

# Aquaculture and Nature-based Solutions

A way to make aquaculture work for conservation, climate change, blue food production, and ...

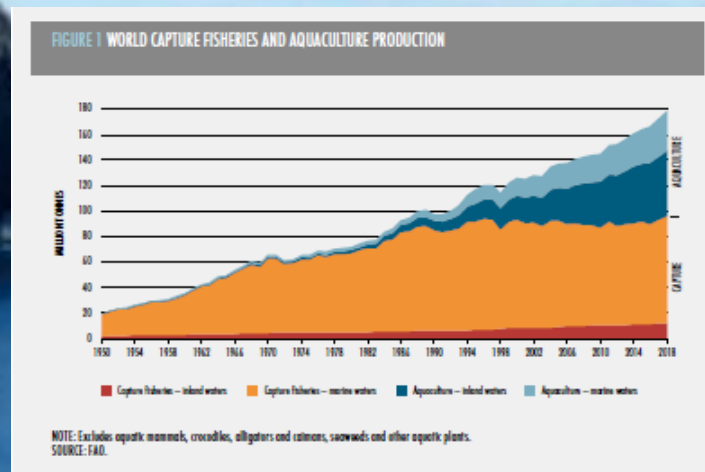


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**STERMOR**  
OCEAN & COASTAL SUSTAINABILITY

## Aquaculture and conservation, a common challenge ?

- ✓ Convention on Biological Diversity's Aichi target 11 on Marine Biodiversity Protection and target 6 on Sustainable Fisheries by 2020,
- ✓ Sustainable Development Goal (SDG) 2 on Food Security and SDG 14 on Oceans, by 2030
- ✓ Aquaculture may meet all SDGs... (cf Hambrey 2017, Brugère et al. 2018, FAO 2020)
- ✓ New COP15 (Montreal..)



➤ Need to Reconcile Nature Conservation and Sustainable Development, including an aquaculture component ...

# IUCN Nature-based Solutions and the Global Standard for NbS (2020)

*“Nature-based Solutions are actions to protect, sustainably manage and restore natural and modified ecosystems in ways that address societal challenges effectively and adaptively, to provide both human well-being and biodiversity benefits”*  
(IUCN, 2016, 2020)



*NbS Global Standard*  
*8 criteria*





# Aquaculture and Nature-based Solutions

## ✓ Criterion 1: How aquaculture production does address societal challenges ?



Climate change  
mitigation and  
adaptation



Disaster risk  
reduction



Economic  
and social  
development



Human health



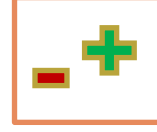
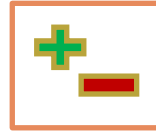
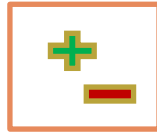
Food security



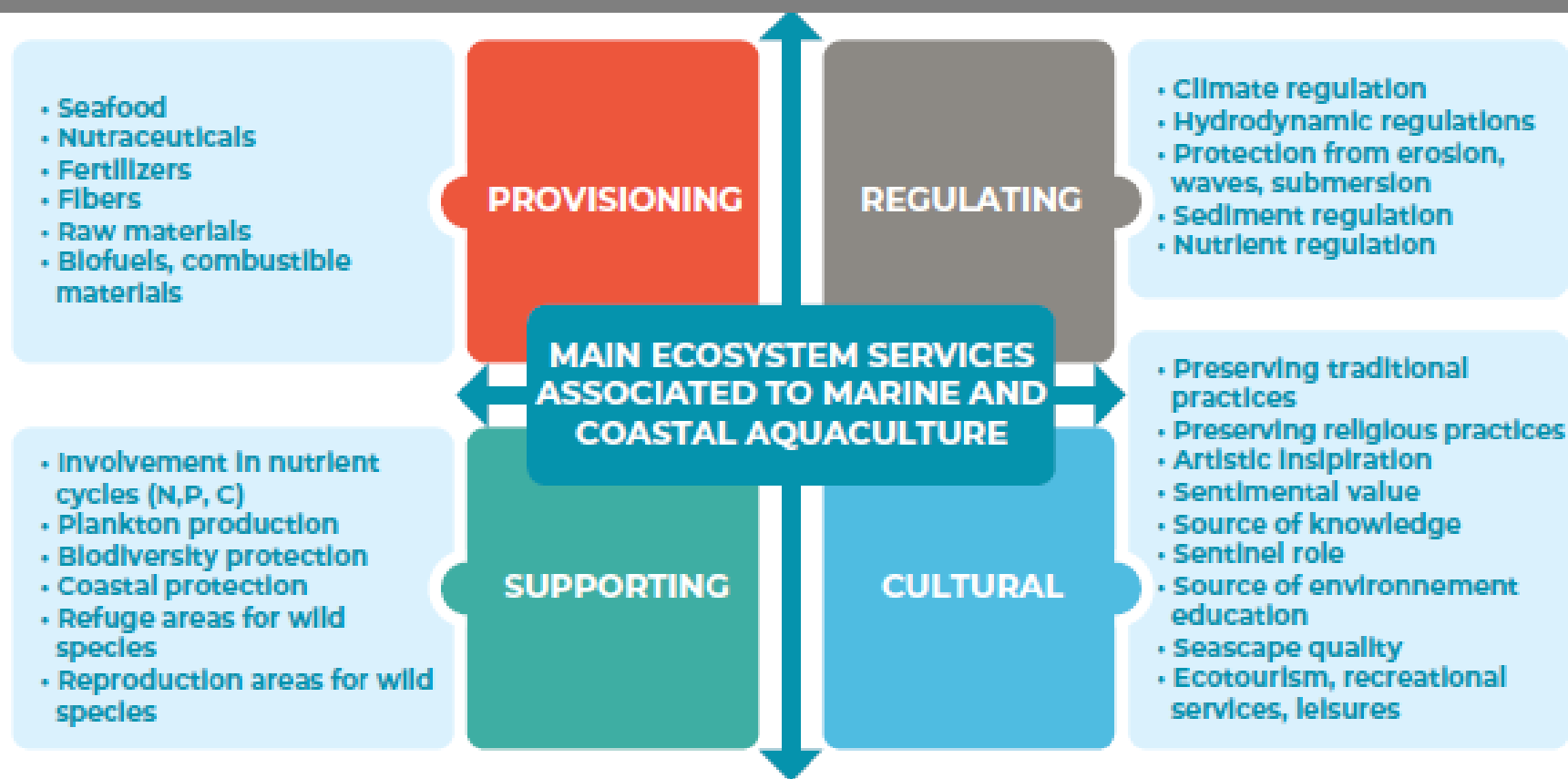
Water security



Environmental  
degradation and  
biodiversity loss



# An opportunity to further explore ecosystem services associated to aquaculture systems, switching from « disservices » to positive impacts ?



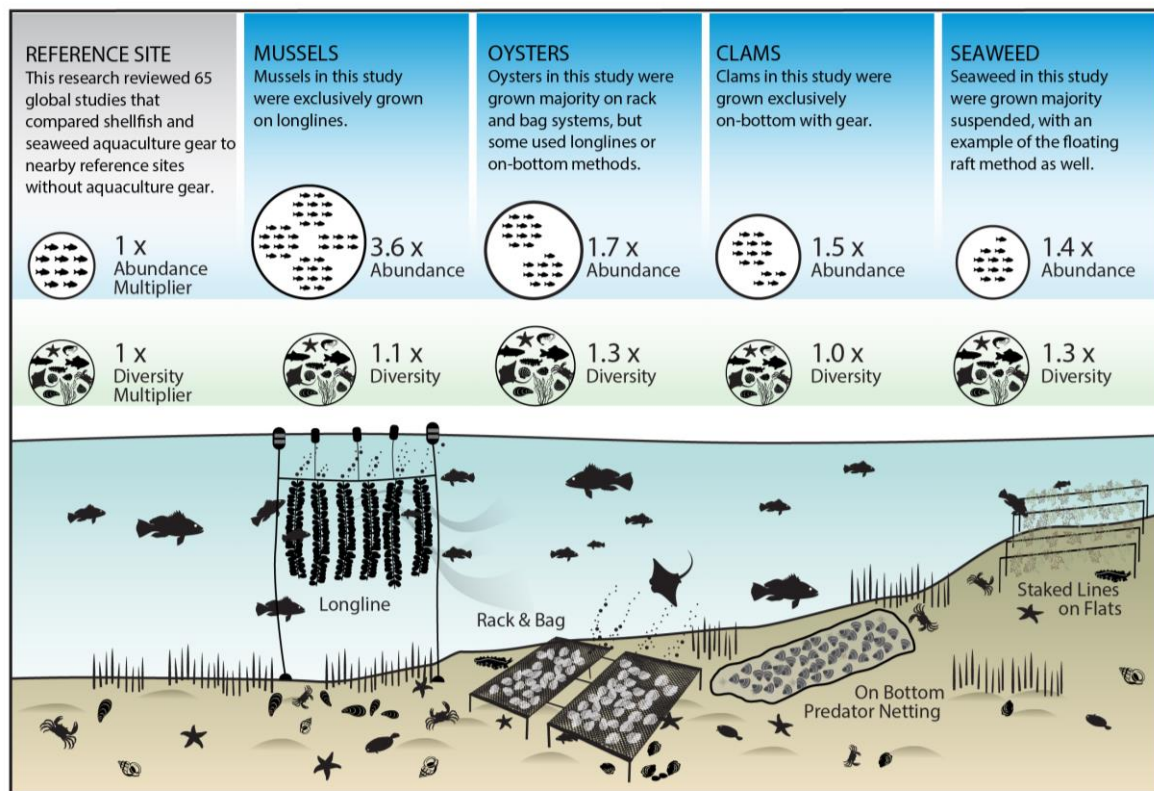
# Aquaculture and Nature-based Solutions

## ✓ Criterion 3: The challenge of a biodiversity net gain with aquaculture

### How Much Habitat Benefit do Shellfish and Seaweed Farms Provide?



Credit: Notre Grand Bleu



Theuerkauf, *et al.* (2021) Habitat value of bivalve shellfish and seaweed aquaculture for fish and invertebrates: Pathways, synthesis and next steps. *Reviews in Aquaculture*. doi: 10.1111/raq.12584





An integrated multitrophic aquaculture (IMTA) system involves the culture of two or more species, of animals and sea plants, on one site with some symbiotic benefit for each product. Photos by (left to right): Seyma Tarkan; Tom McDermott; Marine Institute of Ireland; Scottish Association for Marine Science.

Source: Bonnie Waycott, 2021, <https://www.globalseafood.org/>) – EU Project IMPAQT





IUCN Aquaculture  
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EU Blue Foods,  
November 17, 2022



EP Intergroup Climate Change,  
Biodiversity & Sustainable Development

# Valliculture in Italy



Source: Valli di Comacchio, Italie. (fichier Wikimedia Commons : "Valli\_di\_Comacchio1") - licence CC-BY-SA 4.0 (<https://creativecommons.org/licenses/by-sa/4.0//deed.fr>) - Marsan Dino, 2016



**New Blue Foods in aquaculture:  
Pioneering new types  
of Aquaculture projects/productions, specifically  
designed as NbS?**

**And**

**Also contributing to improve the sustainability of  
existing aquaculture productions?**



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# Merci pour votre attention Thank you for your attention

[www.iucn.org](http://www.iucn.org)

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