

A close-up photograph of a hand holding a piece of bright green seaweed. The seaweed is being held just above a body of water, with a single drop of water falling from its tip, creating a small ripple. The background is a soft-focus view of the water and more seaweed. The overall tone is natural and fresh.

SEA VEGETABLE COMPANY

海藻で人と地域をすこやかに

The current state of seaweed in Japan
and new seaweed production technology

sea:
vege-

Sea Vegetable = Seaweed Cultivation Startup



Land cultivation



Open sea cultivation

**How many types of
seaweed do you think grow
in Japan's coastal waters?**

How many types of seaweed do you think grow in Japan's coastal waters?



It's believed that there are about 1,500 types of seaweed in Japan's seas.
All of them are edible (non-poisonous).



**What are the characteristics
of seaweed?**



**Types of seaweed are as diverse as
different types of vegetables are**

Can seaweed save us from a food crisis...?

Amount of Protein:

Nori Seaweed:	40%	$\geq$	Soybeans: 34%
Aonori Seaweed:	30%		

No need to use
fossil fuels,
pesticides, or
synthetic fertilizers

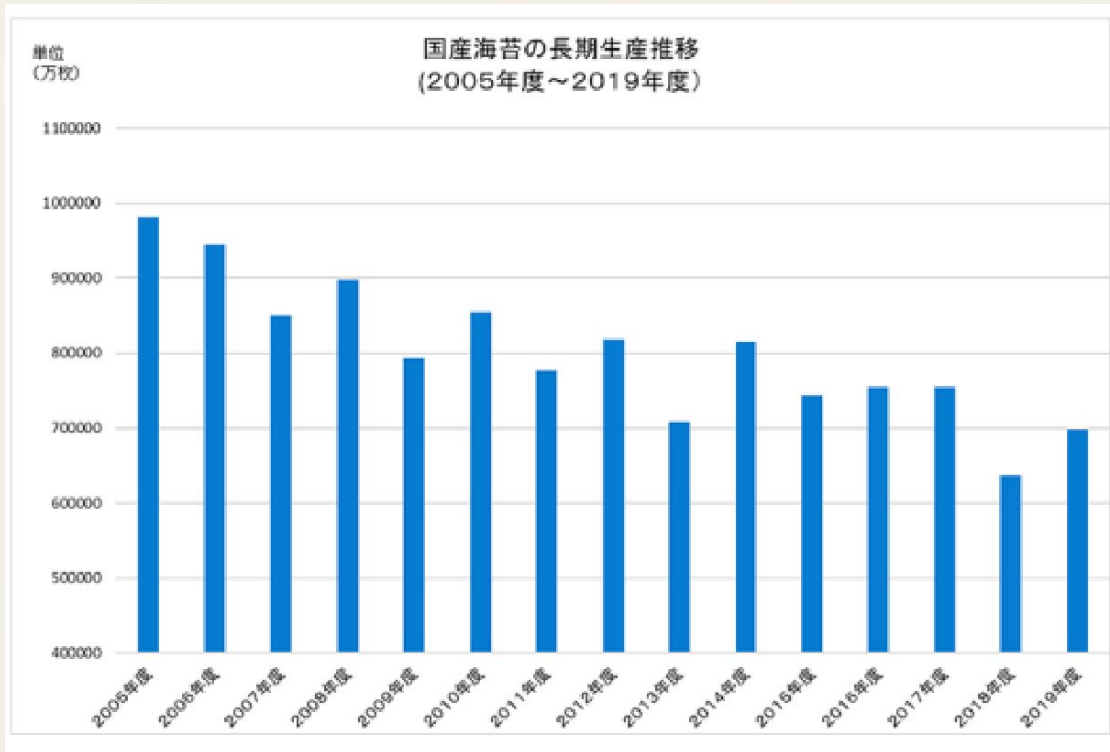


Able to grow using just sunlight and the ocean's nutrients, could seaweed be the most sustainable ingredient in the world!?

The current state of Japan's seaweed

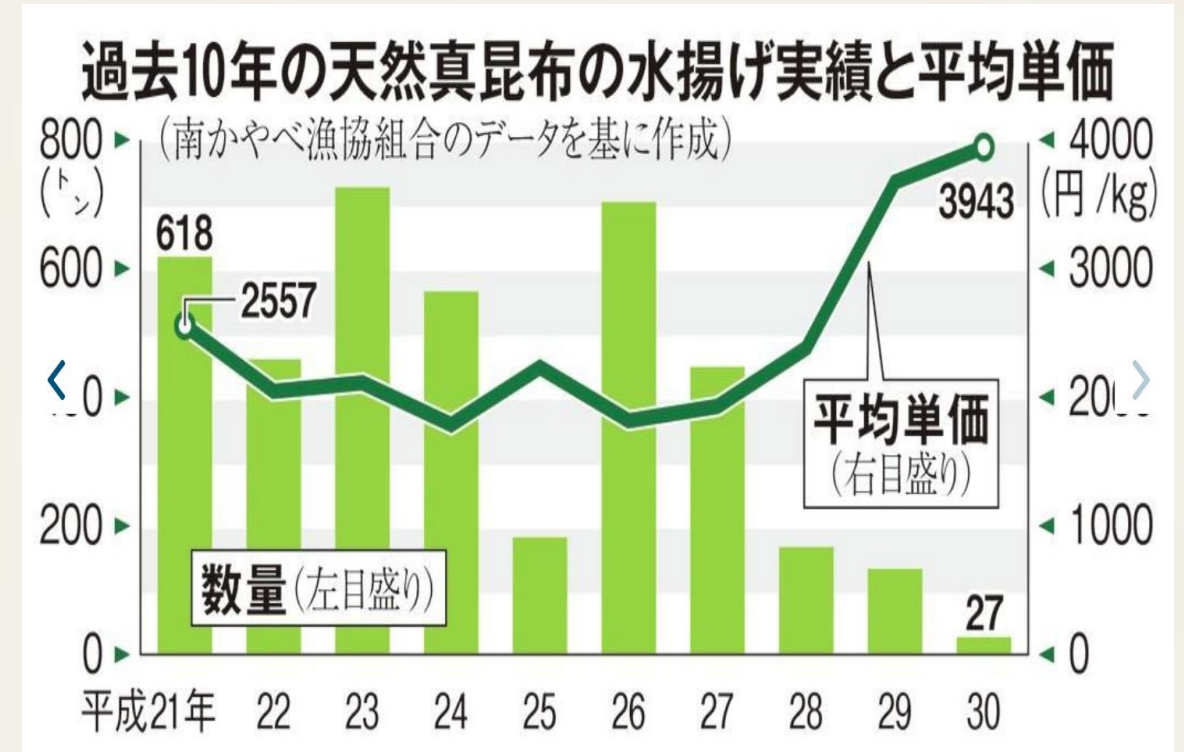
Both nori and kombu seaweed harvests keep hitting record lows...

Nori seaweed



Drop from just 10 billion sheets in 2005 to 6 billion sheets in 2022... to **just 4.8 billion sheets in 2023**

Kombu seaweed



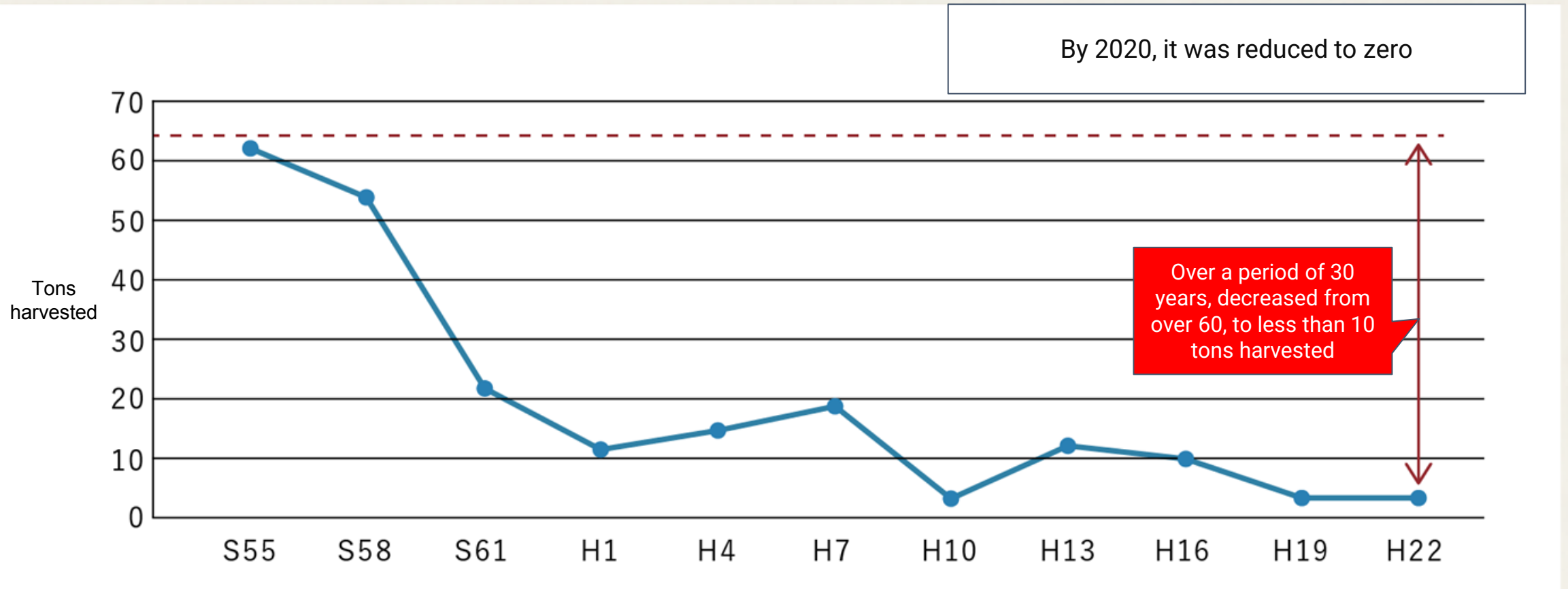
From 700 tons harvested to nearly zero while base prices keep increasing.

Aonori seaweed in Yosu



The current state of Japan's Aonori seaweed

The traditional main production area of Aonori seaweed has been Shimanto River in Kochi Prefecture. However, the seaweed harvest there has shrunk dramatically and there is currently a massive shortage.



Technology of Land-based aquaculture

- ① using cluster technology
- ② find high potential strain in winter and summer season
- ③ using saline ground water.

By using these technology, we realized we can cultivate Aonori throughout the year and it has become a commercial business.







The current state of Japan's seaweed

Seaweed has dramatically decreased in areas with algae-eating fish and sea urchins, and in some areas seaweed has disappeared completely.



The seaweed here has completely disappeared due to the sea urchin population



A school of juvenile algae-eating fish



Seaweed after being eaten by algae-eating fish

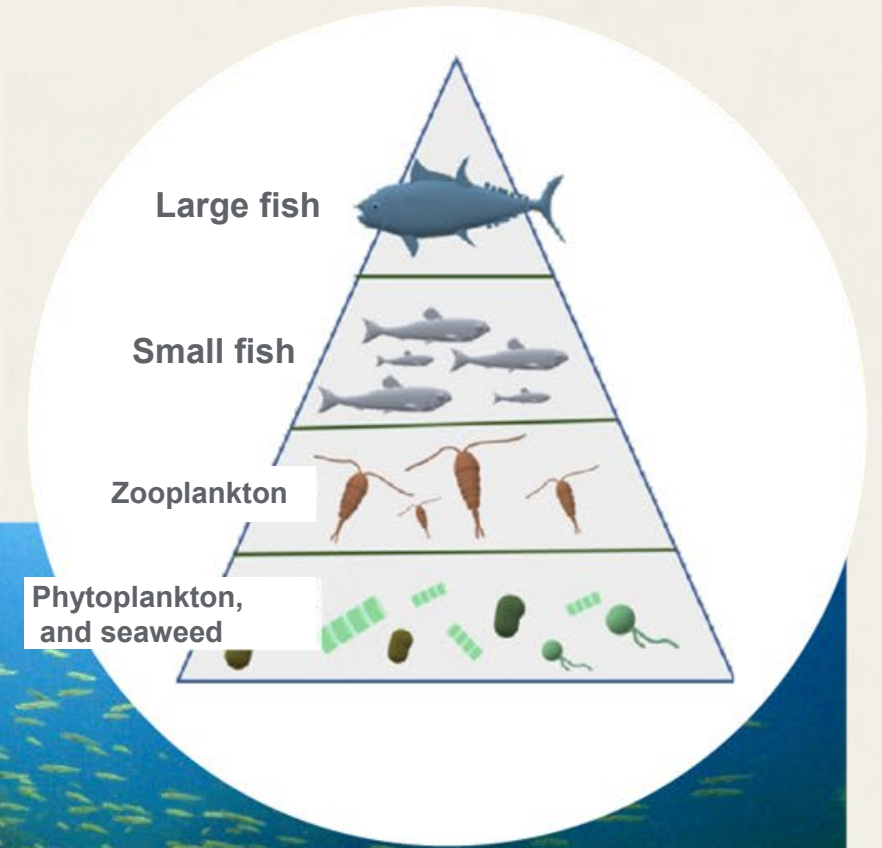


The role of seaweed beds

Many small organisms that serve as food for juvenile fish live on the surface of seaweed. There are also fish that eat seaweed, and species like greenlings and squid use seaweed beds to raise their young.

The disappearance of seaweed beds, which serve as a hub for life in the ocean, has a negative impact on the entire ecosystem.

Growing seaweed on the bottom of the ocean is difficult, so creating seaweed beds on the surface of the ocean is the only option!



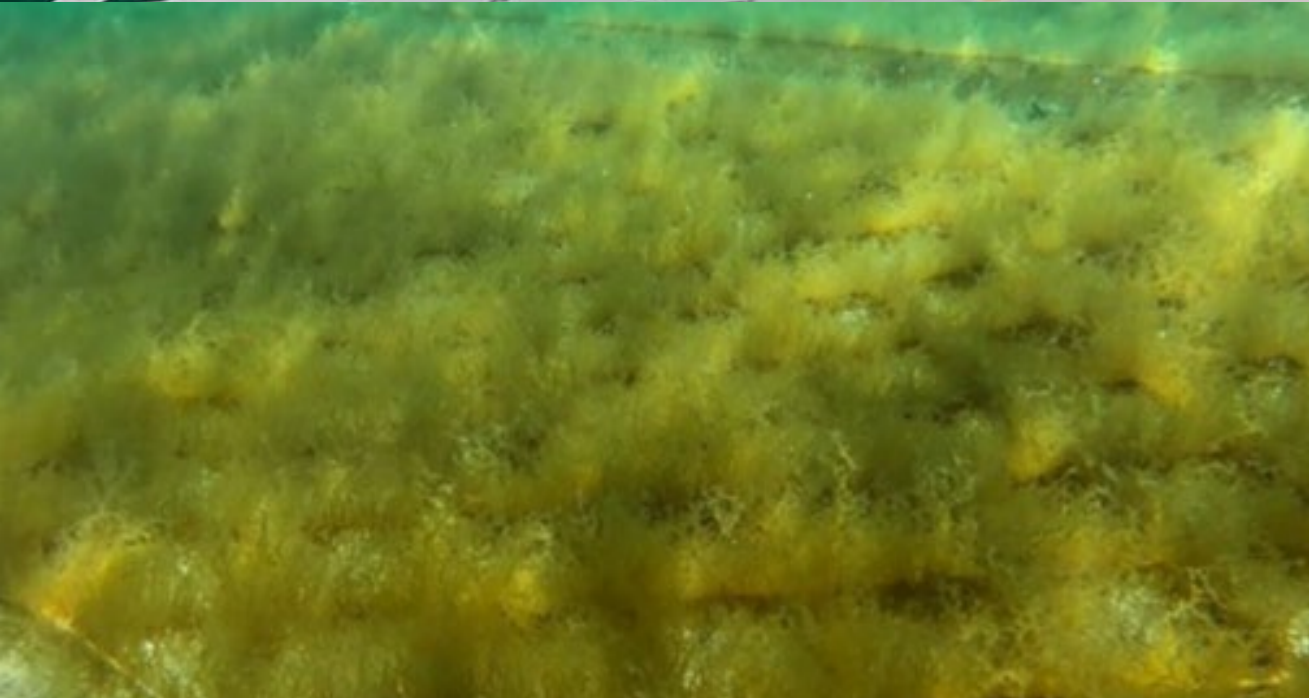
Established seaweed cultivation methods

The only kinds of seaweed that are currently grown from seedling to adult, are mainly:

Wakame, kombu, nori, and mozuku (in addition to some others)



**Sea Vegetable is able to produce
over 30 different kinds of seaweed**



Revitalizing marine ecosystems

The cultivation of seaweed on the sea surface leads to an increase small organisms. This supports a richer ecosystem, including varied fish species. We are currently gathering evidence in collaboration with universities and national research institutions.



SEA VEGETABLE Test Kitchen



Chef Hideaki Ishizaka, originally from Australia, made a name for himself as the head chef at INUA and later joined Sea Vegetable.

In 2023, he also participated in the noma Kyoto project while at Sea Vegetable.

Ishizaka, along with two other chefs from INUA, is currently dedicated to making new developments in the culinary world of seaweed.

He has already worked with over 100 varieties of seaweed!



A close-up photograph of a hand holding a silver spoon over a dish. The spoon contains a thick, green, bubbly foam. The dish below is a dark, textured bowl filled with dark green seaweed, some of which is garnished with small orange and yellow pieces. The entire dish is set on a light-colored, textured plate.

We want to enrich and improve the ocean by creating a new food culture around seaweed.