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United Nations Decade on Ecosystem Restoration 2021-2030

...for Production Ecosystems?

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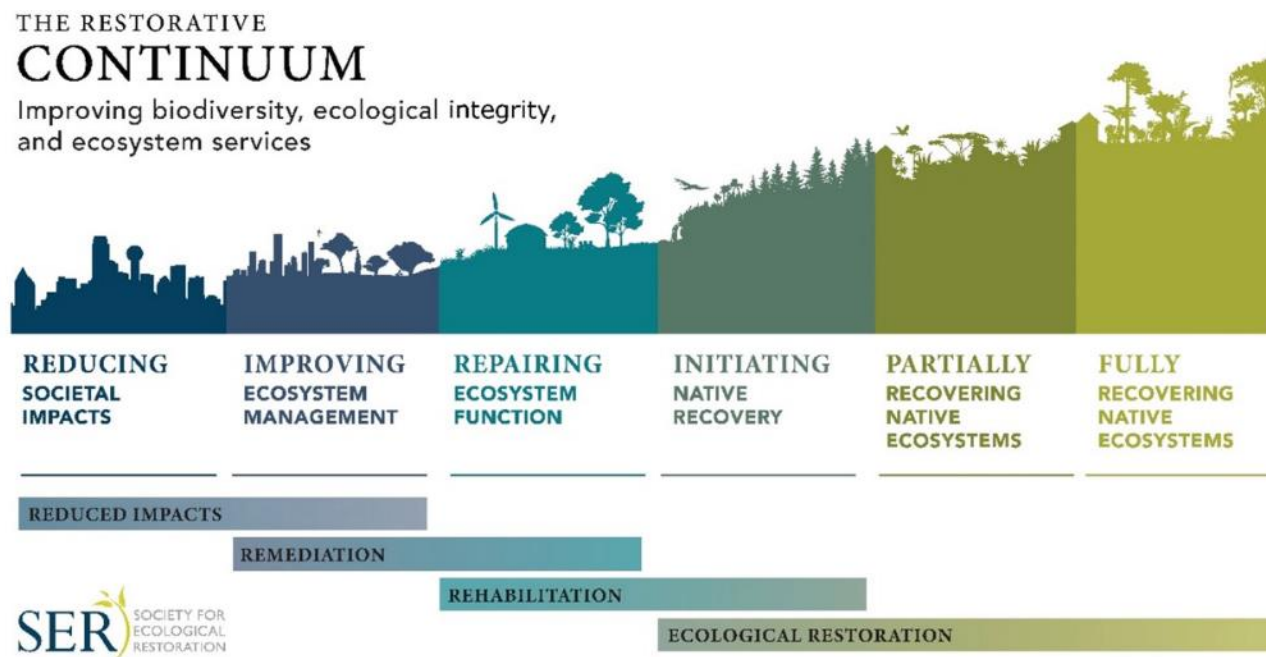
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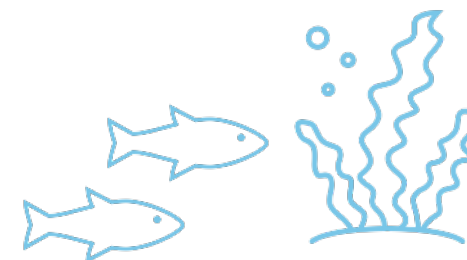
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“Ecological restoration has traditionally been defined as an act of returning a system to an original state” (BenDor et al 2015. PLoS One)



What does this mean for Production Systems which we need to end hunger and poverty?

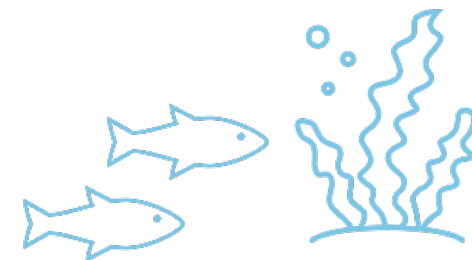




UN Decade – Strategy

Ecological restoration - the process of assisting the recovery.../... Ecological restoration aims to move a degraded ecosystem to a trajectory of recovery.

Crucially, restoring ecosystems increases the supply and quality of ecosystem services over time towards desired outcomes supporting national sustainable development priorities.





[FAO position paper to COFI, COFO, COAG, 2020/21]

“The restoration of forest landscapes, farming, livestock and fish-producing ecosystems should primarily contribute to restoring these ecosystems to a healthy and stable state, so that they are able to support human needs for sustainable food production and livelihoods”



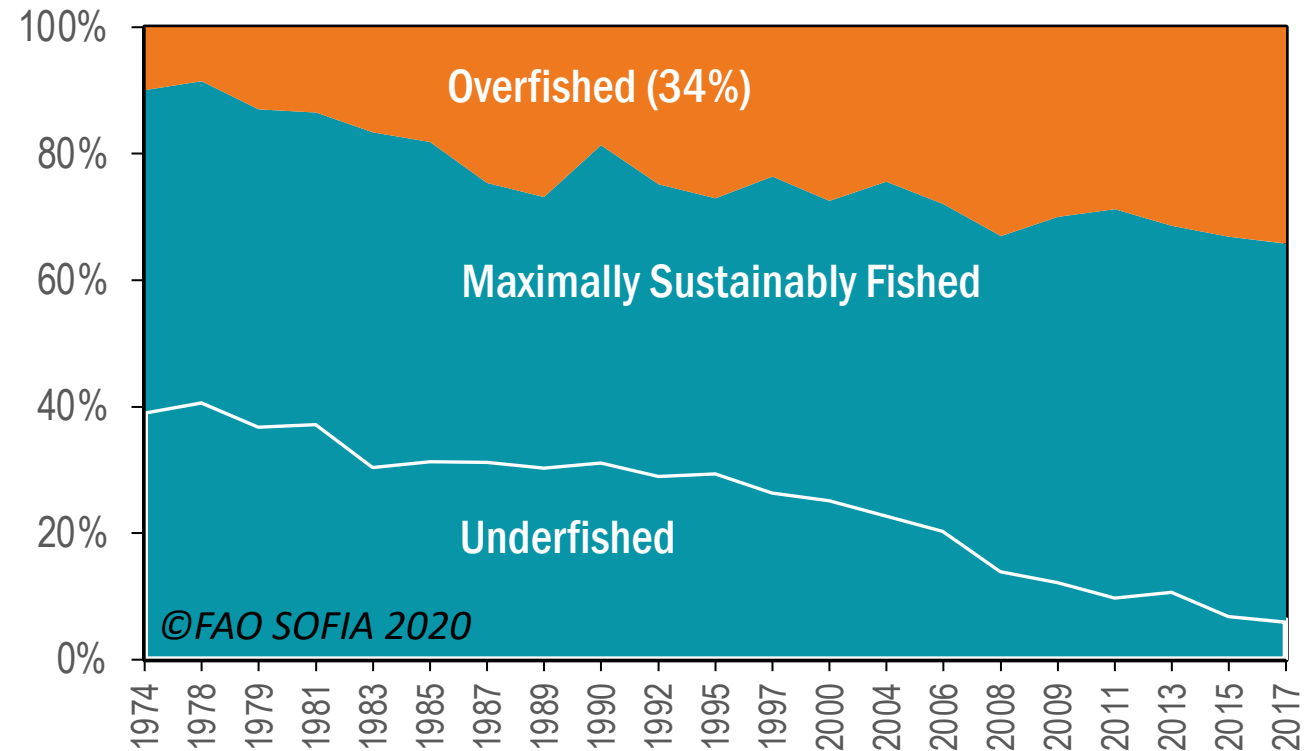


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Ecosystem Restoration in Marine Systems (examples)

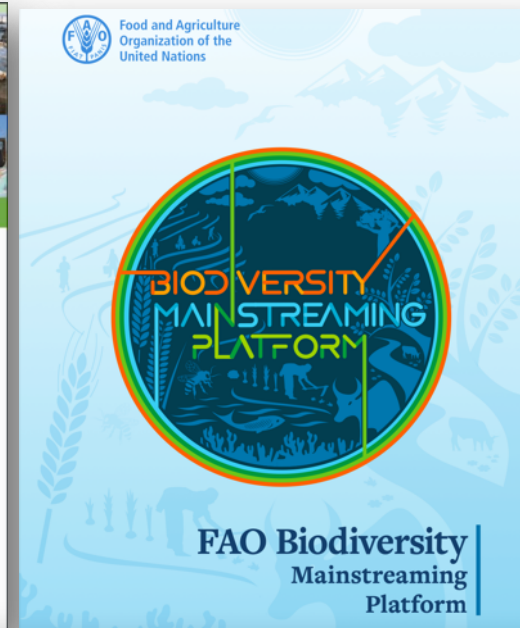
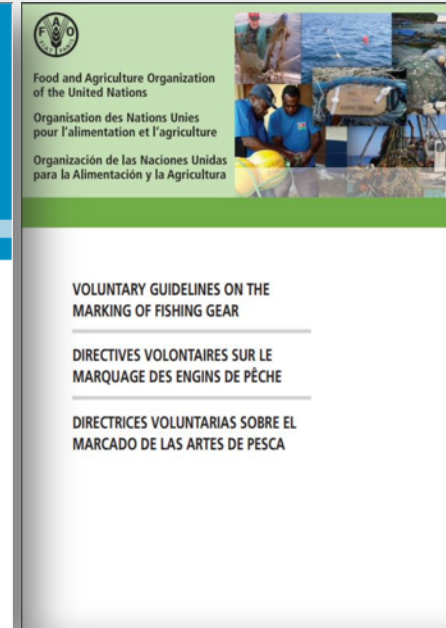
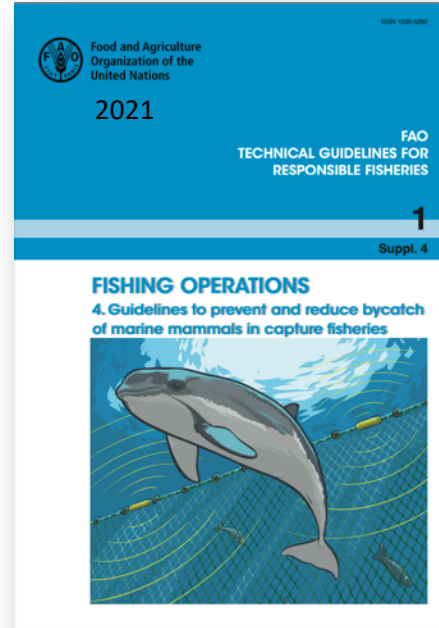
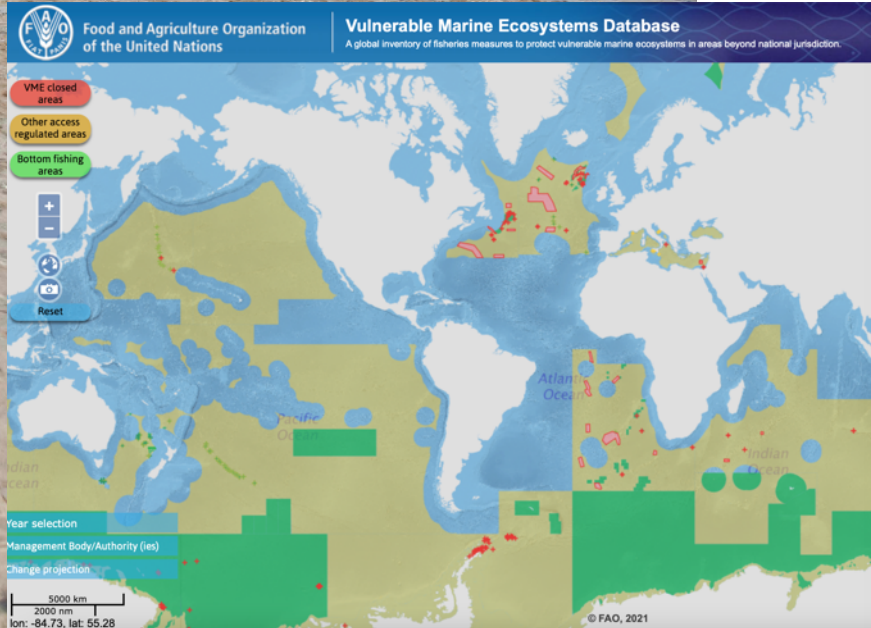


- ❖ **Rebuilding fish stocks** “to maintain or restore populations of harvested species at levels which can produce the maximum sustainable yield” (UNCLOS, Article 61.3)
- ❖ **100% of seascapes to be sustainably managed** on the basis of the Ecosystem Approach



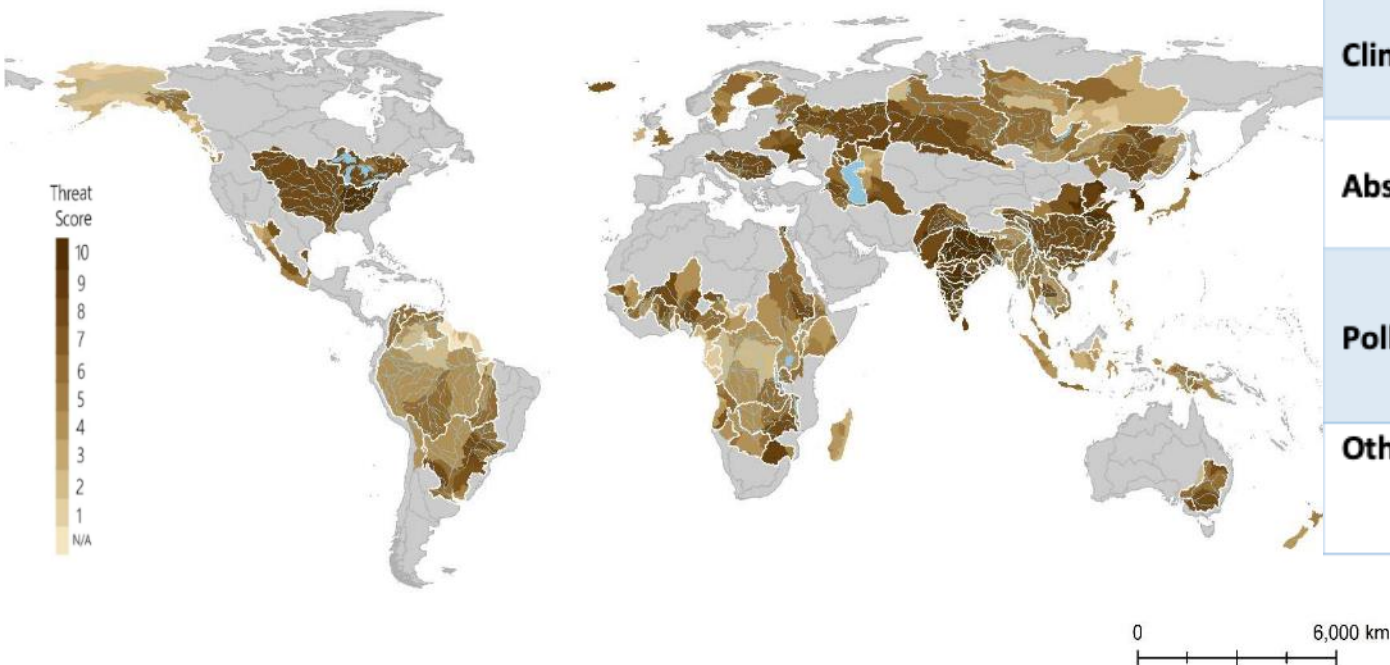
Ecosystem Restoration in Marine Systems (examples)

- ❖ Reduce adverse impacts on the environment, such as impacts on **Vulnerable Marine Ecosystems (VMEs)**, **incidental catch** or **impacts of abandoned, lost or otherwise discarded gears**.
- ❖ Consider protecting **essential habitats** (e.g. seagrasses, coral reefs), and use **Area-Based Management measures**





Threat score in inland water basins



©FAO. 2021. Report of the Second Advisory Roundtable on the Assessment of Inland Fisheries.

Ecosystem Restoration in Freshwater Systems

Major threat		Sub-threat
Loss of connectivity	⚡	Channelization Dredging Dams Barrages, weirs, other barriers
Land Use	⚡	Deforestation, land degradation, sedimentation Mining Nitrogen runoff Phosphorous runoff
Climate change		Temperature increase/decrease/variability Precipitation increase/decrease/variability Predicted extreme weather events
Abstraction	⚡	Water abstraction for irrigation, agriculture Water abstraction for industry Water abstraction for urban, human consumption
Pollution	⚡	Sewage, organic runoff Pesticides, other chemical runoff Microplastics, pharmaceuticals, other pollution Aquaculture effluents
Other		Overfishing Disease Invasive species

⚡ = not fisheries-related threats



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ECOSYSTEM RESTORATION - A PRACTICAL AND INTEGRATIVE APPROACH

- When considering restoring options :
 - **what has driven** the damage,
 - **what is the objective** of the restoration process,
 - **What is the scale** of the restorative actions.
- **Integrated restorative solutions** are best to fully optimize outcomes
- Restoration also implies the **development of alternative livelihoods** and large-scale financial incentives, so that restoration is truly transformative.
- **Take Home message:** The UN Decade on Ecosystem Restoration provides a unique opportunity for FAO and partners to transform food, fibre and feed production systems to the needs of the 21st century