

Economists review Chile's seaweed
farming subsidy policy



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The high cost of starting up seaweed cultivation projects along the Chilean coastline is the main hurdle to the aquaculture industry restoring areas where this key marine resource has been heavily harvested. The productivity of farmed seaweed areas also varies greatly between aquaculture sites, which further threatens the financial viability of projects that are geared towards shoring up coastal livelihoods and supporting marine conservation.

However, a new aquaculture subsidy policy designed to overcome these barriers will help less than 13% of the targeted beneficiaries in the industry.

These are the findings of a multi-disciplinary research group led by environmental economists at the University of Concepción. Their aim was to test how well designed the policy is, who is most likely to benefit from the scheme, and how effective it might be in supporting the development of this industry. The researchers are based at the Research Nucleus on Environmental and Natural Resource Economics (NENRE), which is the Chilean office of Environment for Development, an initiative that supports policy-making with evidence-based analysis.

In recent years, the extensive kelp forests along Chile's long coastline have become



The growing popularity of seaweed products, such as for pharmaceuticals and cosmetics, means the resource has been heavily harvested in Chile.

an important source of income for many small fishing operations, where people harvest the marine resource, either for food or to use in cosmetics, nutritional supplements, or pharmaceuticals. This industry not only supports the harvesters, but also feeds into downstream industries and export-oriented products.

But harvesting pressure has denuded many areas of the sea floor, which has threatened both the health of the inshore marine environment and the livelihoods of small-scale seaweed harvesting businesses. To address this, a secondary industry has taken off in recent

years, where small operators have begun work to re-populate denuded seaweed beds. By re-seeding the sea floor, they are able to restore the marine ecosystem, and shore up the livelihoods of those involved in the seaweed cultivation industry. The industry has become technically proficient, and seaweed farming is now well established for some species, where seaweed beds are seeded using either fragments of plants or spores fixed to some soil mix.

Recently, the Chilean government initiated a programme to subsidise these operations as a way of boosting the industry and supporting marine conservation efforts. The policy was drawn up by the Undersecretary of Fisheries from the Ministry of Economics, passed in 2016, and implemented within a year.

In 2017, NENRE researchers began reviewing the aquaculture subsidy policy, focusing on how effective it would be for two of the 16 regions that are set to benefit from it. They looked specifically at the Biobío and Los Lagos regions along the central Chilean coastline, to see how far the policy would reach within the targeted group of potential beneficiaries, and how it might impact seaweed restoration.

In the research team's preliminary findings, released late in 2017, the researchers found that the policy is well designed, and offers good

technical support to people or organisations who apply for the subsidy. They also argue that the law provides good access to investment co-financing, and that the process of certification, which aims to measure the impact of algal restoration in the target areas, is trustworthy.

The research team first met with policy makers, so they could define the scope of their review process and gauge what information the government needed from it. They then conducted a series of interviews with stakeholders, before surveying in detail some 140 potential beneficiaries of the subsidy, in order to understand what factors influenced their decision making in terms of seaweed cultivation.

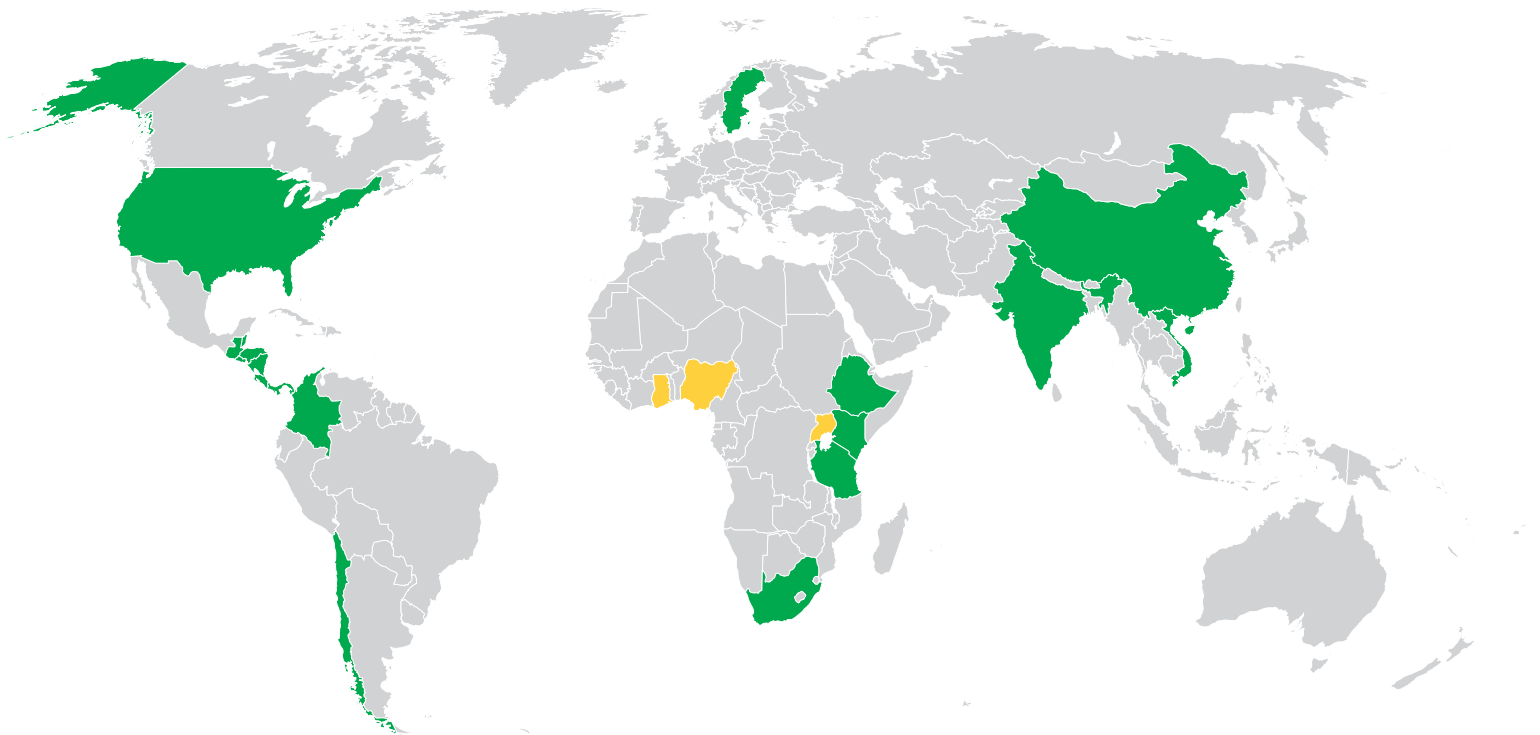
This project, overseen by the University of Concepcion by the Fund of Fishing and Aquaculture Research (FIPA, by its Spanish acronym), is part of a larger collaboration where NENRE is working with state services supporting the fishing industry, with the hope of improving the fishing sector in Chile. The team is still busy with its analysis, but their early findings were presented at a 2017 workshop organised by NENRE, which brought together academics, graduate students, and policy makers in the country.

Researchers involved

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EfD in Chile

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