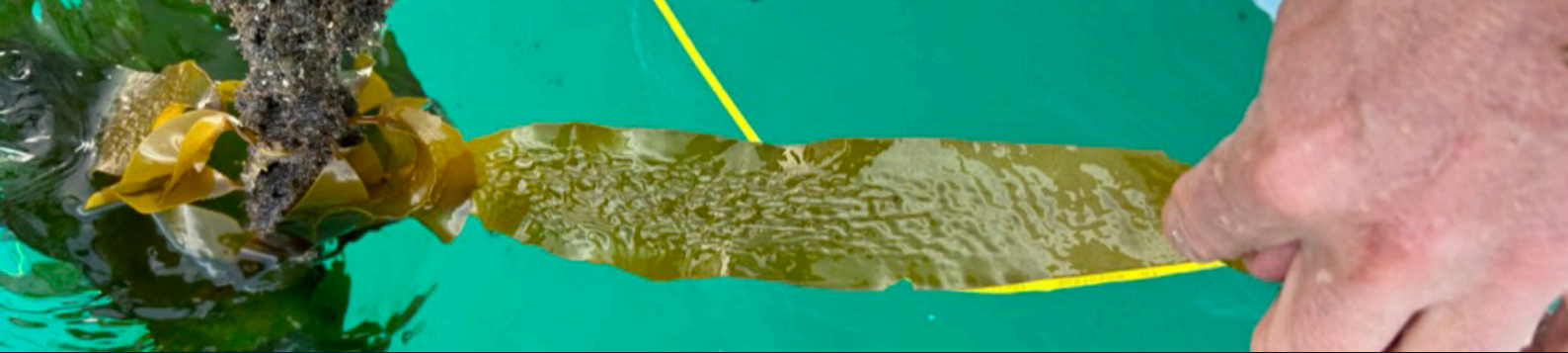




Annual Report **Auskelp** – Eden 1

Update #2 FY23



Welcome to AusKelp's Update FY23

Ocean temperatures are at record highs globally... and we are entering a marine heatwave for Australian waters. The stakes have never been higher – and the case for kelp farming has never been stronger.

After two years of R&D fieldwork we are successfully growing Golden Kelp (*Ecklonia radiata*) on test lines in an open ocean environment. Despite this good news, there remains a long way to go and significant challenges ahead. We are learning a great deal about *Ecklonia radiata*, its growth rates, mortality parameters, and the many protocols needed to grow this native Australian kelp.

To our knowledge, we are the first team in the world to grow *Ecklonia radiata* in an open-ocean, high-energy environment – which is very gratifying. The most positive discovery is; the rougher the water, the better the kelp seems to grow.

Our ocean testing program proves that our hatchery and seeding programs are effective and the protocols we have developed through trial-and-error research have paid off. My sincere thanks goes to the ocean and laboratory teams for their hard work and diligence in building a robust and reliable program.

For everyone involved at Auskelp, including our many partners, this is more than just a job, it is an opportunity to create local jobs we can be proud of, and also protect the wild kelp populations that are under increasing stress from rising ocean temperatures and sea urchins.

On the regulatory side, our team is working on our State Significant Development (SSD) application, which includes an Environmental Impact Study (EIS) and community and First Nation's consultation. This is a complex process that requires various experts to communicate with the 15 responsible local, state and federal government agencies, and also navigate the more than 78 government Acts, Policies, Regulations, Guidelines, Cultural and Heritage as well as other relevant stakeholders, including the local community.

We are gratefully getting assistance from the University of Wollongong (UOW) and the Blue Economy CRC (BECRC) who are providing much needed support for community consultation and Aboriginal Cultural Heritage via a grant they procured from the Regional NSW Strategy Development Fund.

The journey to build a kelp industry in southern NSW is a long, expensive and challenging process. That said, the dream of the Auskelp founders is simple; build a business that delivers high-paying and innovative regional jobs while protecting the environment. Kelp has the potential to be one of the world's great industries. And if successful, kelp farming may be one of the factors that helps to save wild kelp and fish populations in Australian waters, long term.

The upcoming financial year will see further expansion of our ocean testing footprint and the final submission of our Eden-1 SSD – hopefully leading to regulatory approval. On a personal note, it is tremendously satisfying to hold the maturing Golden Kelp in our hands – it is a magical thing knowing the ocean can grow such a beautiful product from the invisible nutrients floating within the seawater.

Sincerely,

Christopher Ride
Founder and Managing Director
Auskelp Pty Ltd



1. About Auskelp

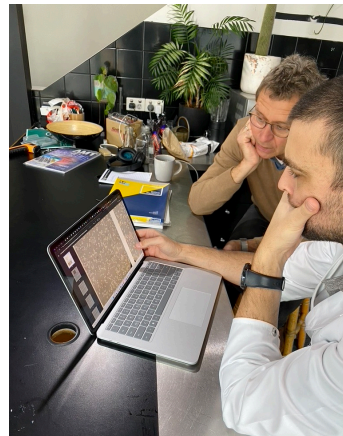
Auskelp is an Australian-owned early-stage developer of commercial *Ecklonia radiata* kelp farms. Our objective is to create an environmentally positive and sustainable seaweed industry in NSW and Victoria. Utilising the latest technology, global research and expert advisors, Auskelp is endeavoring to develop Australia's first open-ocean kelp farms.

AUSKELP'S MISSION: CREATING JOBS THAT SAVE THE PLANET

2. Research and Development

Gametophyte Program

Development of a robust and biosafe hatchery and seeding program dedicated to kelp from the far south coast of NSW. We have developed purpose-built water filtration systems and red-light incubators and associated protocols for the propagation of healthy gametophytes utilising laboratory grade biosafety practices.



Sporophyte Program

White-light incubators and associated processes and protocols for the maturation and development of sporophytes that are used for direct ocean seeding. Development of transportation processes and mortality parameters for on-water deployment.



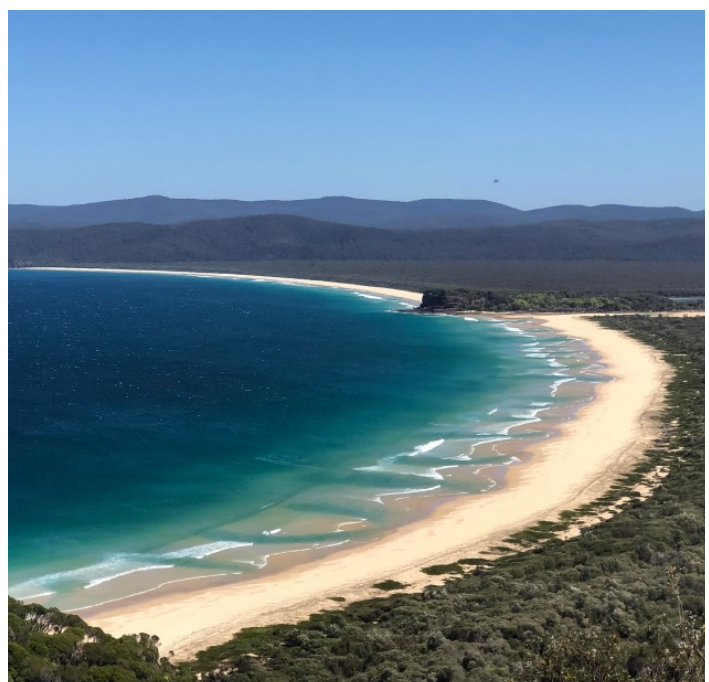
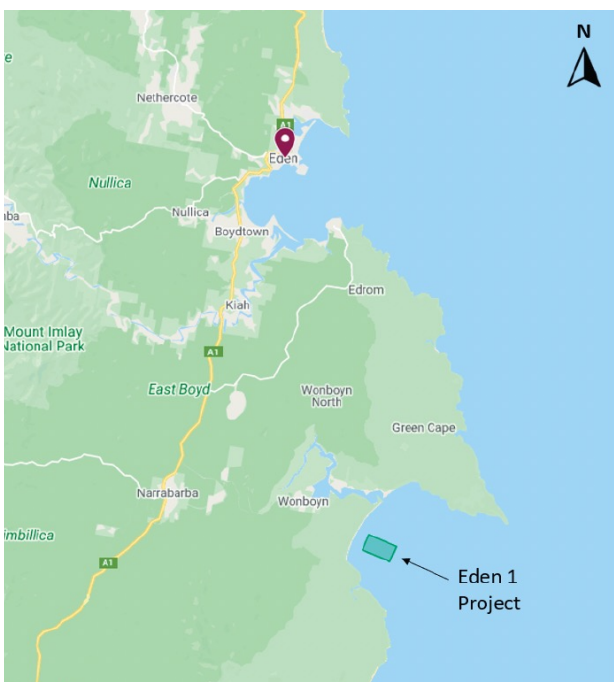
Open Ocean Testing

Development of multiple ocean seeding protocols and test rig designs for the seeding of ocean test lines in high-energy open ocean environments. Work continues on ocean-rig systems designed to minimise surface buoys, protect the kelp from excess wave action, and ensure the structures are safe and visible for ocean mammals.



3. Eden 1

Auskelp's Eden 1 project is a 200-hectare dedicated open-ocean seaweed farm in far south coast NSW. It is the first registered commercial-scale open ocean seaweed farm in NSW marine waters (May 2021). The farm is located in Disaster Bay approximately 23km South-West of Eden and just 25km north of the NSW-Victoria border. Eden 1 is located in an area zoned "available for aquaculture" by NSW Department of Planning and Industry (NSW DPI). To date, Auskelp have completed a rigorous submission and open tender process whereby we have successfully obtained the requisite aquaculture permit and have also secured a marine aquaculture lease designated: AL21/004 from NSW DPI, contingent on State Significant Development (SSD) consent.



4. Seaweed Industry

Seaweed is a fast-growing, global industry producing more than USD \$11 billion in annual sales. Development of a seaweed industry in Australia is aligned to the National Aquaculture Strategy, which aims to double the current value of Australia's aquaculture industry, as well as the National Marine Science Plan 2015-2025 (2018) which aims to further develop Australia's blue economy.

AgriFutures, Australian Seaweed Industry Blueprint, highlighted the opportunity for a seaweed industry in Southern NSW (Jervis Bay to Eden) that could generate \$50M annual gross revenue in the coming years, as well as create 500 jobs in this region, improve water quality and provide habitat for marine life (Kelly, 2020). However, these estimates are dependent on ocean leases being approved for seaweed cultivation in a timely manner. AgriFutures further predicts that seaweed aquaculture will become a \$1.5 billion industry in Australia by 2040 and will employ more than 9,000 direct jobs. It is expected that global food production must increase by 50-70% by 2050 to meet predicted population increases.

National Seaweed Industry and Strategy

Vision


A high tech and high value, sustainable seaweed industry supporting thriving oceans and coastal communities.

2025 Goals

- \$100 million plus GVP
- 600 - 1200 new direct jobs
- Methane emissions reduction from Australian Meat and Livestock sector
- National GHG emissions reduction (from 2013 baseline)
- Actions towards United Nations Sustainable Development Goal 14 – Life Below Water

14


LIFE BELOW WATER



2040 Goals


- \$1.5 billion plus GVP
- 9000 new direct jobs
- Significant methane emissions reduction target from Australian Meat and Livestock sector
- National GHG emissions reduction plus more globally (from 2013 baseline)
- Nitrogen removal from Great Barrier Reef Catchments
- Significant contribution to UN Sustainable Development Goals 2, 3, 8, 10, 12, 13 and 14

Critical SUCCESS FACTORS




01

INDUSTRY LEADERSHIP & COLLABORATION



02

PRODUCTION CAPABILITY & SCALE



03

INNOVATION FOR THE FUTURE





RESEARCH, DEVELOPMENT AND EXTENSION PRIORITIES TO 2025		
<ol style="list-style-type: none"> 1. National Industry Group Formation 2. Regional Cluster Plans 3. Space Planning, Legislation & Policy Review for seaweed ocean aquaculture 4. Pest, Disease, Biosecurity Review 5. Industry Stakeholder Engagement & Communications 6. Industry Impact Investment Fund 7. Market /Product /Species Knowledge Centre 8. Social License, Environmental Standards, Quality Standards 9. Workforce Development Plan 10. International Alliances and Collaboration (ISS 2022) 	<ol style="list-style-type: none"> 1. Accelerate Asparagopsis culture techniques 2. Develop a National Hatchery Network to provide seedstock 3. Biofouling management 4. Information & advice service for new ocean farming projects 5. Broker collaboration projects for manufacturing facilities at key locations 6. Support progress of advanced aquaculture technologies important for scale. 	<ol style="list-style-type: none"> 1. Bio-innovation program for target species 2. Biodiscovery program for new species 3. Seaweed Biofilters for reef protection R&D program 4. Offshore Platforms R&D program

\$8.1 MILLION RDE INVESTMENT TO KICKSTART GROWTH

TO FIND OUT MORE

DOWNLOAD THE BLUEPRINT

SeaweedAlliance.org.au

Annual Report #2

Auskelp, Eden 1 – Sept 2023 5

80% OF WILD KELP LOST IN THE LAST 50 YEARS

5. Wild Kelp

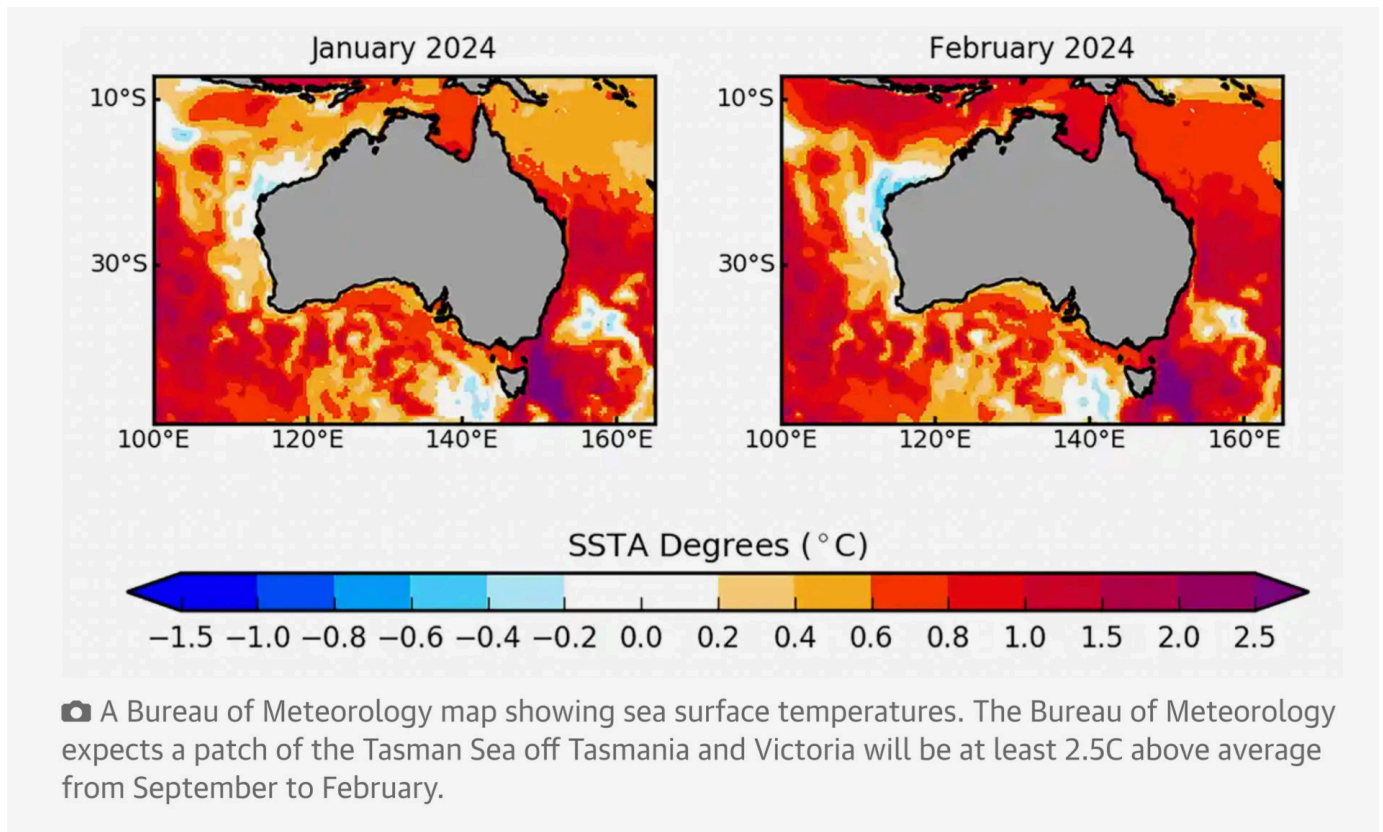
Kelp forests range along 25% of the world's coastlines, providing valuable resources and habitat. In the past half century, threats to kelp forests have increased in number and severity, leading to a global decline of kelp abundances of 2% per year. These changes have significant impacts on marine biodiversity and ecosystem functioning because kelps are foundation habitat.

Kelp forests are found on the rocky coasts of temperate Australia and are the foundation of the Great Southern Reef. Much like terrestrial forests, these marine forests create complex 3-dimensional habitats for diverse communities of flora and fauna.

Increasing ocean temperatures hamper the upwelling process that brings cool, nutrient-rich waters to the ocean

surface, which supply kelp with carbon, nitrogen, ammonium and phosphorus that are required to produce photosynthesis and grow. It has been reported that more than 80% of Australia's wild kelp populations have been lost in the last 50 years. Research shows that once the kelp forests are lost, they do not recover, which leaves barren and lifeless landscapes in once rich and healthy areas.

For the remainder of 2023 and into 2024, the Bureau of Meteorology is predicting a marine heatwave for Australian waters with temperatures estimated to be >2.5 degrees Celsius above average. What effects this will have on wild kelp populations remains to be seen.



6.

Project Timeline

FY2022

July – September 2021 Q

- Launch Auskelp website www.auskelp.net
- Review ocean farm designs and seafloor attachment
- Australian Sustainable Seaweed Alliance (ASSA) – Foundation Member
- Study of carbon emissions/credits and kelp
- Threatened species review

October – December 2021 Q

- Commence State Significant Development (SSD) application process
- Preparation of SSD Application Scoping Report
- Discussions with Principal Planning NSW DPIE
- Review of preliminary underwater inspections and surveys
- Discussions with Wonboyn Oyster Farmers
- Discussions with Blue Economy CRC

January – March 2022 Q

- State Significant Development Application instigated
- SSD Scoping Report submitted
- SSD Scoping Report review
- SSD Scoping Report re-submitted
- AusKelp development roadmap completed
- Hatchery/Laboratory design review

April – June 2022 Q

- Appointment of technical consultants: SWD Connectors
- Appointment of Job Schipper as lead scientist
- Appointment of SSDA advisor: ERM – the world’s largest pure-play sustainability consultancy
- Appointment of technology provider: Soft Seaweed
- Departmental SSD Scoping Meeting: all relevant departments
- Purchase of 2 x ocean monitoring buoys and seaweed-specific cloud software
- Exploratory site dives
- Appointment of Laboratory partner: Co-Labs Melbourne
- Appointment of Senior lab consultant: Andrew Gray
- Scientific hatchery protocols developed
- Lab commissioning commenced
- Commence Seawater filtration system construction
- Commence Incubator construction

FY2023

July – September 2022 Q

- Red light incubator design and implementation
- Osmotic shock processes and procedures
- Sori collection
- Gametophytes production
- Site dives to study effects of severe ocean storms on wild kelp beds
- Meeting with Kristy McBain MP
- SSD planning and workshops
- SSD instigated

October – December 2022 Q

- Sori collection
- Water filtration systems
- Sporophyte production
- Additional site dives
- Agreement for 2 hectare ocean lease Twofold Bay
- Optimising gametophyte production
- SSD research and setup

January – March 2023 Q

- Site dives Twofold Bay – rig design
- Sporophyte program developed
- Purchase of direct seeding equipment
- Development of direct seeding processes for high-energy environment
- Presented at International Seaweed Symposium, Hobart, Feb 2023
- R&D direct seeding processes
- Ocean seeding trials begin
- SSD documentation development continues

April – June 2023 Q

- Coastal Processes report for Disaster Bay completed
- Ocean seeding and rope trails continue
- Sporophyte program expanded
- Direct seeding processes developed
- Ocean test results studied and documents *Ecklonia* growing in high-energy open ocean conditions versus calm water tests
- Additional site dives and documentation
- DNA samples taken
- Further SSD elements completed
- University of Wollongong and Blue Economy CRC collaboration for Community Consultation and ACHAR

7. News and Media



International Seaweed Symposium, Hobart Tasmania February 2023



Christopher Ride (Auskeep), Hon Kristy McBain MP (Member for Eden-Monaro), Mal McComb (CEO Pentarch)

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Small trial in Eden could be the precursor to kelp farming along the Far South Coast

By Denise Dion
Updated July 20 2023 - 4:35pm, first published July 19 2023 - 4:30pm



Close to the mussel farm in Twofold Bay there's a two hectare site where Christopher Ride of Auskeep is seeding golden kelp to see how fast, and how well, what he calls the gold bars of the sea, will grow.

Known as the forests of the ocean, kelp is a high value source of omega 3s, absorbs carbon, reduces ocean acidification, is used in pharmaceuticals and cosmetics, is a food source for cattle and could be turned into a bio-plastic. But kelp volumes are diminishing, in some areas by as much as 90 per cent and kelp collection is via a licence and only from stormcast plants. The small test site is a first for Australia and in 86 days Mr Ride's kelp has grown 45cm, 5.3mm a day.

Kelp could be the new frontier in aquaculture for the Far South Coast with three large test sites planned but unavailable until environmental impact statements and community consultation have concluded.

Mr Ride's large site is 200 hectares in Disaster Bay. Jo Lane of Sea Health Products has two sites, one off Bermagui and the other off Haycock Point, near the entrance to Pambula Lake.

As a diver Mr Ride said he has seen diminishing kelp numbers due to increasing ocean temperatures. Like Ms Lane he wants to grow more kelp by seeding it onto ropes in the ocean and "letting the ocean do its thing".

"This is the forest of the ocean we're talking about and when they start dying out we have a problem," Mr Ride said.

Known as regenerative farming, it is considered one of the most sustainable forms of aquaculture. It involves the natural environment providing the inputs needed for growth, allowing stock to grow on its own using natural food sources and conditions.



There are 50 countries around the world farming seaweed but Australia is not one of them at this stage. However a lot of consultation must take place before anything happens.

Mr Ride is frustrated with the amount and level of red tape he must negotiate.

"In NSW there's no provision to fast track anything related to kelp. We go through the same process as a company wanting to build an offshore oil platform," he said.

Mr Ride said in part it's because it's never been done before and despite it "being one of the friendliest forms of aquaculture" there are multiple Acts, regulations and plans to go through to even work out what is required.

"Anything in the ocean is classed as a State Significant Development and that's good in one way but a really natural process like this needs support."

Ms Lane and Mr Ride are collaborating with researchers from the Blue Economy CRC (Cooperative Research Centre) and University of Wollongong to see how Indigenous, community and economic values can inform the emerging seaweed farming sector and evolving shellfish farming in waters off the south coast of NSW.

The study of kelp is one of the key subjects on the radar for the Blue Economy CRC.

"Globally, understanding the role of kelp in nature-positive solutions to climate and food security challenges is driving innovation into large-scale farming operations, and research into sending carbon to the seafloor, de-acidifying oceans and supplying oxygen to surrounding waters," the organisation said.

One of the considerations is growing kelp alongside mussel farms because of the high nutrient value of kelp.

The project will examine the potential to further develop nature-based, feed-free aquaculture with a particular focus on kelp and shellfish farming.

"We are working alongside existing aquaculture proponents, stakeholders and Indigenous rights holders, as well as members of the community to explore and unlock the opportunities for the development of kelp and mussel farming aquaculture in the local area. This will include an examination of potential social and economic benefits and impacts associated with the growth of this industry," the Blue Economy CRC said.

A series of community focused activities and events are planned including a phone-based survey and open community information sessions, one of which will be in Eden in August.

Ms Lane will give a talk at UJA Tura Beach on July 21 at 2pm with a survey afterwards. The University of Wollongong is open to talking with interested groups and suggested people should first head to the website at blueeconomycrc.com.au for more information.



Bega District News 20 July 2023

'Smelly, brown' solution to huge problem facing Great Barrier Reef

Australia is facing a massive challenge to save one of the country's most popular tourist attractions. Here's one unusual answer.



Carly Douglas

@Carly_Douglas 3 min read July 18, 2022 - 6:43PM NCA NewsWire

A pile of smelly, brown seaweed could be the answer to revitalising the Great Barrier Reef.

Kelp, the fastest growing life form on Earth, can grow up to 50m long at up to 50cm per day in cool, unpolluted, nutrient-rich waters, absorbing the ocean's toxins while providing a habitat for fish along shorelines.

Large scale farming of the brown microalgae also has the potential to join the ranks of Australia's biggest industries.

But tight environmental regulations have prevented the industry from flourishing across the Great Southern Coast, where water temperatures are ideal and space is abundant.

Auskelp founder Christopher Ride has been tugging at red tape to get the \$8 million project up and running since June 2020.

"We're exactly two years into approvals and we've got at least a year, if not 18 months, to go," Mr Ride said.

"The very regulations that are there to protect our environment also stop us from moving quickly on new industries like kelp farming."

In NSW, where Mr Ride and his team of 10 are ready to construct the first large-scale, commercial ocean kelp farm in Australia, there are 88 different policies, guidelines and plans which must be adhered to gain licence approval.

"It currently takes years and millions of dollars just to get the approval to test, let alone move to a commercial scale," Mr Ride reported.

Mr Ride, who previously ran as the Liberal candidate in the federal seat of Macnamara before standing aside to focus on his business ventures a few months out from the election, said he was hopeful the new Labor government would consider alternative solutions to tackling climate change.

He is calling on both state and federal governments to support testing in locations like Disaster Bay on the southern NSW coast, where kelp called *Ecklonia radiata* is still abundant.

"What we're saying is, let's test it and we'll share the results with you," the seaweed expert said.



Auskelp founder Christopher Ride is calling on both state and federal governments to support testing sites in locations like Disaster Bay on the southern NSW coast. Picture: Supplied

"If they are serious about climate action, then let's do the testing."

Over the past 40 years, increasing water temperatures and reduced upwelling – a process which brings cool, nutrient-rich waters to the surface – have decimated most natural kelp forests in Australia by more than 80 per cent.

"What if 80 per cent of all plants died in Australia, but somebody had a plan. Surely we would say let's give it a go," Mr Ride said.

With room to employ up to 60 full-time staff in the Eden area, the site is expected to yield nutrient rich by-products which can be used for pharmaceuticals, cosmetics or food due to its high levels of protein and Omega 3.

Mr Ride also explained the seaweed has been proven to be effective in absorbing large quantities of nitrogen from Great Barrier Reef catchments.

"If you've got a kelp barrier between land, farming and the ocean, you actually create a barrier that protects these natural ocean ecosystems," he said.

"The kelp farms will absorb a huge amount of carbon."

The Australian 18 July 2022



Auskelp founder Christopher Ride has been trying to get his \$8 million kelp farming project up and running since June 2020. Picture: Supplied

A reduction in methane may also be on the cards if the industry grows some legs, with studies showing that feeding cattle the nutritious seaweed, particularly red varieties, could also help to significantly reduce methane emissions.

Mr Ride is hopeful his budding business will contribute to the National Seaweed Industry's ambitious targets.

The industry is hoping to be able to reduce methane emissions from the Australian meat and livestock sector by 30 per cent by 2025 and by a whopping 99 per cent by 2040.

It is also expected to be able to create 9000 jobs and remove 80 per cent of the nitrogen from Great Barrier Reef catchments in the same time period.

While questions were posed to Environment Minister Tanya Plibersek about testing approval for the site, the department responded to queries, saying aquaculture operations were "largely regulated by local and state and territory governments".



Could kelp farming be a golden opportunity for the South Coast

3 September 2023 | Zoe Cartwright

Start the conversation



Christopher Ride of Auskelp hopes Eden will be the home of a world-first way of kelp farming. Photo: Auskelp.

The ocean has always supported South Coast communities, from whaling to fishing, oyster leases to tourism.

Now, entrepreneur Chris Ride hopes it could provide a new industry for the region – and a new tool to fight the climate crisis.

The former IT business owner became fascinated by the potential of kelp to provide food, fertiliser, fuel and bioplastics after watching the documentary 2040.

"It was about what the world might look like in 20 years' time, and it had kelp farms as the industry of the future," Christopher said.

"They provide fish habitat, protect the environment, sequester carbon and require zero input. We watched climate change unfold my entire life, I've watched the ocean and kelp forests change, and I thought you know what, let's see if we can do it."

He landed on golden kelp, native to the South Coast of NSW, Victoria and Tasmania, as a potential winner.

In the wake of the Black Summer bushfires he saw another benefit of kelp farming for the region – it's an industry that's fireproof.

But investing in an industry of the future isn't easy – the regulatory framework to support it and the data about how it works, do not exist yet.

Kelp has never been grown commercially in NSW, and when it has been grown, it's been by universities who need it for research.

Christopher and his team propose growing it in open water, something that is also unheard of.

"Five years ago we thought let's see if we can get a test lease, do the work, bring in some experts and see if we can do something we can be proud of and our grandkids can be proud of and have a positive impact on the world," he said.

"So we went to NSW Fisheries and said we're interested in getting a lease to do some testing.

"You start the process and think it's relatively simple but the more work we did the more complicated it became. A lot of the times there weren't even forms for kelp, and we were told to submit the application as if we were farming oysters, but it's very different.

"We just thought if we can't do something about climate change now we never will, and it just made us more determined."

After a significant investment of time and money, they had a stroke of luck.

Some mussel farmers in Twofold Bay had leases so old that kelp was listed as a permitted purpose, and they were happy to allow Auskelp to put some test lines in the water.

With a team of scientists from around the world they were able to develop a program to breed plants on ropes in the open ocean, using only local kelp.

So far, it's been a success.

"We've been told it won't work; every time we go out there I wonder if it's all going to be dead," Christopher said.

"But it is working.

"The blades grew 55 cm in length in 115 days. That's more than five millimeters a day.

"They're so beautiful, you hold it in your hand and it's amazing to see. There were no inputs at

While Twofold Bay is not identical to Disaster Bay, where Christopher hopes to get approval for an initial kelp farm, it's a start, and helps the team gather some of the evidence they need to meet regulatory requirements.

Another stroke of luck was the involvement of the Blue Economy CRC and University of Wollongong, and funds from the Regional NSW – Business Case and Strategy Development Fund.

The CRC grant program supports industry-led collaborations between industry, researchers and the community, and has partnered with the university to support sustainable ocean business projects.

Associate Professor with the Australian National Centre for Ocean Resources and Security at the University of Wollongong, Michelle Voyer, says she believes kelp farming has real potential to reinvigorate the economies and ecosystems of the South Coast.

"We've seen a big decline of kelp on the South Coast and there is a lot of community concern around that," she said.

"So kelp farming could bring ecosystem benefits along with broader community benefits like jobs and businesses.

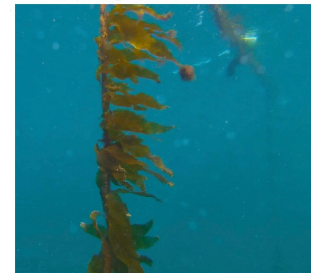
"A lot of coastal communities have a strong heritage of maritime industries and primary industries which has really declined over the past 30 or 40 years and been replaced by tourism, but that brings vulnerability into the economic makeup.

"Aquaculture and wild harvest can operate in a complementary way with tourism, such as food tourism and producing boutique local products – and not everyone is interested in or suited to tourism!

"One of the things that's super interesting and exciting is not thinking about these farms in isolation but how they link up to different innovative businesses already on the South Coast.

"So in Jervis Bay there is already a business looking to make plastic out of kelp.

"It's not a farm just sitting out there in isolation, there are a whole range of spinoffs that could



Fifty-six-day-old baby kelp growing on test lines in Twofold Bay NSW. Photo: Auskelp.

With the funding from Regional NSW Michelle and her team will be assessing potential social and cultural impacts of kelp farming in the Eden region.

She acknowledges that with such a new industry there are a lot of unanswered questions.

"We don't know how the farms will respond to weather events, how they will interact with marine wildlife like whales, these are definitely questions to be answered and that's part of the challenge of this process," she said.

"Until it has gone through rigorous environmental assessment process there is not a lot of opportunity to try out different methods or areas to find minimal impact, so that is difficult."

To get more community feedback on the project, an information session and research workshop on 'Seaweed Farming in Disaster Bay', and a drop-in session, will be held.

These events will allow the project team chances to listen and learn from local community experiences and aspirations, and the results will form advice to industry and government partners.

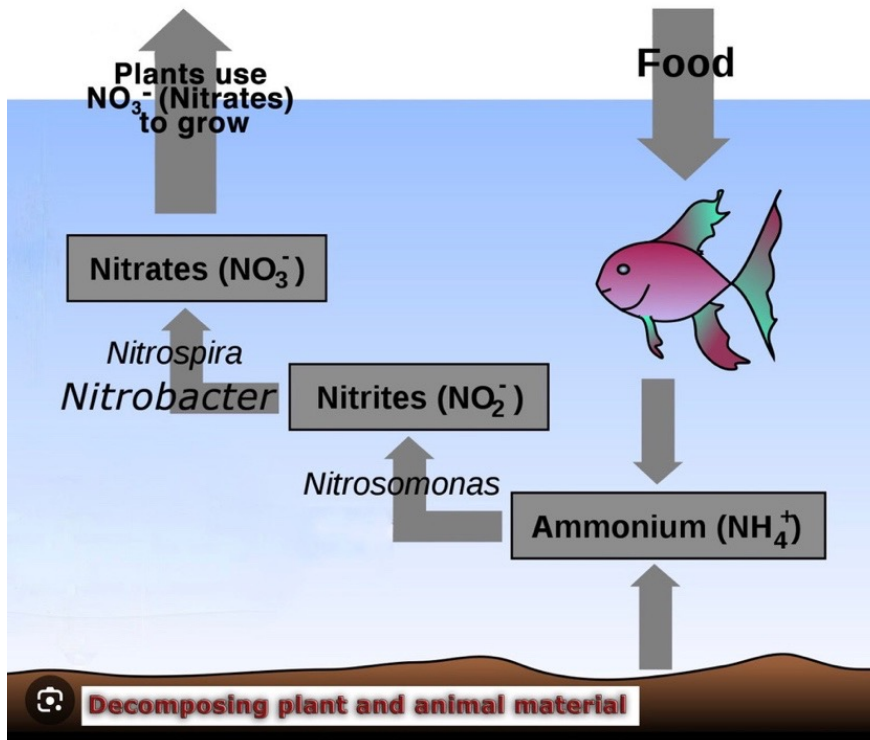
The workshop will run from 4:30 – 7 pm, on Thursday 14 September at the Eden RSL Memorial Hall, with light refreshments provided.

The Wondabyon drop-in session will run from 10 am – 2 pm, on Friday (15 September) at the Wondabyon RFS Station on Gleeson Road.

Find out more about the drop-in session [here](#) or register for the workshop [here](#).

About Regional Sept 2023

8. Ocean Facts



Kelps important role in ocean health

For kelp to grow it requires nutrient rich waters and sunlight. Like land plants, kelp uses energy from sunlight to drive photosynthesis. Sunlight is captured by the plant as energy (photons) which are used to drive a chemical reaction that produces sugar. Kelp feeds by absorbing dissolved nitrogen in the form of Nitrates, Ammonium and Urea, and also takes up inorganic carbon (including carbon dioxide) and converts it into organic biomass. Nitrates are kelp's main source of food, however Nitrates are more scarce in the summer due to increased water temperature.

Kelp in everyday food and products

A substance called algin is found in the cell walls of kelp. Algin makes the kelp plant flexible enough to withstand the pressure of the ocean's movement. When it is processed, algin can be used to thicken, gel and emulsify foods and products. For this reason, algin is commonly used in making sauces, ice cream, salad dressing and for non-food items like shampoo, paint, toothpaste and also as a soothing agent. More broadly, kelp can be used as high-protein food (for human consumption), as fertiliser, in cattle feed, and also as a critical ingredient in new industries like bioplastics and biofuels. Kelp has so many uses that there is expected to be a supply-shortage of kelp for the foreseeable future for this environmentally-friendly ocean product.

9. Our Partners



Australian Sustainable Seaweed Alliance



10.

What's Happening this Year: FY24

July 2023 – June 2024

- Further ocean testing
- Sub-sea ocean rig design
- Community consultation
- Aboriginal Cultural Heritage Assessment (ACHAR)
- Benthic survey completed of ocean desert to identify biological communities and the classification of marine biotopes in the proposed farm area
- DNA Testing of local *Ecklonia radiata*
- Stakeholder management and information sessions
- Complete the SSD application for Eden 1 for review by NSW Government
- Address issues and provide amendments to SSD
- Public exhibition of SSD
- Submit final SSD for Eden 1 project





AusKelp FY23

