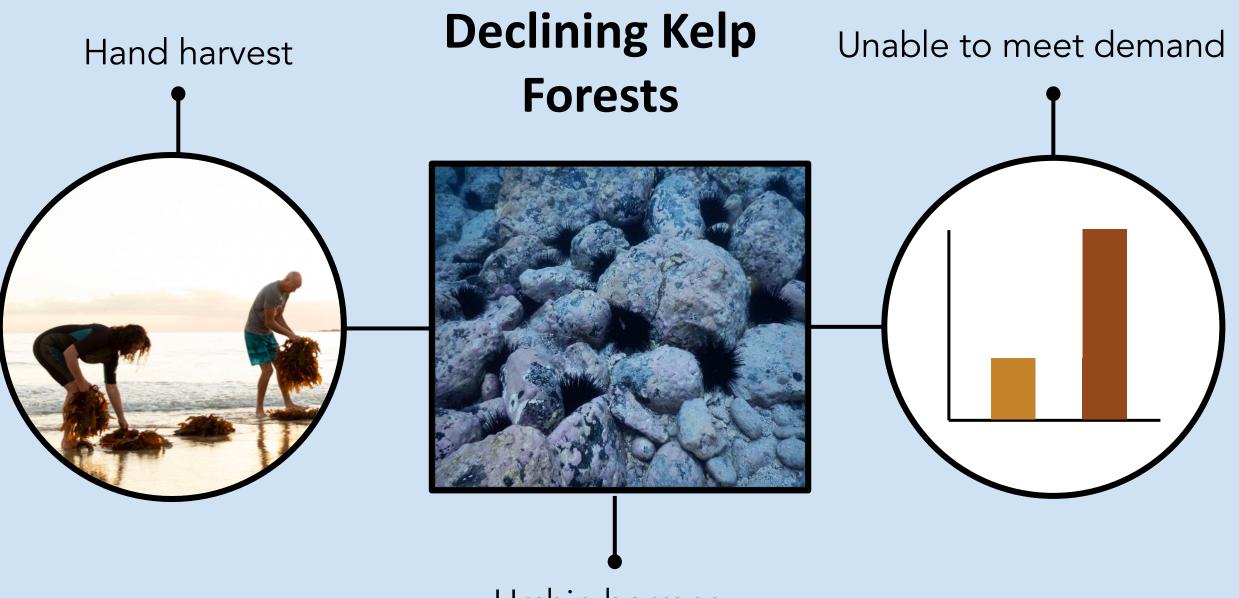


WE NEED MORE AUSTRALIAN SEAWEED AS THE DEMAND FOR LOCALLY SOURCED, SUSTAINABLE PRODUCTS INCREASES

> Opportunity to create an innovative and sustainable industry with economic, social and environmental benefits.

Current hand-harvesting methods are severely inadequate to meet the projected demand





Urchin barrens

### THE KELP LADY

#### By KAY KEAVNEY

 Along the breathtaking sweep of Beaches round Narooma, N.S.W., In Fair weather and foul, Betty Long (Picture at right) harvests seaweed.

A World mand hav by Fire

Long and I call her the tild content an abordence content hand at he tends was and he piltering facility and inputies, and pi K o 1 p 1, a d y ; of Ho-autoinens Semanat on every side. "This belongs

worked the gooden wap with absorbs hanches. refranke mare, strings it in that WE it manufa in its her. sur, dops it, turns it into converted into a paintible and bought the children, pollution, Sun-chying halo gather it inyout and use it assued the tours. This gets ment, and the and has been willoud top-party of he atout has years approximately a hild rain and it, properties, and each while was bailing for my health

Belly her phildren, Aven still book from." filedly mak otherwish here orth, and your, ficant (15), and present way of its. waters advertances is It's effect. They protonely pady nectour after prystell from the original shack And giow with golden health. DurtMaunderstand, fieldy partous, incurates pitte was pince." nit me. Note is only one light deviationly discover. factor. We true the on a natural clet, stoolly \$48 and programs. Decodering. Die The parts was putche. The

vegetables, note, cates, was well to ty stuffing. sometimes fair, but raway in the second se Subserver possible our of 5.W. She are given proof.

last is organizatio grawn - a polyton too booked to work introfit in our backup rd. things out for horself by Hall "Wid we has an address and write outpoor the filmen if we dearth

ward he which an old world Lived in city have to getter the kelp. "Zinematoled in a manyoillinia.

The way a Dyshey pil, supportent; non in indine, but all her life had spent and basis intravals, and findstays on a stiff hard by a posteria, and utamos, and beautiful present of beach. arring acids, and lat much, man Namorna or the points more, excluding bulk in the coastartNS MI

consideratellage. Taile sate inais, the sugars "In been used for both Giana Hause Roces. fuman beings and animals dominated the beak. preparately daged for "Autors," Bethe series, "we centures in countries such compact The Dacibuilt a bit as Jacan Orna Pulyteens of a shade. He haved that

New Designet, Septiand, place above all others, and retard, PreContinent, stand for wanted to die frene. Wa a real Mosever in andistanthe-dd poline areas, being line The refursh here and built

to bed source of looke in the trip looke suit of the offer secold. and of the least, and her a These deals the land is faith

Thesare prelip familiar impleted of it's contensity, and our fixed is processed and with farming practice, and I wined and de-satured, national how the enmistie Chemical sprays and thireborneds Transport my hatter additions a dditu the clangers.

"But live may not for longiti 22D agree of live She amongs and me made density or semanter, to hydrithy similation in the South many assessment) The eye call set a. Westitute in where I memory.

> sale and back of the function. interime. Titled with Molley or the state to sufficient Arrie and reperimenta-

kig house across the bay selfering. The fours was About the years ago, while this touce was built porestwhite. Lynablety serviced set workes, the developed a five been adding to it over

BETTY LONG feeds san-drieckelp into diaminiprofonto coplimito meet.

The forces was charming. my dod," Body and Parentin Manifored lawso provis, oftensteller,

mogent fields of weightowers. There were generalishe in beach, and think, any carifi and dry's again, which takes basind key and ranks at the Bash?" These followed secrets of

How was for surround what would be the test look

Expensive business

she calls Golden Kelp, a lyter affect to the terminants group. debigunited by its rails polden colour and heah phalie fieding. The Natural Health Society, institled by satisf she was doing, white about it in their require, which pose all over the world. Delty wire being tomberded finiting the work and tagen title Acostratios and as far away as Effective a work Jacob ---Scott she was det out tilling ordent. It was a highly aspensive business, since also patching on and service the manal personal sector. "The hold breaking revers "silve

**Existently after** 

"I shall like take maintain many HSR name is Bothy crade of the only planet coeffice." She want a light sity nose trated in the induce last, but the staff I and want the tasp is one

> "These I entropy it as allocate Wideliners and watch the Book set of and thy 2 on the solwied with it in the rackinghings. Therewant right?theigait and impurities. "I not serves it's wined. Onthebeachbelow.Goot wearging inquiries and Ran wearas out all the conversion. I have be much. Automals in the rain to get it

converted into meet? And inside infime "When it's dried 1 aut 8 by of the many variables the hand through the South-Coast yetdoo?"

Batty tracked down a positionary sintegrater to chap up the real Her meanth he live

lokel me without regiot, "and ihave to with very hard adhening the belg. emailmes pring quite for afted to find thy own appeals.



analyticity is made from the fettor the weathers last. Be works quite despense aspecially getting the keipling builters on the diffs, but are many clean lines h "In fact 1 into it allocation: www.though-th's fueld, and it tian me down. It's Networkdowsky interwedulg

strai statis, shife, and it hanning and out infine special "Representations inlines that lines Prochargellines Pages styles (E.\*

Arms and Scott came up. from the beauty and test upon siess of paper with the guillo most strue, reserve for attractions.

The man schurge. The same puts source. The plant Rusin gillered. The plant creamed an the creaters Smith and modify, bit on ton. The elderer help res. The sand it's precision of of kale.

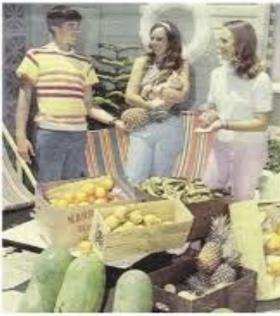


ABOVE: The Longs spread kelp out in racks for drying on the grass outside their cliff-side home at Naronma, N.S.W. Drying. altes ab out five hours. Kelpis liter chopped and sloved loto meet.



AT LEFT Belly with Anne, 17, and Scott, 15, bringing inkelp by the backetful. The beach is dominated by the magnificant Glass House Backs.

BELOW: Portion of the Long's weekly Built. It includes. in BRABOR, BIR wetermelens. elightplineapplas. cases of oranges. man-pose, benance, and papawet, plus clates, mats and help. Pruit costs about \$20 strength.



AT LEFT. No. Long believes in natural foods and grows as many of the family vigatables as possible, fartilising with truit peakings, grass clippings and seawood.

Pictures by Staff photographer Kellh Barlow











# Kelp is a valuable and versatile resource

 food agricultural feed fertiliser

cosmetics bioplastics

bioactives and nutraceuticals

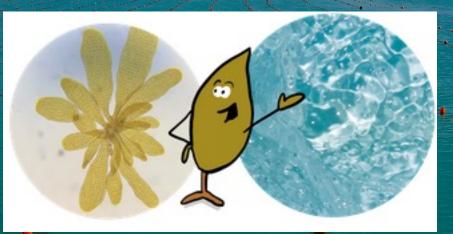


#### Wando, South Korea

#### The Faroe Islands

Challenges to the development of kelp farming aquaculture in Australia

Seedstock hatchery knowhow



Access to marine leases Complex Regulations

Attracting Investment

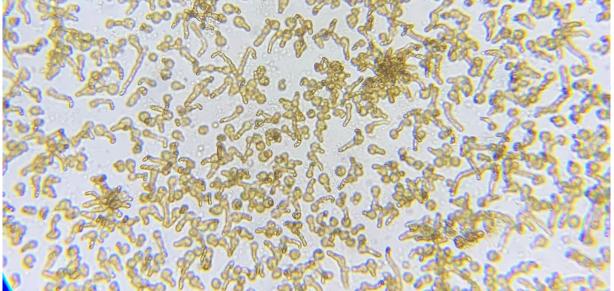




3 hatcheries – NSW, SA and Port Lincoln with red room for gametophyte strains







Ecklonia radiata

### Successful Ocean Trials in NSW



#### Successful landbased trials in SA



Table 2. State-based comparison of governance for seaweed aquaculture development in Australia.

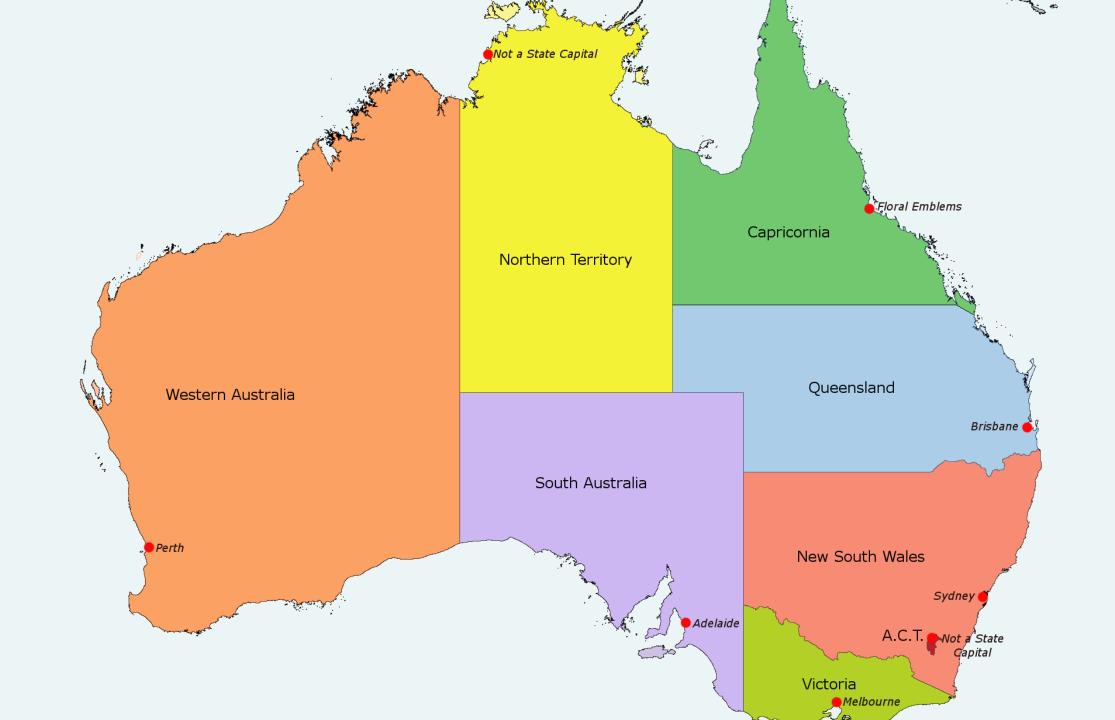
	Queensland	New South Wales	Victoria	Tasmania	South Australia	Western Australia	Northern Territory
Specific seaweed sector strategy/policy?	No	No <sup>1</sup>	No	No	Yes	Yes	No
Provision for seaweed aquaculture in existing legislation?	Yes	Yes	No <sup>2</sup>	Yes	Yes	Yes	Yes
One-stop shop for all aquaculture approvals?	No	No	Yes	Yes <sup>3</sup>	Yes <sup>3</sup>	Yes <sup>3</sup> – proclamation of the ARMA <sup>4</sup> will fully embed this	No
Designated zones for seaweed aquaculture in formal marine spatial planning?	Some – Great Sandy Regional Marine Aquaculture Plan	No	No	Yes	Yes	No	No
Commercial seaweed aquaculture approved/ allocated?	No	Yes	No	Yes	Yes	Yes	No
Provision for pilot/trial/ research licence?	Yes – development application still required	No – full state significant development process applies	Yes	Yes	Yes	Yes	Yes
Research/trials conducted or in progress	Yes – two small- scale pilots underway in different regions	No – application(s) are under consideration	Yes – some small- scale pilots on sites within aquaculture reserves	Yes	Yes	Yes	Yes

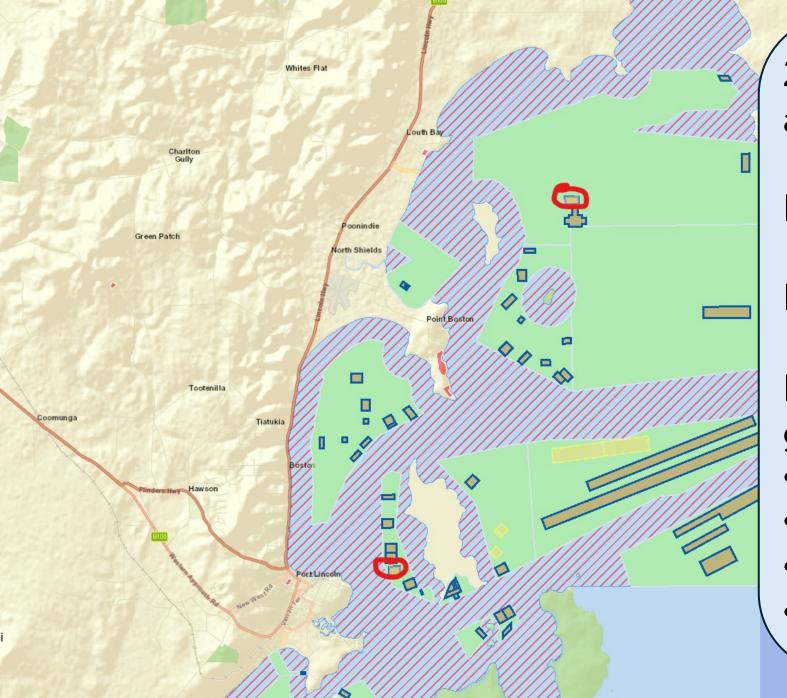
<sup>1</sup> Aquaculture strategy mentions seaweed.

<sup>2</sup> Review of seaweed aquaculture governance arrangements in progress at time of publishing.

<sup>3</sup> Application and assessment process managed by a single agency. Separate permit from Fisheries for collection of broodstock/seedstock.

<sup>4</sup> Aquatic Resources Management Act 2016.





2 x 20 hectare lease sites approved Boston Bay - protected Louth Bay - exposed New research project to gather growth data •2 sites •2 depths •2 substrates •Nutrient absorption

### Eden, South Coast NSW

## Kelp farming Opportunities

#### Reliable, consistent supply-

IMTA/diversification

Growing a new Australian industry

Economic, environment and social benefits



## Thank You!

See you in Adelaide for Seagriculture Asia Pacific

Jo Lane jo@seahealth.com.au seahealthproducts.com.au



Australian Sustainable Seaweed Alliance

With thanks to ASSA for their support