

WHAT TO KNOW ABOUT THE GROW

A LOW-IMPACT PROCESS WITH HIGH BENEFITS FOR THE REGION AND ENVIRONMENT

Every step of the seaweed farming process is designed to have a minimal environmental footprint, making it far more climate friendly than many kinds of land-based farming. The process is also community friendly because it brings new enterprise to the area, provides extra opportunities for seasonal fishers, and protects fish stocks and coastlines.



LOW-IMPACT FARMING PROCESS

1

SPORES

Unlike farmed terrestrial plants, kelp doesn't grow from seeds. Kelp farmers begin in early fall by releasing microscopic spores stored in the center of mature kelp blades. Just one blade contains millions of spores so not many are needed to start an entire farm, making this a highly efficient, renewable crop.

2

NURSERY

Spore release is done in a small offsite "nursery" with filtered water tanks filled with long tubes wrapped in twine. The spores are then poured into the tanks, where they attach to the twine and begin growing. In one or two months, the kelp will have grown large enough to transfer to the ocean.

3

OCEAN

Farmers transport the young kelp to ocean farms in October–December. The twine from each tube is wrapped around sturdier ropes and suspended below the water, hiding most of the farm from view.

4

GROW

The kelp grows to maturity during winter. Unlike terrestrial farms that need water and fertilizer, seaweed farms get everything they need from the ocean. Sunlight, carbon, phosphorus, and nitrogen are all naturally occurring.

5

HARVEST

From April to early June, farmers use boats to lift and cut mature seaweed from the ropes and ready it for market. Since harvest happens during spring, it doesn't interfere with summer coastal recreational activities.

HIGH-IMPACT BENEFITS

ECONOMIC GROWTH

Seaweed farming provides fishers with an alternative income during their off season, enabling them to work the water—using their same boats—all year.

NEW INDUSTRIES

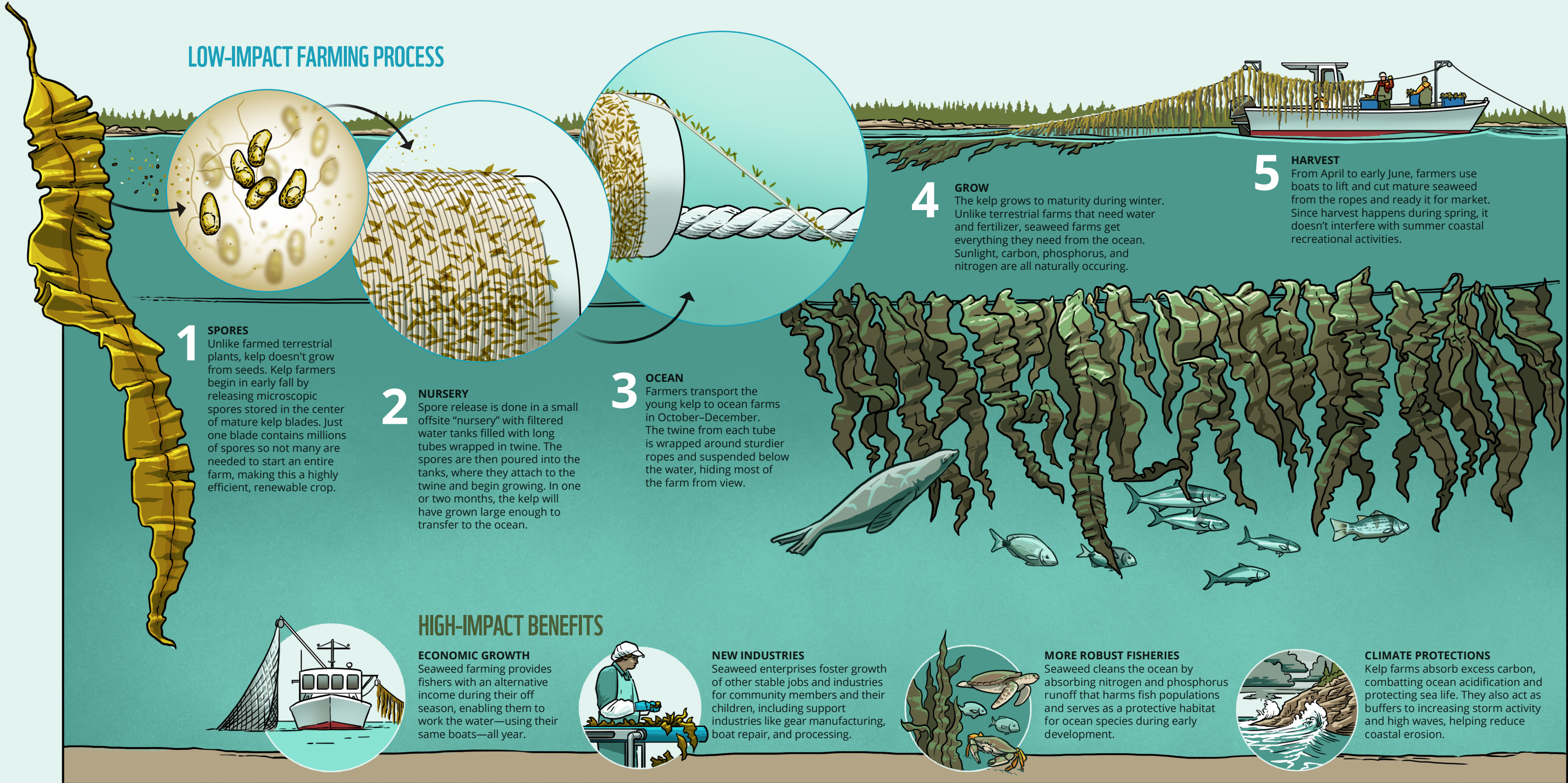
Seaweed enterprises foster growth of other stable jobs and industries for community members and their children, including support industries like gear manufacturing, boat repair, and processing.

MORE ROBUST FISHERIES

Seaweed cleans the ocean by absorbing nitrogen and phosphorus runoff that harms fish populations and serves as a protective habitat for ocean species during early development.

CLIMATE PROTECTIONS

Kelp farms absorb excess carbon, combatting ocean acidification and protecting sea life. They also act as buffers to increasing storm activity and high waves, helping reduce coastal erosion.

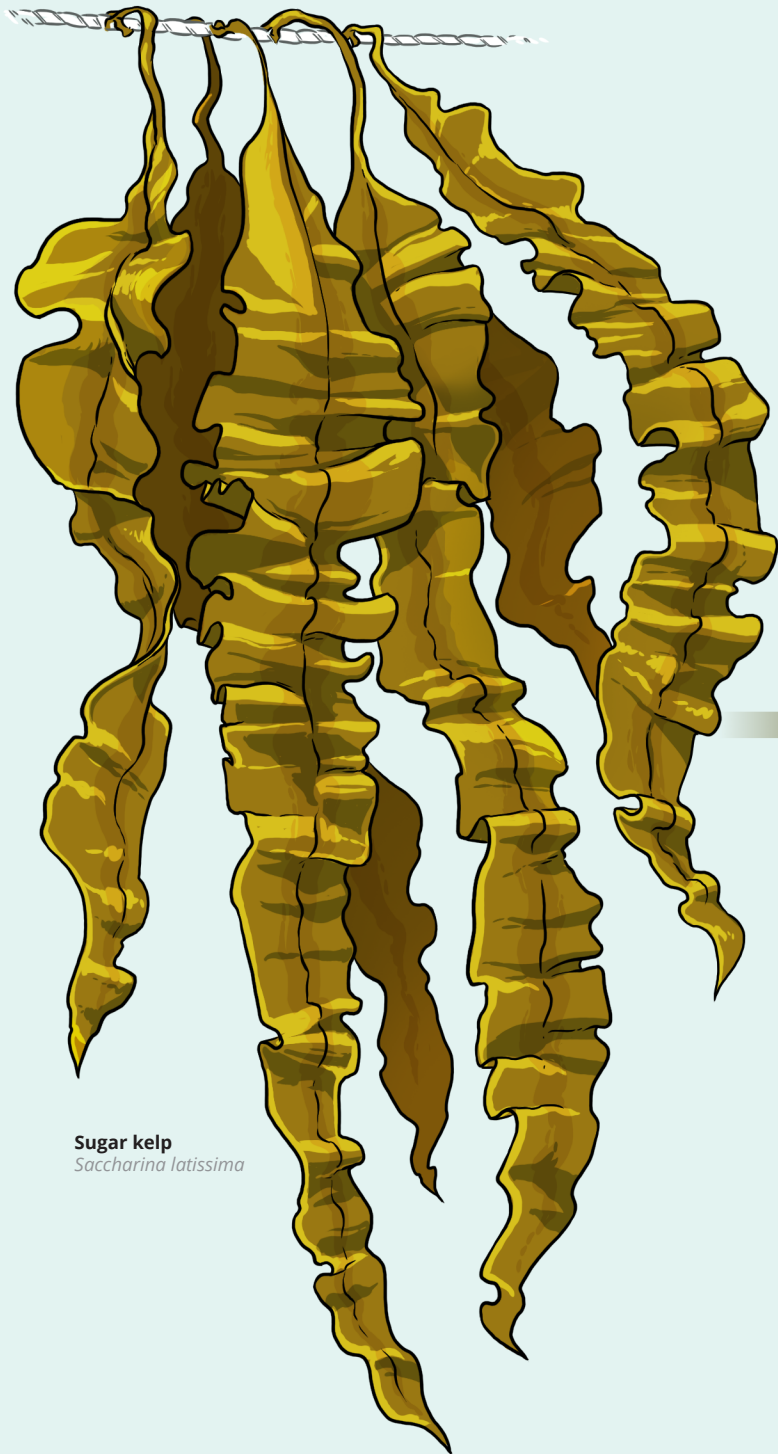


AN INVESTMENT IN

INNOVATION THAT HELPS CONSERVATION

SEAWEED IS INSPIRING NEW CHANGES IN INDUSTRIES YOU MIGHT NOT EXPECT—ALL WHILE HELPING PROTECT THE CLIMATE.

People often assume seaweed is only grown for food. But industries of all kinds are using this environmentally optimal, fast-growing, and low-resource crop in exciting ways to improve their business models, protect their supply chains, and ensure sustainable practices that protect the climate and the world.



Sugar kelp
Saccharina latissima

TEXTILES

The textile industry is creating new cotton blends using seaweed fiber. Unlike cotton, growing seaweed uses no freshwater resources, and it has a significantly lower carbon footprint than petroleum-based textiles like polyester.



COSMETICS

Well-known cosmetic companies are using seaweed as a texturizing agent in their lotions and makeup. Seaweed also contains bioactives that give products anti-inflammatory, moisturizing, and sun-protective benefits.



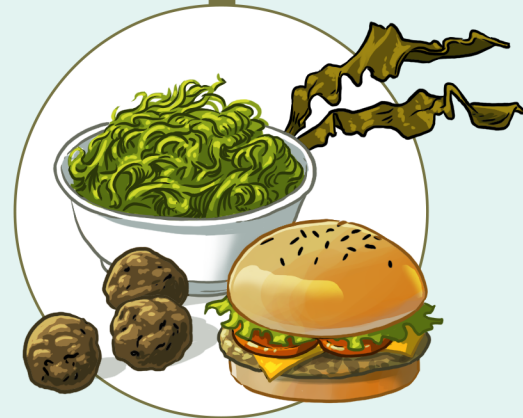
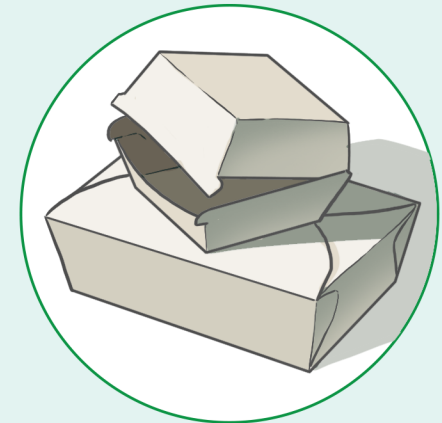
PHARMACEUTICALS

Every day, the pharmaceutical industry is discovering more ways that seaweed compounds can be used to improve human health—including for anti-inflammatory, probiotic, and thyroid benefits.



BIOPACKAGING

Forward-thinking companies are looking to seaweed as a lower-carbon, biodegradable alternative to traditional packaging. Innovations currently in development include seaweed-based plastic products, cardboard, and ink.



FOOD

Food retailers and producers are using seaweed for far more than sushi. Consumers can now find seaweed burgers, meatballs, hot sauces, salads and more in their local supermarkets.



FEED

New research reveals that seaweed feed improves livestock health, productivity, and growth—which means economic stability for farmers. It also reduces cows' methane output, which protects the climate.



FERTILIZER

Seaweed fertilizer helps farmers reduce the use of dangerous chemicals while delivering a wealth of nutrients and biostimulants directly to plants, which can increase crops' temperature tolerance, disease resistance, and yield.



BIOFUEL

We know how to make seaweed biofuel that greatly reduces land, freshwater, and pesticide use compared to other biofuels. Next step: scale up seaweed production to make this fuel price-competitive.