THE MERMAID FUND

White Paper

OWNER

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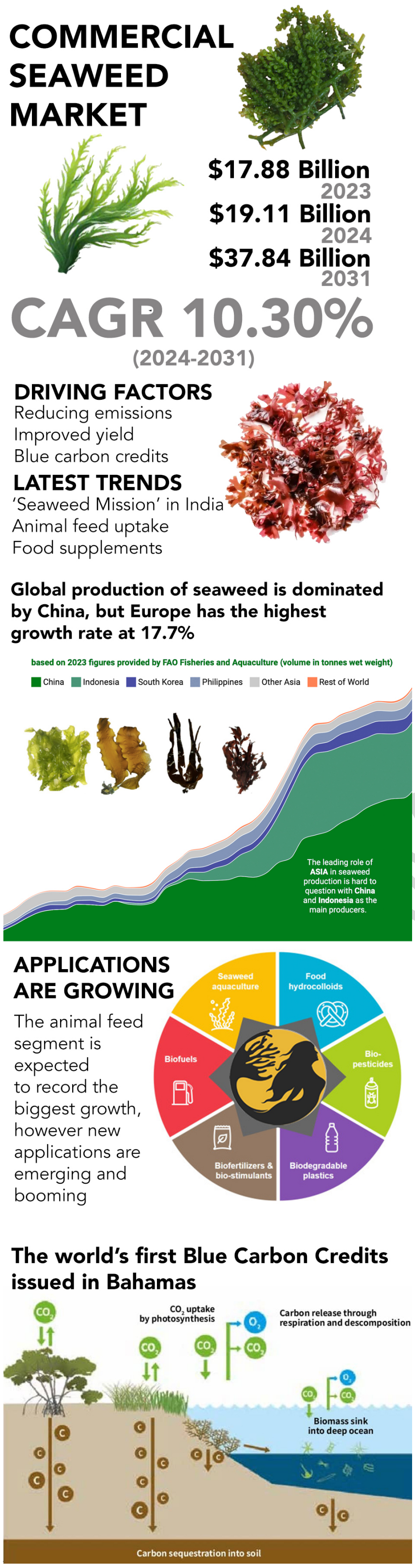
INTRODUCTION

The value of the global commercial seaweed market in 2023 was around USD 17.6 billion according to a recent forecast by Meticulous Research and is projected to grow to USD 37.85 billion by 2028.



A World First in Environmental Funds

The Mermaid fund is the world's first private equity fund devoted to investment in the global seaweed and macro-algae industry. The timing is right for a fund specialising in this area for several reasons:

Bans on Single Use Plastics

Countries are introducing bans on single use unbiodegradable plastics. The technology now exists for the creation of bioplastics from seaweed that will break down in a matter of months.

Emerging Blue-Carbon Credit Markets

The carbon credit market for sinking seaweed in the deep ocean is beginning to emerge. Seaweed was excluded from offsetting systems due to lack of sufficient research and international standards, but in 2022 Japan announced the first blue carbon credits and Oceans 2050 are working on a credible European standard. The Bahamas has already launched the very first Blue Carbon Credits, along with Blue-Carbon Sovereign Carbon Securities

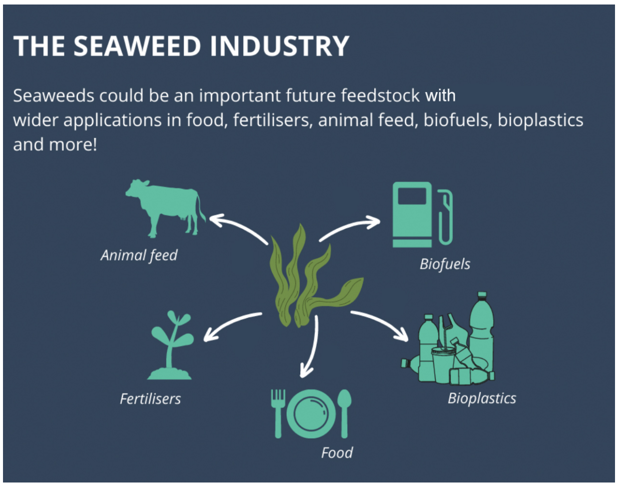
Offshore Windfarms

The rapid growth of offshore windfarms has created ideal conditions for seaweed production – windfarms are in shallow water, protected from passing boats, offer good anchoring points for ropes sown with seaweed, and can share maintenance costs.

Expansion of the Natural Sargassum Belt

Owing to global warming the rapid expansion of the natural sargassum belt from the Caribbean to the West coast of Africa is causing enormous problems for tourism, shipping, and wildlife. Governments and operators are already paying large sums of money for its removal, and now sargassum can also be used for other purposes then there is a double win.

HUGE AREAS OF OPPORTUNITY exist in human food, agriculture, high margin pharmaceuticals, and the seaweed based phycocolloid businesses upon which industrial giants such as Nestlé and Unilever are already heavily dependent.



Mermaid will add value through synergy between the different portfolio companies. For example, the trend to incorporate seaweed production within offshore wind farms will result in an increase in kelp production. However, this output will only be of value if it can be processed into yarn, for example, and if textiles made with this yarn can then be retailed.

The fund's investments will be geared to produce a perfect circle, creating effective global markets for a recovered resource.

The Circular Economy
By actively facilitating vertical integration of the emerging industry the fund will ensure that each level has an enhanced chance of success. The management of Mermaid also have had decades of experience running their own start up and early-stage companies, and so will be able to draw upon their own experiences to actively engage with the portfolio management teams and improve performance.

10 Year Duration
The Fund will be a standard Jersey LLP of a 10 year duration, with a 2% annual management fee and 20% performance fee, with limited partners assuming liability for their individual investment whilst the general partner will maintain complete liability. The advisory company will be an appointed representative of Sturgeon Ventures in the UK, which is regulated by the FCA. Target returns for investments will be an IRR of 30%, with around 20 separate investments in the portfolio.

The potential areas for investment, discussed in more detail below, are:

- Plastics
- Sequestering Carbon
- Seaweed Production
- Environmental Protection
- Human Foods
- Agricultural uses
- Pharmaceuticals
- Other Chemicals
- Biofuels

Breadth of Interest Amongst Large Corporates
Major players purchasing seaweed based components to incorporate into their finished products include companies such as Cargill Inc, Kerry Group, Danone, L'Oréal, Nestlé, Unilever, Colgate-Palmolive, Procter & Gamble, and DowDupont. Interest is already growing

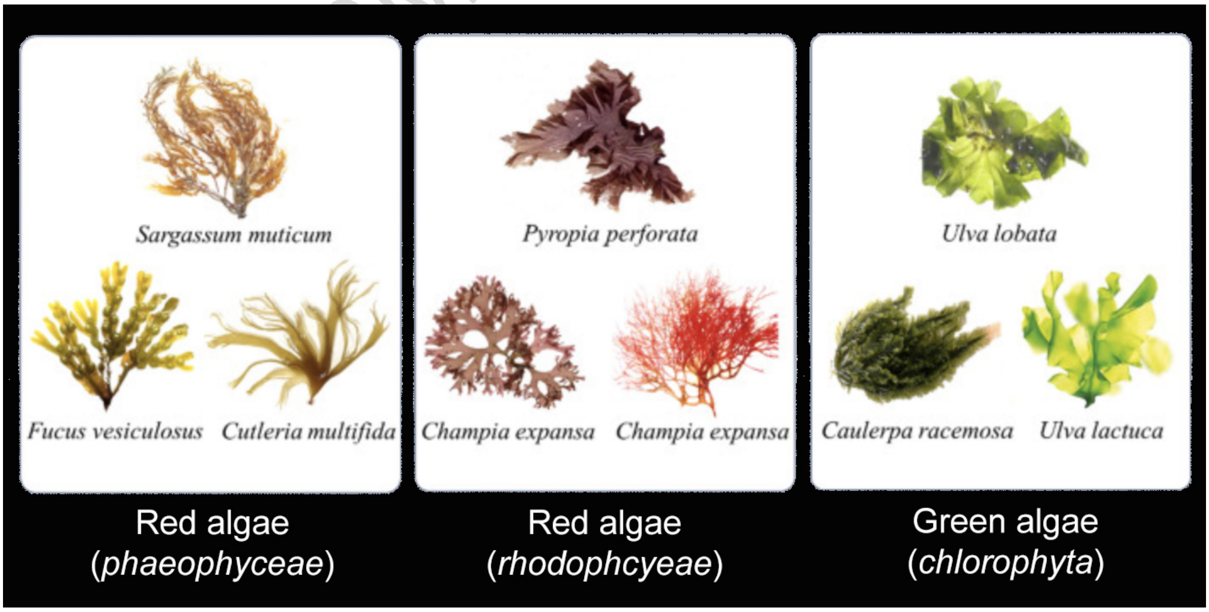
exponentially amongst large corporates seeking to add environmental credence, with Amazon investing in the cultivation of seaweed aligned to wind turbines and Sky Ocean Ventures backing initiatives to remove plastics from the oceans. These companies all provide potential exit opportunities for successful Phycological investments.

Notpla, a London based startup that manufactures plastic packaging from seaweed, won the 2022 Earthshot 'Build a Waste Free World' prize, sponsored by Prince William and Sir David Attenborough.

A Background to Seaweed and its Uses.

There are believed to be 12,000 species of macroalgae (seaweed), divided into red, brown, and green categories, based on their different combinations of photosynthetic pigments.

Seaweeds have complex and different means of reproduction, which may include crustacean pollination, just as with bees on land. Brown algae are thought to have derived from red algae around a billion years ago, but red and green algae share no common ancestors in the plant world. Green algae is more closely related to oak trees, strawberries, and roses than it is to red algae!



The world's sea-forests cover an area equal to the entire Amazon rainforest, but they are spread along the global coastlines and are at least twice as productive in terms of biomass.

Whilst seaweed farming occurs on a significant scale in Asia, the West wild harvests 99% of its production, meaning that it is operating at the level of stone age hunter gatherers. We are therefore on the verge of a new era, as pivotal as the advent of agriculture in the Neolithic period, not just in terms of food but also in the other areas discussed further in this document.

Almost 50 million years ago the proliferation of a modest aquatic fern called Azolla caused an extraordinary drop in world temperature. The fern is believed to have covered the surface of the sea, but when it died it sank to the bottom where the lack of light and oxygen meant that the microorganisms for putrefaction could not survive. The atmospheric carbon from that era was therefore trapped and fossilized into the fossil fuels that we use today.

The result was the exact opposite of the climate change that we are experiencing today, and as temperatures dropped the polar ice formed which trapped further carbon and methane, so accelerating the process, and changing Earth from a 'greenhouse planet' to an 'ice planet'.

Every day there are nearly 250,000 more human mouth to feed on planet earth. This means that in the next 50 years we will have to produce as much food on the planet as we have produced in the last 10,000 years. To do this on land will require much more fresh water and will greatly increase carbon emissions, contrary to our stated intentions!

In addition to the traditional farming of seaweeds in countries such as Japan and Korea for food, the extraction of hydrocolloids from red seaweed is relatively simple and this industry has introduced seaweed to tens of thousands of farmers in Indonesia, Philippines, Tanzania, Morocco, Malaysia, India, Madagascar, Spain, and Tunisia.

PLASTICS

Plastic is toxic and on average takes more than 700 years to degrade. According to the United Nations Environment Programme less than 10% of the 8 billion tonnes of plastic produced since the 1950's has been recycled, and we are expected to produce another 600 million tonnes per year by 2025. Every year an average of 10 million tonnes of these synthetic materials ends up in the oceans, and so at the current rate there will be more plastic than fish in the sea by 2050.

Many countries are therefore introducing legislation that will outlaw single use plastics, particularly in the food industry, and require them to be replaced with biodegradable alternatives. This has therefore created a fantastic new opportunity of immense proportions.

Seaweed is better than grain-based alternatives in that it does not require fresh water and pesticides to grow, and seaweed based products appear to break down more easily than the land based alternatives. It has been calculated that just 0.03% of the kelp available in the sea could replace all of the PET plastic used on earth. Seaweed based plastics can take the form of films, or can be adapted for other uses such as injection moulding.

Startup companies around the world have therefore started making water containers, drinking straws, cups, water bottles, bin liners, food trays, and field mulching biofilms from seaweed. The biofilms are doubly interesting, as when they do biodegrade after a certain time due to light and rain they release active ingredients that contribute to the growth of plants and the richness of the soil.

An Eco-friendly Subsitute for Cotton

Cotton requires a large amount of water to grow – it takes an average of 2,500 litres of water to produce a 250 gram T-shirt. According to the WHO cotton takes up about 2.5% of the world's cultivated area, but consumes 25% of insecticides and 10% of herbicides. Alternatively, seaweed can provide quality fibres in large quantities.

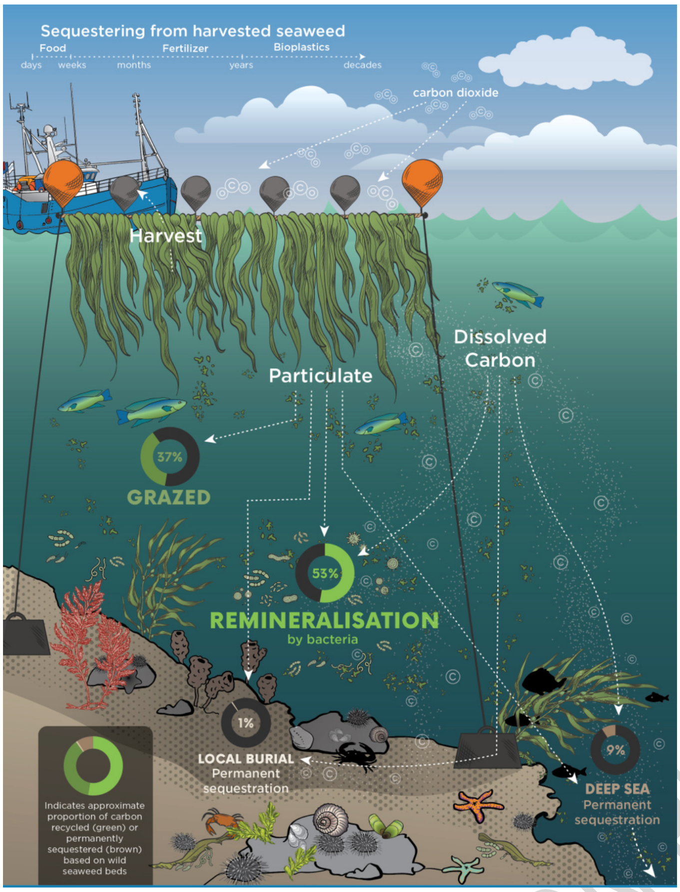
Clothing ranges are already on sale that that incorporate a proportion of seaweed fibre, and over time the seaweed proportion is likely to increase. These plastic and clothing manufacturing companies therefore provide a fantastic opportunity for the Mermaid fund.

Range of plastic alternative packaging materials made by Notpla, a London based startup whose capital came from crowdfunding.

SEQUESTERING CARBON

As discussed earlier, Azolla caused the temperature at the poles to drop more than 20 degrees by decreasing the concentration of carbon dioxide in the atmosphere from 3,500 parts per million (ppm) to 650 ppm. The planet is now at 450 ppm and ideally we need to get closer to 300 ppm to reach preindustrial levels. Seaweed may therefore offer the only large-scale natural solution for capturing carbon from the atmosphere and returning it to the earth.

Throughout its life seaweed suffers cell losses, mainly due to swell and currents, and the particles lost can represent in total almost 50% of the biomass. Around half of this will feed the plankton and filter feeders (shellfish, krill, sponges, etc) which form the base of the ocean food pyramid, but the other half will fall to the bottom of the sea and into the abyssal sediments. If it reaches depths greater than 300 metres the carbon will be trapped for a century – if it reaches 1,000 metres, it will be trapped for millennia.



Research by the NGO Ocean 2050 indicates carbon sequestration of 3.5 tonnes per hectare—three times more than the sequestration by a hectare of Amazon rainforest, and this figure could be increased to 10 tonnes per hectare under optimised conditions. The Max Plank Institute for Marine Microbiology suggests that seaweeds contain 'focose' sugars which appear to be resistant to degradation by bacteria, and so the real capacity of seaweed to sequester carbon could be even higher.

As the ocean's mass is 250 times that of the atmosphere, transferring 50% of the atmosphere's carbon to the oceans will only modify the carbon content by 2%. 50% of the carbon on our planet is already stored in ocean sediments, and the existing biomass of seaweed in the oceans is greater than that of all the forests on land.

The Importance of Blue Credits

Blue credits will become all the more important as the land available for large scale tree planting is becoming increasingly scarce and large carbon emitting companies struggle to find projects to achieve the carbon neutrality demanded by their stakeholders. Commercial opportunities therefore exist for companies that can harvest and sink seaweed to effective depths, and so earn their revenue from carbon credit systems.

SEAWEED PRODUCTION

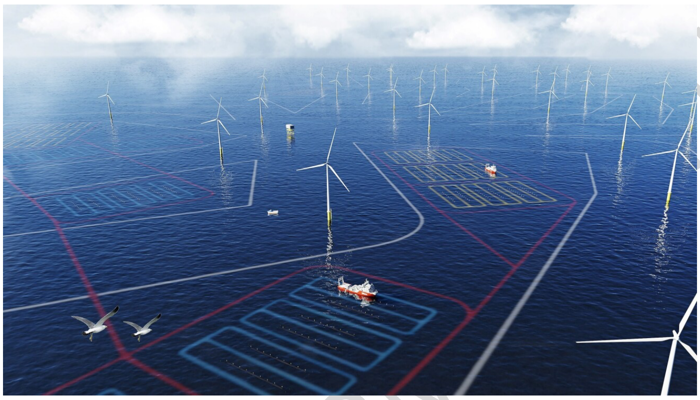
As discussed above commercial farming is currently taking place in the far east, with China, Indonesia, Korea, and Japan being the leaders. Small farmers harvest the seaweed, which is then boiled in water and bathed in an alcoholic solution to precipitate the carrageenan fibres, and the resulting dried red seaweed powders high in hydrocolloids are sold to Nestlé, Danone, Unilever, and others.

Seaweed co-production projects can be developed in areas dedicated to the production of offshore windfarms. They are rarely located in deep water, are protected from any passing boats, already benefit from concessions, and offer good anchoring points for ropes sown with seaweed. The dual activity allows for sharing of the maintenance, transport, and repair costs. It is even possible to add oyster and mussel production to the mix, as these filter feeders benefit from the biological matter that breaks off from the seaweed.

High precision farming has also resulted in closed environments on land. For example, tanks are used to grow very expensive but high quality Chondrus Crispus, which thanks to a process of selecting very targeted pigments, has bright and diverse colours of pink, yellow, and green. The Japanese adore them, and will pay up to one hundred times the price of common Chondrus to decorate their salads with these exceptional varieties.

So far we have only domesticated between ten and twenty types of seaweed out of the 12,000 that exist, and only 200 are on the market, most of which are wild. According to the FAO, 95% of cultivated production comes from just five different species. Genetic diversity is essential to ensure that farms do not suffer for particular diseases or climate changes.

More than 50 genomes have been deciphered for macroalgae, and this technology will allow us to select the most efficient and disease resistant varieties. Electronic sensor monitoring of water combined with artificial intelligence will enable us to better understand these plants and optimise their growing conditions. These high tech applications are areas which could be attractive to the Mermaid fund.



The world's first commercial seaweed farm between turbines, located in the Netherlands and sponsored by Amazon

ENVIRONMENTAL PROTECTION

The Sargasso Sea gets its name from the floating seaweed, never attached to a substrate, that inhabits the vortex created by the convergence of the three great marine currents of the Atlantic. Two species of sargassum co-exist in this body of motionless water, Sargassum natans and Sargassum fluitans.

The Problem of Sargassum

Since 2011 the proliferation of new sargassum has accelerated exponentially, multiplying its biomass tenfold in the space of a few years. It now covers an area from Central America to West Africa, a strip 9,000 kilometres long. This growth is thought to be due to the increased flow of nutrients from the Mississippi river to the north and from the Amazon in the south. As more and more rainforest has been cut back to increase production of crops such as soya, the erosion of the soil has resulted in the increase flow of nitrogen and phosphorous into the river.

As sargassum gets closer to coast it prevents light from penetrating, causing corals and seagrasses to die. these decompose and absorb oxygen, creating areas deserted by fish, crustaceans, and turtles. On land, the sargassum covers the shores for kilometres in heaps a metre thick, release a hydrogen sulphide stench as they decompose. Not only does this adversely affect the Caribbean tourist industry, but it also clogs the propellers of boats and fills the water intakes of power stations.

Clearing the seaweed once it has landed on the beach is a very inefficient approach and is estimated to cost around $1.5m per kilometre per year. The sand accidentally collected with the weed makes it hard to use for anything other than landfill, and the daily excavation means that beaches eventually must be re-sanded.

A more advanced approach is therefore to collect it at sea, and companies are already developing the technology to do this. The movements of the sargassum can be hard to predict, but this is an area where AI developments may be able to add value.

Governments and leisure operators already pay considerable amounts for beach clearance, and so will be prepared to pay for its removal at sea. In addition to this income, the captured sargassum can either be sunk to obtain blue carbon credits or can be converted into plastics, cardboard, or textiles, so creating a second revenues stream.

Opportunities for investment exist in the companies that are developing the technologies for offshore sargassum collection, both in the Caribbean and in other seas with similar problems.

SEAWEED AS HUMAN FOOD

All seaweeds are edible. They are low in fat and contain high amounts of vitamins A, B12, C, K, as well as iron, iodine, magnesium, phosphorous and zinc. They also contain the valuable long chain omega 3s (these polyunsaturated fatty acids are only found in fish oils and seaweed). Porphyra (nori) and Palmaria (dulse) have a protein content of over 40% dry weight, the same as soya, on which the protein intake of livestock farms is largely based. More than

85% of the soya produced in the world is used to feed livestock, with the largest producer being Brazil, whose rainforest has been dramatically reduced to grow this crop.

Unlike terrestrial plants humans don't need a large volume of seaweed to reap its nutritional benefits – a few grams a day of dried flakes can ensure our requirements of certain essential nutrients. Unlike terrestrial plants, there are few nutritional differences between fresh and dried versions of seaweed, the result of billions of years of adaptation to extreme conditions of salt, cold, sun at low tide, and swells at high.

Not only does seaweed retain its nutrients when dried, it does not deteriorate over time, does not require a refrigeration chain, and it is easy to transport without plastic packaging. Alternatively, seaweed can be fermented to make it easier for our bodies to absorb, to remove some of the stronger flavours, and again providing an unrefrigerated method of storage.

There is a huge scope for improvement in the West for cooking seaweed. The Mirazur restaurant in Menton, France, uses more than 20 types of seaweed in their cooking – they have been awarded 3 Michelin stars, and so the future looks good for seaweed biased menus.

It offers multiple flavours and in addition to salty, sweet, sour, and bitter, can offer the 5th flavour of umani. Interestingly the human palate enhances this flavour whist flying, unlike the other 4 flavours which are reduced.

Commercial opportunities for investment therefore exist in the distribution of new seaweed based food products, for example to the airline industry, and to expand the supermarkets' range beyond the ubiquitous sushi currently available.

AGRICULTURAL USES

There is research to support the benefits of seaweed to farm animals, both to increase growth rates and replace antibiotics. According to the FAO, a large proportion of methane emissions comes from ruminants, totalling 3.5 gigatonnes per year. Recent studies have shown that incorporating 0.2% of a species of red seaweed named Asparagopsis into the diet of ruminants would reduce more than 80% of their methane emissions, by modifying the composition of the intestinal flora. Methane is the second largest contributor to global warming, and is thirty times more harmful to the atmosphere than carbon dioxide. Tests in the New Zealand dairy industry suggest that another positive effect is a 20% increase in the growth rate of the meat.

Seaweed also offers solutions for vegetation as well as animals. Marine plants, bathed in nutrient rich seaweed, are loaded with mineral elements (nitrogen, potassium, calcium, magnesium, copper), which once spread on fields allow plants to absorb up to 20% more nutrients, and to tolerate the stresses of cold or drought. Trials are underway into combating fungal diseases in wheat, vines, and cucumbers using seaweed extracts.

The use of seaweed in agriculture dates back centuries in Iceland, Ireland, & Brittany, and in Canada today soils that are too acidic are treated with extracts of Ascophyllum Nodosum to make them more neutral. In the US the decriminalisation of cannabis in some states has resulted in the use of kelp as a fertilizer for hemp plants. The French agency for Ecological Transition, ADEME, has calculated that reducing artificial mineral fertilization by only 35kg of nitrogen per hectare on the fertilized surface of mainland France would result in savings of 540,000 kilotonnes of oil, equivalent to the annual production of 200 onshore wind turbines.

Opportunities therefore exist for the Mermaid Fund to invest in companies making advances in the areas of additives to animal feeds, and anti-fungal treatments made for plants.

PHARMACEUTICALS

Seaweed is the oldest and therefore the most experienced organism to survive on our planet. For over a billion years it has developed sophisticated defence systems against a wide range of enemies such as fungi, bacteria, and viruses. It has already been recognised and accepted that seaweed has anti-cancer, anti-inflammatory, antiviral, analgesic, immunomodulatory, antibacterial, and antifungal properties, and it is widely used in Chinese medicine.

While one in eight women in the US is diagnosed with breast cancer in their lifetime, in Japan where there is a long tradition of eating seaweed foods it is one in thirty-eight. Interestingly, this difference is almost non-existent for Japanese women who live in the West and have adopted a local diet. Whilst the obesity rate is 38% in the US, it is only 4% in Japan and according to the WHO the life expectancy for these two countries is 84.3 and 78.5 years respectively.

Undigested fibres remain in the intestine for a long time, promoting a feeling of satiety that could have a positive effect on obesity issues. Fucoxanthin, the pigment that gives brown seaweed its colour, has been shown to have significant effect on fat metabolism and blood sugar levels. This pigment, and also seaweed phytosterols, have been shown to reduce the risk of breast, ovarian, lung, and stomach cancer.

For a long time alginate has been used in dressings because it activates the cells used in wound healing, maintains a moist environment with great absorption power, promotes coagulation, and reduces the risk of infection through fixation of bacteria. Laminaria hyperborea products are used for cervical dilation, and agar-agar obtained from red algae is used for petri dishes. Purified extract of agrose is used to separate proteins on columns used for their purification, and also in PCR tests.

Investment opportunities therefore exist for companies manufacturing seaweed based dressings, tampons, treatments for cystic fibrosis and obesity, laboratory preparations, and beauty products.

L'Oréal's anti-aging product Crème de la mer product contains kelp extracts, and retails for more than £400 a tub

OTHER CHEMICALS AND USES

During WW1 the Dupont company of the USA manufactured potash for gunpowder and a range of other chemicals from seaweed when imports of chemicals from Germany were blocked. Although these factories closed after the war, Dupont is still very active in seaweed derrived chemicals.

Hydrocolloids are texturizing gels for various products, mainly in the food industry. They are derived naturally and can be produced from plants, and when produced from seaweeds they are known as phycocolloids. Today almost half of all hydrocolloids are phycocolloids such as alginate from brown seaweed, and agar-agar or carrageenan from red seaweeds. In our food they can be used as a texturiser, thickener, binder, or gelling agent. They are cheap, odourless, tasteless, cannot be absorbed by our bodies and are therefore also calorie-neutral.

Phycocolloids are used for ice creams, dessert creams, juices, sweets, preserves, meat, margarines, soups, terrines, sauces, pastries, pet foods and certain beers where they have a clarifying effect and limit the excess foam formed by proteins. They are even used in medical and pharmaceutical applications, the manufacture of fire extinguisher foams, and even welding rods (in European supermarkets they can be found on food labels under the codes E401 to E407).

Paints are currently oil based, but less polluting seaweed paints are more appealing, particularly to the shipping industry where they may have natural antifouling capabilities based on their natural rejection of marine parasites. Native Americans have long used seaweeds to create a range of natural dyes, and so the potential exists to colour seaweed darns once they have been spun, and to possibly also produce printing inks.

In Japan seaweed extracts from Gloiopeltis and Chondrus ocellatus have historically been used in plastering, and in central America sargassum is being incorporated with mud into building blocks where their fibres give added strength.

Opportunities for investment therefore occur both within the well established phycocolloid supply chain to large multinationals in the food and cosmetic industries, and possibly also in the newly emerging paint and dye sectors.

BIOFUELS

Finally for the sake of completeness, we should mention biofuels. These are carbon neutral in that they only release back carbon that has been extracted from the atmosphere earlier in the year, but they are not as advantageous as the other products described above as they do not actually reduce the overall carbon in the atmosphere in the long term.

Although it only has a low calorific value, in the absence of other materials, seaweed has often been used as fuel throughout the world. Creating biofuel from seaweed by extracting lipids or bioethanol from sugars is technically possible, and so-called third generation biofuels deliberately cultivate algae to create a usable energy product.

There was significant enthusiasm for this biofuel in the early 2000s. Shell, Chevron, General Electric, Statoil, and even Bill Gates invested large sums of money into the field at the time. The US Department of Energy launched a multi-million dollar programme involving US research centres and universities. The resource seemed unlimited, untapped, and did not compete with land based food production.

Unfortunately, the yield appeared to be limited and the costs prohibitive. The techniques for converting seaweed into bioethanol are much more complex than those used for terrestrial plants, and so with our current state of technology it does not seem that it will be a competitive energy source.

Indeed, many companies set up to produce biofuel from seaweed have now become pioneers in animal feed and bio-stimulants. However, the third generation algae biofuel technology is appearing to be more viable, and so could be a possible avenue for future investment.

MANAGEMENT

Baroness Worthington
Advisory Board

Bryony is an environmental campaigner and life peer in the House of Lords. She has previously worked for friends of the Earth, and the Department for Environment, Food and Rural Affairs where she helped to draft the Climate change Bill which requires the UK to reduce carbon emissions by 80%.

She launched Sandbag to raise public awareness of and improve the European Union's Emissions Trading Scheme, and she has been a trustee of UNICEF. Bryony has a degree from Cambridge University and has previous investment experience as a director of the Jupiter Green Investment Trust.

Professor Alison Smith
Advisory Board

As head of the Plant Sciences department at Cambridge University Alison has a particular interest in the biochemistry of microalgae, the symbiotic relationship between algae and bacteria, and the subsequent metabolic engineering of high value products from algae sources.

She set up the Algal Innovation Centre to test scale-up of some of these technologies to allow sustainable exploitation of microalgae, such as the remediation of waste streams and biomass production to increase nutritional value of food and feed. Alison has a PhD in Biochemistry from Cambridge University.

Professor Saul Purton
Advisory Board

Saul is Professor of Algal Biotechnology at University College London, and has more than 25 years experience of working on algae. His research covers biotechnological applications of microalgae for the synthesis of hormones, vaccines, immunotoxins, anti-microbials, delivery systems for vaccines and insecticides, oils for human health, and the biofuels sector.

Saul has PhD in Plant Molecular Biology from the University of Cambridge, is President of the UK Phycological Society, and is a director of Algae-UK.

Seonaid MacKenzie
Chief Investment Officer

As the founder of Sturgeon Ventures Seonaid has been involved in the setting up more than 150 funds and regulated companies over the last 25 years, and has been the Chief Investment Officer for many of these.

Her experience has covered not only the UK but also Europe and the USA, and she is a fellow of the Chartered Institute for Securities and Investments.

John Daw
Chief Financial Officer

John has more than 35 years experience in financial services including time spent in the venture capital world with Schroder Ventures (Permira), Apax Partners, and West Private Equity (Horizon Capital).

He has be the co-founder of a number of start-ups, and In addition to his finance responsibilities, he will be responsible for managing the deal-flow and exit pipelines. John qualified as a Chartered Account with Deloitte and has a degree in Agricultural Economics.

Paul Templeman
Chief Executive Officer

Paul has been involved with many start-ups and early stage companies throughout his career. These included the regulated company Neteller, in which as European CEO he was responsible for an AIM listing with a "Unicorn" market capitalisation in excess of £1bn.

He has been an approved person for many companies, and will be responsible not only for compliance, but will also use his extensive business experience to mentor the management teams of companies invested in by the fund.

RECENT PHYCOLOGICAL INVESTMENTS

Company	Date	Amount	Country	Activity
CH4 Global	Aug-23	USD 45m	Australia	Methane emissions
Carbonwave	Jun-23	USD 18.9m	US	Biomaterials
Hooked Foods	Jun-23	USD 6m	Sweden	Seaweed foods
Ocean Harvest	Apr-23	EUR 6m	Ireland	Pre-biotics
Origin by Ocean	Apr-23	EUR 9.5m	Finland	Bio-refinery
Viridos	Mar-23	USD 25m	US	Algae biofuel
Ocean Rainforest	Feb-23	USD 7.7m	Faeroe Islands	Cosmetics
Kelpi	Feb-23	GBP 4m	UK	Bioplastics
North Sea Farm 1	Feb-23	EUR 1.5m	Netherlands	Seaweed production
Algama	Jan-23	EUR 13m	Belgium	Algae food ingredients
Microphyt	Dec-22	EUR 15m	France	Nutrition & beauty
Oceanfarmr	Nov-22	USD 1.5m	Australia	Seaweed production
Pure Ocean Algae	Sep-22	EUR 3m	Ireland	Seaweed production
Algiknit	Jun-22	USD 13m	US	Yarns from kelp
Symbrosia	Jun-22	USD 7m	US	Methane emissions
Brevel	Jun-22	USD 8.4m	Israel	Algae food ingredients
Brilliant Planet	Apr-22	GBP 12m	UK	Carbon capture
Kelp Blue	Apr-22	GBP 2m	Netherlands	Seaweed farming
Umaro	Mar-22	USD 3m	US	Meat alternatives
AlgaCytes	Jan-22	EUR 16m	UK	Omega 3 production
Notpla	Dec-21	GBP 10m	UK	Plastics & packaging
Oceanium	Dec-21	GBP 5.4m	UK	Seaweed refinery
Sway	Nov-21	USD 2.5m	US	Plastics & packaging
Algisys	Nov-21	USD 8.9m	US	Omega 3 production
Marinomed	Oct-21	USD 7m	Austria	Pharmaceutical
Oregon Seaweed	Oct-21	NOK 1.5m	US	Seaweed production
Volta Greentech	May-21	EUR 1.7m	Sweden	Methane emissions
Olgram	Mar-21	USD 1.5m	France	Pharmaceutical
Iwi	Dec-20	GBP 10m	US	Omega 3 production
Algolesko	Dec-20	EUR 1.2m	France	Seaweed farming
Happy Ocean Food	May-20	EUR 0.6m	Germany	Seaweed foods
Alginor	May-20	EUR 2.5m	Norway	Seaweed farming
Algaia	Mar-19	EUR 4m	France	Seaweed extracts

N.B. Many more Phycological investments have been made over this period, but due to the confidential nature of the transactions it has not been possible to disclose them in this table. (Source: Crunchbase.com)