### **Climate-Smart Blue Foods**

Food systems contribute to both climate change and climate solutions. Species that are wild-caught or farmed from oceans, rivers, and lakes – known as blue foods – are essential to global food systems. When done right, blue foods can be a promising part of sustainable, equitable climate solutions, yet they are often overlooked in climate discussions and underfunded in mitigation and adaptation financing.



Did you know?

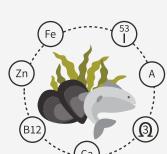
There are more than 2,500 different species or species groups of blue foods.



Over 3 billion people are estimated to get at least 20% of their animal protein from blue foods.

# **Global Food Systems**

# Nutrition and public health



Blue foods are rich in essential nutrients like vitamin A, vitamin B-12, calcium, iodine, iron, zinc, and omega-3 fatty acids.

## **Environmental performance**

Blue Foods are a Cornerstone of



7.6 tons seaweed 1 ton chicken or 6 tons bivalves

Blue foods like bivalves and seaweed can have lower greenhouse gas emissions as compared to chicken.

#### Culture

Blue foods can be central to the identity, culture, storytelling, and art of communities around the world, especially coastal Indigenous Peoples.



### Livelihoods

Blue food production supports more than 600 million livelihoods. Nearly half of the blue food workforce are women.

90% of jobs in fisheries are held by small-scale actors.

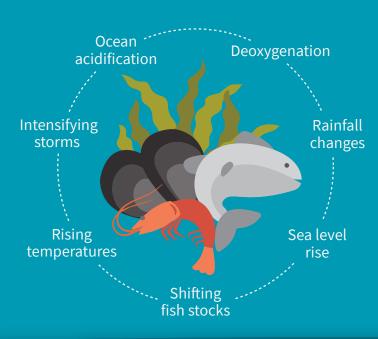


# Threats and Challenges

Blue food production can degrade the environment and worsen social inequities. Blue foods also face climate and societal challenges that undermine their benefits.

#### Climate change

More than 90% of global blue food production faces substantial risks from environmental change. The productivity, quality, and safety of blue foods is threatened by:



#### **Overfishing**

1/3 of marine fish stocks are overfished.

#### unregulated fishing Illegal, unreported, and unregulated

Illegal, unreported,

fishing removes millions of tons of fish from the ocean each year. **Pollution** 

Pollution can cause low oxygen conditions and threaten food safety. **Habitat degradation** 

#### Over 20% of mangroves are estimated

to have been lost globally over the past 40 years.

#### **Inequities**

Women often face gender-based constraints that prevent them from fully participating in blue food decision-making.

Improving environmental performance and social equity in blue food systems can strengthen their resilience to climate change impacts and their contributions to climate solutions - for both mitigation and adaptation.

# **Climate Mitigation Opportunities**



nutrition security through low-carbon, nutrient-rich blue foods.

Increasing food and



food supply chains.

emissions along blue

Reducing carbon



ecosystems.

Enhancing carbon

storage in blue food

# Real Good Fish | United States

**Bay2Tray** 

Bay2Tray repurposes local seafood once discarded as bycatch to promote nutrient-rich school meals for nearby Cálifornia schools. The program also connects local fishers and students, empowering future environmental stewards.





WorldFish | Egypt







GIFT, selectively bred by WorldFish scientists and produced in at least 14 countries, can outperform other farmed strains in growth by up to 80%. It can have 20% reduced

GHG emissions due to improved feed conversion efficiency.









Community groups, which center gender equality and social inclusion, build coastal resilience with mangrove

forests. This empowers rural coastal communities to sustainably manage coastal resources, bolster livelihoods, and address adaptation and mitigation to climate change.



**Climate Adaptation Opportunities** 













#### **Ecosystem-based adaptation in the Coral Triangle** Environmental Defense Fund | The Philippines



community capacity

respond to climate

Enhancing

to predict and

Reducing exposure

to climate hazards.



hazards.



Assessment.

Supporting equitable, alternative livelihood

#ClimateSmart #BlueFoods | X@oceansolutions

opportunities.

seaweed and shellfish farm that supports local livelihoods and increases understanding of seaweed's role in GHG mitigation, ocean deacidification, and biodiversity.

and coral reef ecosystems to enhance storm surge protection. It will integrate with a community-based

Un Sistema de Alerta, Predicción y Observación (SAPO)

This project aims to restore nipa palm, mangrove, seagrass,



with buyers accordingly.















CARE Philippines | The Philippines

affected by strong waves, promoting socio-economic equity and climate and economic justice.











**Learn more** 

To work towards sustainable, equitable, climate-smart food systems, decision-makers can integrate blue foods into Nationally Determined Contributions and National Adaptation Plans, and increase climate financing for fisheries and aquaculture.