





To Conserve the Lands and Waters on which All Life Depends

Connect People and

Nature

1. Protect Land and Water

2. Tackle Climate Change

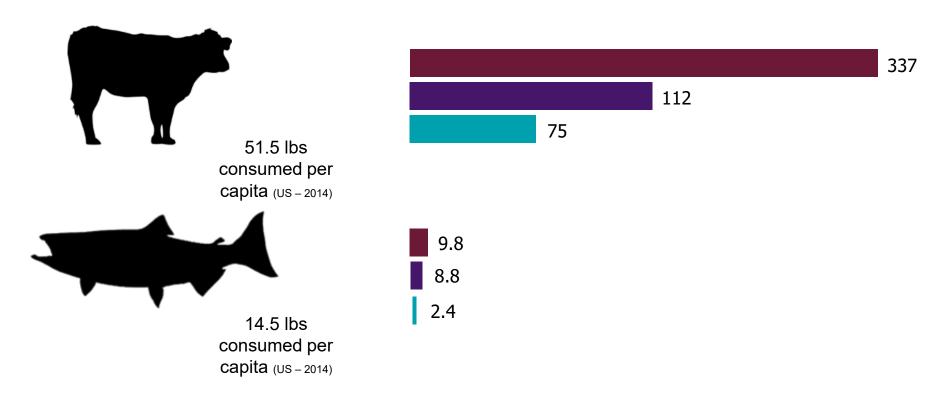
3. Provide Food and Water Sustainably

4. Build Healthy Cities





Environmental Performance of Beef vs. Salmon Aquaculture



Sources: WRI (2014) (mollusks, chicken, pork, and beef) and Pahlow et al. (2015)

GHG Emissions (t CO2e/t edible protein)

Land Use (ha/t edible protein)

Fresh Water Use (m³/t edible protein)





TNC's Vision for Sustainable Aquaculture

Aquaculture grows to:

- sustainably increase seafood production to meet nutritional/food security needs;
- provide livelihoods in coastal communities
- contribute to restoration and conservation efforts.





Two Key Initiatives of our Global Program

Restorative Aquaculture

Harnessing the potential of commercial marine aquaculture to accelerate coastal ecosystem restoration

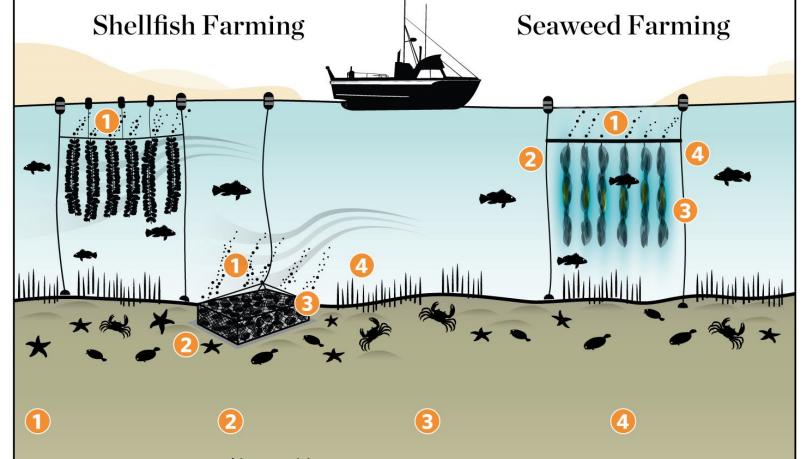
Smart Aquaculture Growth

Improving governance and driving sustainable investment of the world's fastest growing food production sector



Hypothesis

Aquaculture can help restore ecosystems



Mitigate Pollution

Shellfish and seaweed aquaculture can improve water quality by extracting nitrogen and phosphorous from coastal waterways. As filter feeders, bi-valve shellfish can improve water clarity. These factors can lessen the symptoms of eutrophication.

Habitat Provision

85 percent of native oyster populations have been lost worldwide and many seaweed communities are similarly in decline. Shellfish and seaweed aquaculture can provide some of the benefits of these lost habitats.

Support Fish Populations

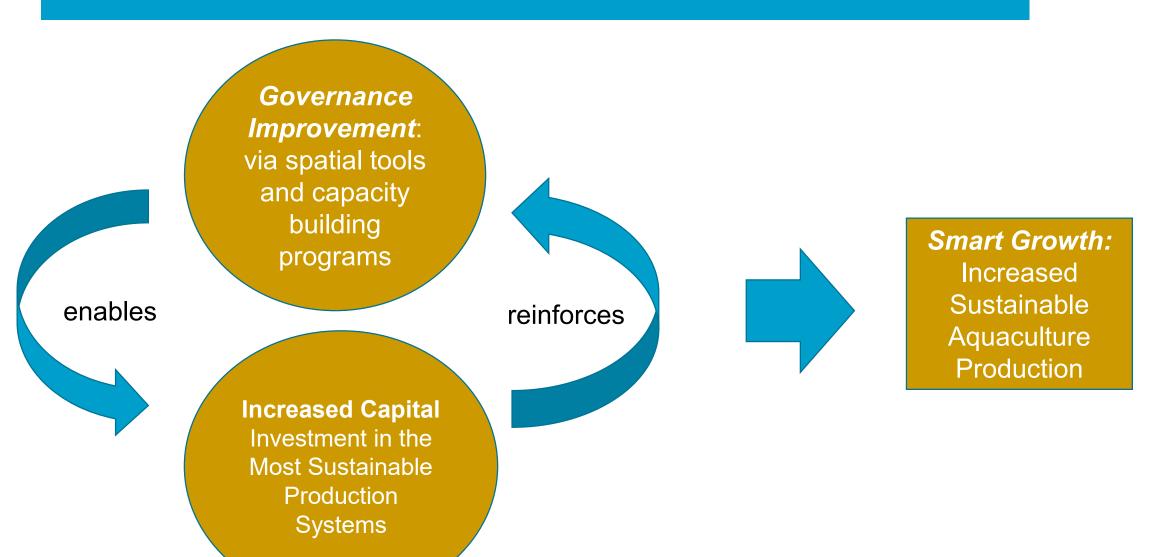
Shellfish and seaweed aquaculture gear provides refuge for macro-fauna including fish, crustaceans, and other invertebrates.

Reduce Local Climate Change Impacts

Aquaculture can reduce carbon dioxide and oxygenate waterways, and may locally mitigate the effects of ocean acidification. Through increased water clarity, shellfish aquaculture may promote the growth of eelgrass beds, a carbon sink.

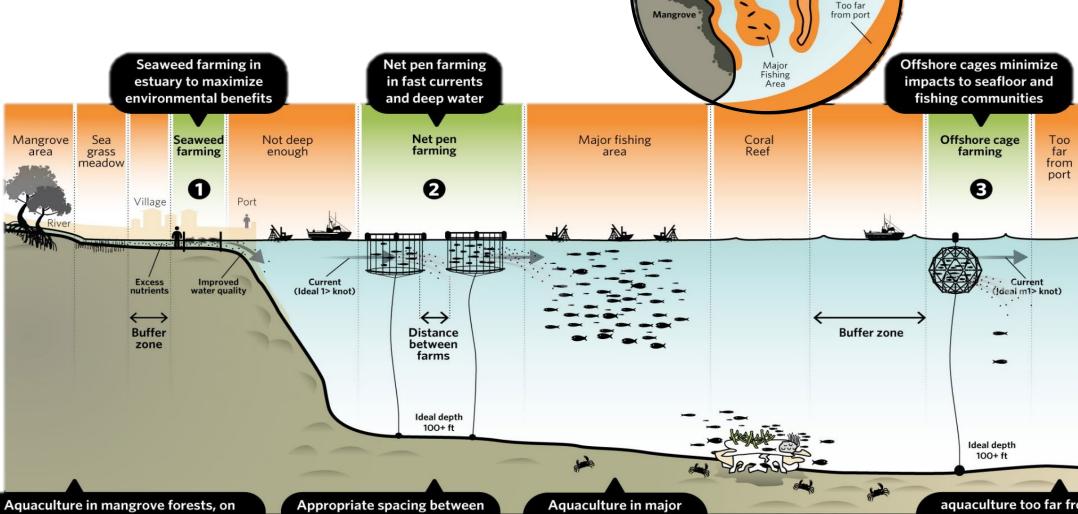


Smart Growth Theory of Change (generalized)





Smart Growth Siting Principles



Aquaculture in mangrove forests, on seagrass meadows, or near coral reefs could have a negative environmental impact

farms to not exceed environmental carrying capacity Aquaculture in major fishing area would have a negative social impact

Coral

8

aquaculture too far from ports and other infrastructure would not be profitable



www.nature.org/aquaculture





Industry Agenda Food Security and Agriculture Oceans Population

Aquaculture could feed the world and protect the planet - if we get it right



With arable land in limited supply, is aquaculture - the practice of growing food in water - a viable solution?

10 Oct 201

Robert Jones
Global Aquaculture Strategy Lead, The Nature

What if we had the chance to reinvent the world's food system and m more sustainable food the norm rather than the exception?

It might seem like a crazy idea, but with 9 billion people expected on by 2050, it's a necessity.