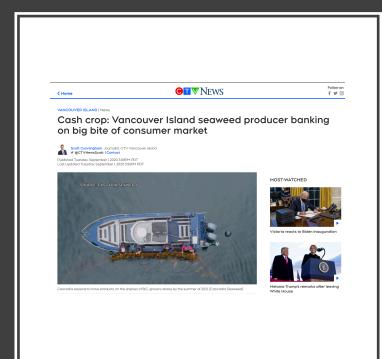


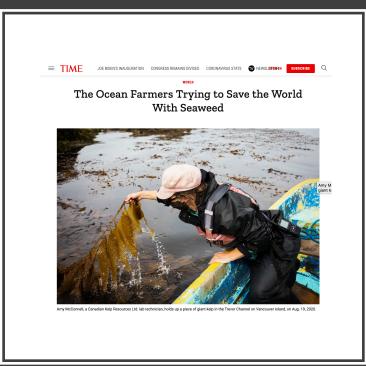


Seaweed sleuth offers a 'kelp-ing' hand for B.C.'s coastal communities

Twee

Cascadia Seaweed aims to become the largest producer of seaweed in the Pacific Northwest





## Kelp Farming in British Columbia

Environmental and Economic Impacts of a Rapidly Emerging Industry

## Context: The Global Seaweed Industry

- \$6.4 billion (USD) industry
  - FAO predicts \$22.1 billion (USD) by 2024
- Harvested in ~50 countries
  - 99% from Asia, some from Europe, and a little from NA & Africa
- Global production doubled 2005-2015
  - Wild harvesting remains static

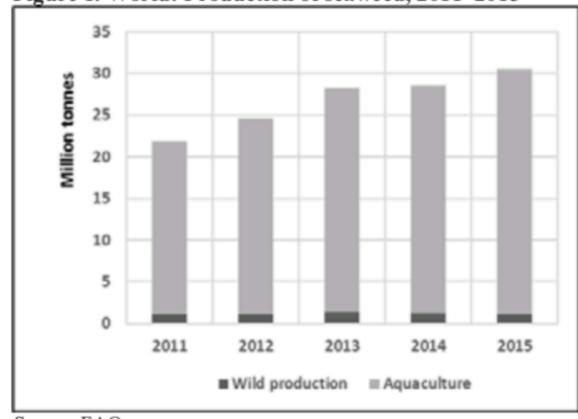


Figure 1. World: Production of seaweed, 2011–2015

Source: FAO.

http://www.fao.org/in-action/globefish/publications/details-publication/en/c/1154074/ https://www.bcbusiness.ca/BC-kelp-farming-is-untapped-resource

## Economic & Social Benefits in BC

- Uses for kelp:
  - Food
    - Fresh: seaweed salads, kelp noodles
    - Dried: soups, pastas
    - Dietary supplements: (iodine, calcium, iron)
  - Fertilizer
  - Animal Feed
  - Sodium alginate
    - Bioplastics → BioForm Solutions (From UBC!)
- Cascadia Seaweed
  - Employment for First Nations and remote communities



# Ecological Benefits of Kelp Farming

- Provides habitat for marine life
- Carbon sink + oxygen production
- Absorbs excess nutrients
  - Fish/Shellfish farms
  - Dr. Steven Cross
    - Associate professor & director of the Coastal Aquaculture Research & Training (CART) Network at the University of Victoria.
    - · Co-Founder of Cascadia
- Reduction of methane emission from cows



## Bonus Slide: How to Start a Kelp Farm

- Summary: You need \$10'000 and 1.5-2 years from permit application to first harvest.
- Contact: Nichole Prichard. Head of Aquaculture (West Coast) for the Ministry of Forests, Lands, Natural Resource Operations and Rural Development

#### Applications & Fees:

- 50\$ Culture Application fee (approval for the species you want to grow)
- 1260\$ Shellfish Land Tenure Application Fees (yes even though you will not be growing any shellfish)
  - This is processed by the DFO + Transport Canada.
    - DFO Provides environmental recommendations (should be fine for kelp).
    - Transport Canada actually provides the permit.
  - Alternatively: 800\$ Shellfish Land Tenure Amendment Application Fee if you partner with a fish farm and amend their tenure agreement.
- 600\$ + [unknown]\$/Acre for annual rent from BC Government
- Approval from Transport Canada, no fees tied to this application "yet". (There will be fees in the future)
- DFO: Nothing if you only grow plants.

#### Timeline:

- Application process takes >1 year.
- Faster if you get First Nation approval before hand
  - The Province will run it by all relevant First Nations communities. If consulted, the First Nations can ask for accommodation or to be part of the deal.

#### Other interesting info:

• If you just want to experiment, you can deploy lines within the area of a pre-existing fish farm. No applications are needed here, as long as you do not sell the kelp, and it cannot be used for human consumption.

## Other Sources

#### News Articles

- <a href="https://seawestnews.com/seaweed-sleuth-offers-a-kelp-ing-hand-for-b-c-s-coastal-communities/">https://seawestnews.com/seaweed-sleuth-offers-a-kelp-ing-hand-for-b-c-s-coastal-communities/</a>
- <a href="https://vancouverisland.ctvnews.ca/cash-crop-vancouver-island-seaweed-producer-banking-on-big-bite-of-consumer-market-1.5088353">https://vancouverisland.ctvnews.ca/cash-crop-vancouver-island-seaweed-producer-banking-on-big-bite-of-consumer-market-1.5088353</a>
- https://time.com/5848994/seaweed-climate-change-solution/
- <a href="https://www.cbc.ca/news/technology/what-on-earth-regenerative-ocean-farming-1.5608258">https://www.cbc.ca/news/technology/what-on-earth-regenerative-ocean-farming-1.5608258</a>
- https://www.bcbusiness.ca/BC-kelp-farming-is-untapped-resource
- https://seawestnews.com/burping-cows-breathe-new-life-into-aquaculture-for-bc/