



## CLIMATE TAKE BACK CASE STUDY

# URCHINOMICS

### Protecting and restoring the world's kelp forests, one sea urchin at a time.

#### WHAT IS IT?

A win-win for gastronomy and the health of the ocean's kelp forests!

Overfishing and environmental changes have caused a decline in the number of species that prey on sea urchins. The resulting explosion in the population of urchins has led to the destruction of the kelp forests upon which they feed, which are a valuable carbon sink. After devouring the kelp, the urchins are left with no food source and starve, becoming inedible to both humans and other species. Urchinomics is helping to protect these valuable habitats and carbon stores, by removing the urchins to be farmed and then sold as a high-quality delicacy.

#### HOW DID IT DEVELOP?

It all started in Japan, where urchins are a highly prized culinary delicacy in high demand.

Normal practice is for fishermen to harvest the best specimens from the forest for sale into high-end restaurants and sushi bars. However, not many of the urchins make the grade, meaning most are left in place to continue degrading the forests and those that are removed by divers are simply discarded.

The company's founder, Brian Tsuyoshi Takeda realised that by managing the population of urchins and 'ranching' them in a controlled environment, yield rates could be significantly increased.

This would have a transformative effect not only on the quantity and quality of urchins being brought to market, but would also encourage their removal on

a far greater scale from the threatened kelp forests.

#### HOW DOES IT WORK?

Urchinomics works with marine biologists to identify kelp forests that are under threat, and which have urchin populations that are suitable for removal and further cultivation.

Having identified suitable forests, Urchinomics enters into partnerships with local fishermen who systematically remove the urchin population from the forests and relocate them into specially designed holding systems.

Once on the 'ranch', the urchins are latched into sea cages and fed Urchinomics' all-natural feed to help them grow to the required size, before being harvested and sold into the sea food market.

In the meantime, the urchin-free kelp forests can get on with the process of growing ever bigger, and absorbing even more carbon.

### **HOW EFFECTIVE IS IT?**

In terms of urchin harvesting and production, this project is transformative.

Using conventional techniques, only around 15% of urchins reach a size and quality which makes them worthy of harvest. Under Urchinomics' system, virtually every urchin is removed, with nearly 90% of them eventually growing to a size that means they meet the culinary grade.

### **WHAT ARE THE END PRODUCTS?**

Delicious and healthy urchin roe – a food that is not only a much prized delicacy but the production of which now has the capacity to help protect one of the world's most valuable and threatened ecosystems.

### **WHO BENEFITS?**

Virtually everyone and everything involved.

For the fishermen it means the opportunity to grow their incomes through significantly increasing their yields and profits.

For diners it means increased availability of a foodstuff that they prize and which they can feel really good about eating.

For the oceans and fishermen it means the protection and restoration of valuable habitats for a variety of fish species.

And for the planet it means the protection of a valuable ecosystem that locks in around 60 million tonnes of CO<sub>2</sub>.

### **HOW CREDIBLE IS THIS?**

Urchinomics has proven itself in the field, and is now expanding with trials in a number of countries.

It's attracting major partners, too. From September 2017, a wholly owned

subsidiary of Mitsubishi Corporation will start manufacturing specialty feed for Urchinomics.

### **WHY WE LOVE THIS**

All too often, new methods to help meet the rapidly expanding global demand for healthy, nutritious food have a potentially disastrous effect on the planet. Sometimes it is hard to know how we will provide food for everyone whilst also maintaining viable natural habitats for all the species that rely upon them.

Here is a business model that delivers truly sustainable growth – enhancing natural systems, driving local economic growth and giving consumers healthy, natural food at more affordable prices.

Letting nature cool is starting to look not just like good environmental sense, but good business sense too.

 [URCHINOMICS.COM](https://www.urchinomics.com)

# CLIMATE TAKE BACK

At Interface, we're convinced a fundamental change needs to happen in our global response to climate change. We need to stop thinking about how to merely limit the damage caused by climate change – and start thinking about how to create a climate fit for life.

**Our new mission is called Climate Take Back – and we invite you to join us.**

Find out more at our website [here](#)

**Interface®**

## LIVE ZERO

Aim for zero negative impact on the environment

## LEAD THE INDUSTRIAL RE-REVOLUTION

Transform industry into a force for the future we want

## LOVE CARBON

Stop seeing carbon as the enemy, and start using it as a resource

## LET NATURE COOL

Support our biosphere's ability to regulate the climate

