



## Innovative fish and algae aqua-farming : Cook Islands

Offering inexpensive fish and livestock feed to island communities

### Project description

Since 2006, the tropical multi-species aqua-farm has contributed to food security by providing sustainable supplies of organic oysters, milkfish and tilapia. More recently, they also cultivate micro-algae as livestock feed for fish. The initiative furthermore creates a local source of income and employment.



### Business model

Fish are co-farmed with shellfish and micro-algae in inland ponds, drawing on the tropical climate, natural nutrient cycles and new harvesting technologies.

The initiative originally had three products: Pacific oysters, milkfish and tilapia. Now it also cultivates and harvests micro-algae to make livestock feed.

By providing locally-made, algae-based feed, the project is tapping into an under-served market of 8,000 seafood-loving residents in the Cook Islands and 90,000 visitors.



### Scaling up activities

- Run trials to separate algae from water in the most efficient way
- Test the harvested algae cakes as feedstock for local pigs, chickens, goats and a variety of fish
- Make organic fish and livestock pellets from the micro algae and terrestrial plants: moringa, maniota, portulaca
- Utilise the herbivorous fish as yet another organic livestock feed ingredient
- Expand the aquafarm to new sites, such as the neighbouring island Mauke where the impoverished community needs a livestock industry, and continue oyster farming
- Continue paid aquaculture consultation to Maori tribes.

### Immediate needs

- Financial assistance to add a small algae laboratory.
- Financial assistance to employ a micro-biologist to oversee the rapidly developing technology.
- Professional planning consultancy to assist with regional expansion and submissions to international aid sources.



# SEED Awards 2009

for entrepreneurship in sustainable development

## WINNER

### Partnership

- ❶ **Ecoculture Ltd** manages the aquafarm, headed by a marine biologist and businessman, and supported by TGA's Chairman.
- ❷ **Titikaveka Growers Association** (TGA) is an NGO that promotes the combination of biological agriculture and organic aqua-farming as a new basis for sustainable, regional fish and livestock farming.
- ❸ **The Ministry of Agriculture** is a strategic partner that informs national policy regarding food security and import substitution.



### Social, environmental and economic impacts

**Social impact:** Aqua-farming contributes to food security by offering inexpensive and toxin-free seafood, a traditional part of the local diet, while also providing a local source of employment. Additionally, producing inexpensive fish and livestock feed contributes to expanding the local and regional economy so countering its dependence on expensive food imports.

**Environmental impact:** Farming fish reduces pressure on natural fish stocks while farming micro-algae

extracts CO<sub>2</sub> from the atmosphere and converts it into a useful, carbon-based product. The project abides by all applicable international health, environmental and organic standards.

**Economic impact:** Each KAITE partner farmer increases its family's income by 150% while fulfilling international customers' demands for organic products and derivatives. This provides a sustainable income base for farmer families, in addition to a marked improvement in food security.

### Contact

Mr Tap Pryor and Mr Teava Iro  
Email: [pryor@tangaroaci.co.ck](mailto:pryor@tangaroaci.co.ck)

### SEED Partners

SEED is hosted by the United Nations Environment Programme (UNEP). Other current partners are the United Nations Development Programme (UNDP); IUCN (International Union for Conservation of Nature); and the governments of Germany, India, the Netherlands, Norway, South Africa, Spain, the United Kingdom and the United States of America.



### About the SEED Initiative

The SEED Initiative identifies and supports promising small scale social and environmental entrepreneurs around the globe, entrepreneurs that while working towards a greener economy also tackle poverty, marginalisation and social exclusion.

SEED provides these social entrepreneurs with know how and networks, taking the lessons learnt at local level up to decision-makers to promote evidence-based policy making.

More information: [www.seedinit.org](http://www.seedinit.org)

### SEED Secretariat

[info@seedinit.org](mailto:info@seedinit.org)