# Chapter 12 - In conclusion: how to manage fisheries?\*

# QUESTIONS ASKED

- What is the real state of fisheries around the world?
- What experiences have we on the assessment and management of different fish populations?
- When should we invest, or refrain from investing or intervening, in the fishing industry?

## **BACKGROUND INFORMATION**

- Daniel Pauly <u>CIESM Panel on Fishery Governance</u>
- Ray Hilborn <u>Plenary</u>, <u>Seafood Summit 2011</u>
- CLAW 14'- Group 3: <u>Balanced Harvesting</u>
- EUsem1 <u>Sustainable Fishing Methods</u>
- Costello et al. 2013 <u>Status of the world's unassessed fisheries</u>





#### COVERAGE

- Conflicting views about the state and management of marine fisheries
- Simple rules of the thumb for fishery and ecosystem management
- Challenges for the student

## INFORMATION AND SOFTWARE

The Chapter 12 of FIΣH IT reveals that despite the large body of knowledge in fishery science, we are still far from agreeing on the best methods to manage or govern our fisheries. This is probably a challenge for the students who would expect more objective advice from science. With basis on their long professional experience, rather than complicated mathematics, Caddy & Gulland made in 1983 a very good, and still relevant, summary of the limitations of fishery science. They suggested possible strategies to handle and invest in different types of fisheries around the world. Students are otherwise challenged to address the policy of balanced harvesting (e.g. Garcia et al 2015), by discussing it, or by making simulations based on either some of the software distributed in this package or developed by their instructors (practicals in Tromsø). It should be

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<sup>\*</sup> Santos, J. 2015. FIXH IT 1.0 – Student Manual: A Training System for Aquatic Resource Managers. Septentrio Educational 2015(3). DOI: <a href="http://dx.doi.org/10.7557/se.2015.3">http://dx.doi.org/10.7557/se.2015.3</a>. This work is licensed under a <a href="https://creative.commons.org/">Creative.commons.org/</a> Attribution 4.0 International License.

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recognized that changes in the way we exploit aquatic populations might require adaptation in the whole governance process and management procedures.

- Balanced harvest single-species
- Balanced harvest food web

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