

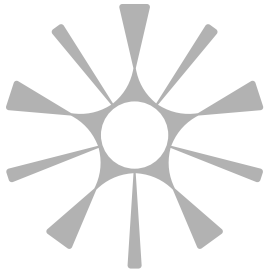
URCHINOMICS

Urchinomics: Restoring Ocean Habitats to Feed the World

Urchinomics' purpose is to rehabilitate unhealthy oceans into healthy ecosystems for the benefit of our planet and humanity. We do this by removing overgrazing sea urchins and helping nature turn a barren seafloor back into a vibrant kelp forest. The removed sea urchins are then ranched and sold as premium seafood to restaurants around the world. Our pioneering restorative aquaculture venture aims to turn ecologically destructive sea urchins into high valued seafood products that can be consistently supplied nearly year-round.

The Urchinomics Methodology helps restore kelp forests, which in turn supports greater marine biomass, biodiversity, and capacity to sequester atmospheric CO₂, all while creating full time employment in rural, coastal communities around the world.





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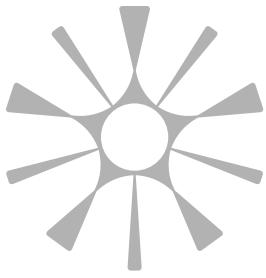
The Context and Problem

Coastal kelp forests are some of the most fertile feeding and breeding grounds for fish and other living organisms combined with being the planet's most important source of carbon sequestration. However, many of these coastal marine habitats are disappearing four times faster than rainforests on land. Kelp forests and other shallow water vegetation make up the majority of the ocean's vegetated habitats but only equal 0.05% of the plant biomass on land, they convert almost as much CO₂ as terrestrial vegetation (Bouillon et al 2008, Houghton 2007).

Overfishing and other human activities have allowed sea urchin populations to explode. This has disrupted the equilibrium amongst organisms which maintain ecosystem diversity.

In the past, the natural balance was maintained by mammal and fish predators keeping the urchin population in check. With the loss of these predators, sea urchins have overgrazed on the kelp forests turning a once healthy ecosystem into a barren desert. After consuming all the food around them, the urchins then starve and become empty. Empty urchins have no economic value for fishers and contain little nutrients for predators, allowing them to continue occupying what could have been productive coastal marine habitats.





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The Solution

At Urchinomics, we are passionate about harnessing the power of the natural world to help reverse some of the negative ecological and economic impacts we are seeing today.

Urchinomics has spent years in developing proprietary technologies to help facilitate this process. We have a special formulated feed made with sustainably harvested, umami rich kombu (kelp) that we use to grow the roe inside the barren urchins (100% plant based, no hormones, antibiotics, or animal ingredients) in sea cages and/or land based raceways. We are currently in the final phase of this development and are fine tuning the flavor profile to meet the expectations of the finest chefs around the world. Uni is a buttery, sweet and briny flavor with a creamy rich gold consistency. Connoisseurs of milder caviars will find a strong similarity. Our technology is complemented by a branding division and operational know how to get these urchins into the hands of people that love them.

By understanding and aligning new economic incentives and further improving our technologies, we can remove the overgrazing sea urchins and turn them into luxury gourmet seafood. By doing this we simultaneously help to restore kelp forests, encouraging fish and marine biodiversity and CO2 sequestration. Socially, we help to create meaningful full-time jobs in rural communities, whilst providing profitable investment opportunities for our partners.

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