

# KELP FARMING AS A CLIMATE SOLUTION

Kelp farming has promising potential as an ecologically and economically viable strategy to remediate and mitigate the effects of climate change.

## Why care about climate change?

Climate change has many contributing factors such as:

- Greenhouse gas emissions from industrial and personal pursuits
- Deforestation (for agriculture, urban development, etc.)
- Highly consumptive lifestyles

And many negative social, environmental, and economic effects:

- Ocean acidification
- Decreased biodiversity
- Rapidly changing atmospheric temperatures



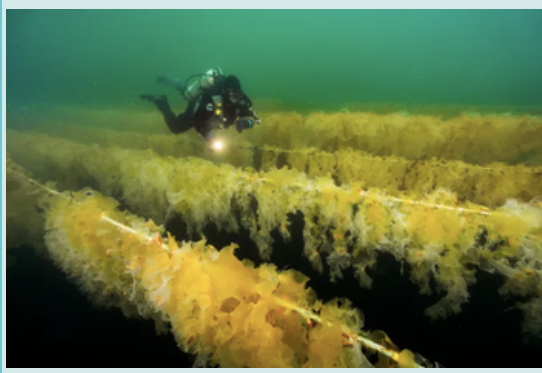
## How can kelp help?

Global temperatures rising is partly due to excess carbon in the atmosphere:

- kelp absorbs carbon dioxide and releases oxygen
- act as a carbon sink, is predicted to annually decrease the amount of carbon

temperatures rising leads to ocean acidification:

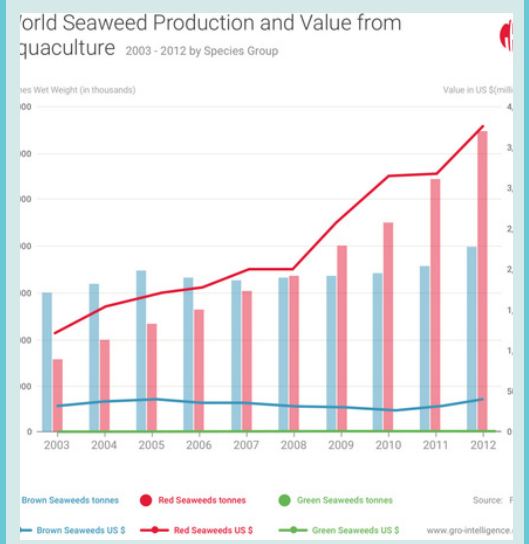
- kelp leads to mitigating ocean acidification



the image to the left is a kelp farm located in Alaska which is stated to be change fortunes.

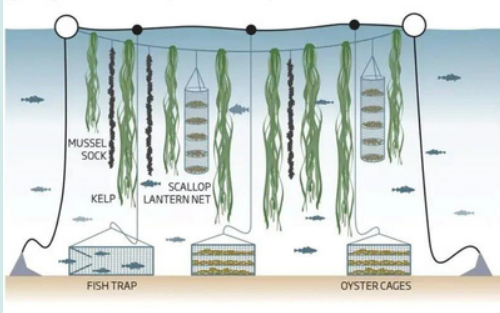
## The Economic and Social Benefits

- A sustainable fertilizer for grasses and gardens, leads to less nutrient pollution
- A sustainable cattle feed alternative, which has been shown to reduce methane content from cattle emissions (add reference)
- Creates jobs in the community and reduces the emissions produced by the travel
- Improve the overall water quality and level of biodiversity in an area. For example, by reducing ocean acidification, which helps calcifiers



## Vertical thinking

By utilising the entire water column, 3D ocean farms can produce a lot in a small area



above is a diagram of the vertical system allowing other traps and nets to be incorporated in the farm.

The graph above shows kelp and seaweed production and value increasing, as product grows the value increases.

This compares types of kelps and seaweeds to identify the most valuable.

## The Gritty Details

Kelp farming employs a vertical, 3D growth system which allows for large amounts of kelp to be grown at once. Kelp farming also opens the doors as a resource for health opportunities. It can also open more jobs and employment opportunities for the local areas.

