Blue Transformation for a Sustainable Blue Economy

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United Nations Decade on Ecosystem Restoration 2021-2030

...for Production Ecosystems?

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What is Restoration?

“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.
“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”
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.
## Ecosystem Restoration in Freshwater Systems

### Threat score in inland water basins

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

- = not fisheries-related threats

• 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