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Round Up Session

- ownership, access and allocation disputes
- disputes about the science and the advice
- poor compliance with regulations
- stock collapses and seemingly unsuccessful recovery programmes
- illegal and seemingly wasteful practices such as black fishing, high grading, discarding
- the undoubted pain of fishing communities originally caught by the loss of distant water resources,
 - and now caught in the grip of crisis regulation,
- the frustration of fishers previously excluded from the process because of a core historical notion of protecting the science and the advice from vested interest.

Fisheries management is difficult to do.

- All fishers have rights, until those rights are taken away
- Head on conflict between the inherent expansion of fisheries, & the finite limits of stocks, necessitating REGULATION
- The science questions are simple
 - how many fish are there, how many should there be,
 - how much to take & how much to leavebut the answers come from interacting components of systems that are complex and variable
- The seas are vast and opaque so we have to estimate the numbers indirectly, or by back calculation from fisheries data, or from life history principles.
- Fisheries are now interacting with other users of the ocean and coastal waters during the development of our embryonic spatial planning regimes.

Above and beyond the European horizon: our global obligations

Beddington: statement of the global problem

Hillborn: fitness for the task

Where do we make our contribution ? Optimising our use of the European seas: are we adapting quickly enough ?

Damanaki: revising the CFP: MSY, discards, ecosystems, etc

Ben Yami: failings in the traditional approach

O'Brien: assessment & advice: current developments

MacMullan: Seafish science: data technology

Kelly: assessment & advice: innovative solutions

The changing world:

Scott: spatial issues and management

Simms: key shifts in fish behaviour, distribution, abundance

Frid: ecosystem based management

Mackinson: participation with stakeholders, at last !

Will anything really change ?

What genuine deficiencies/challenges/improvements have been identified?

Where do they occur (e.g. concepts, knowledge, data, science and advice, governance, behaviour, education, accreditation)?

How influential are they?

What remedies been proposed, identified and tested?

What benefits are likely to be achieved?

Do we need more, or less?

What is the practical scope for change? Joining up?

What is the actual route for implementation?

To the practitioner, we have seen 140+ years of study, analysis & institutional development, involving the following elements

The Ecosystem

Water masses, and benthic habitats;
Production cycles & food chains; Fish life cycles in time & space; Single and multispecies dynamics; Environmental variation and trend; Climate change; Non-fishery functions of the ocean.

Harvesting

Socio-economic instincts, imperatives, and behaviours of fleets and communities;
The competitive anarchy of harvesting resources that are common property and FINITE

Fisheries science and advice

Successive generations of concepts, equations & models;
Sampling strategies, fisheries data collection & stock surveys;
Stock assessments, reference point benchmarks, analysis of
harvest options; Ecosystem effects of fishing; Forecasting and
advice.

Governance

Conventions, commissions & their policies; Management
strategies, targets, harvest rules; Allocation & management
tools (licensing, TACs, quotas, technical measures, closed
seasons/areas); Advisory processes; Decision structures and
processes; Representation, regulation and enforcement;

Recent issues

*Compliance ; Degradation of data and knowledge;
Marine spatial planning issues;
Accreditation/certification/responsible fishing schemes.*

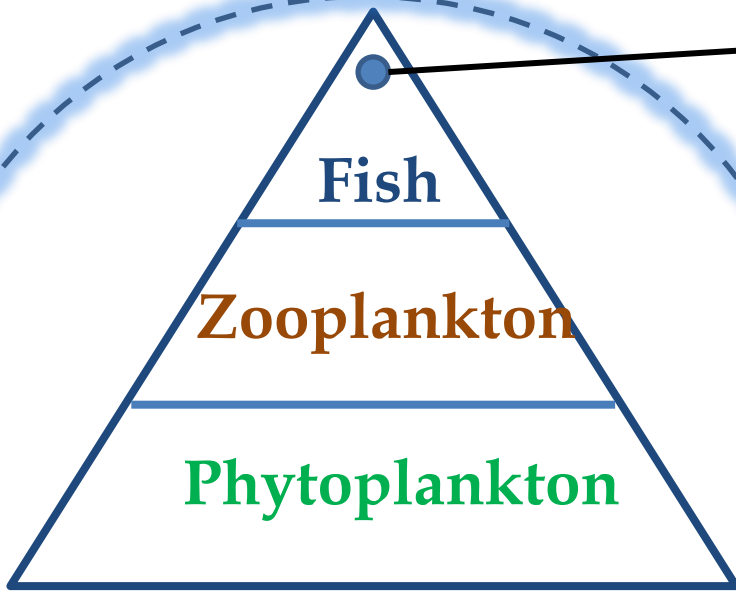
In general

DON'T FISH TOO HARD

**ESPECIALLY ON
IMMATURE FISH**

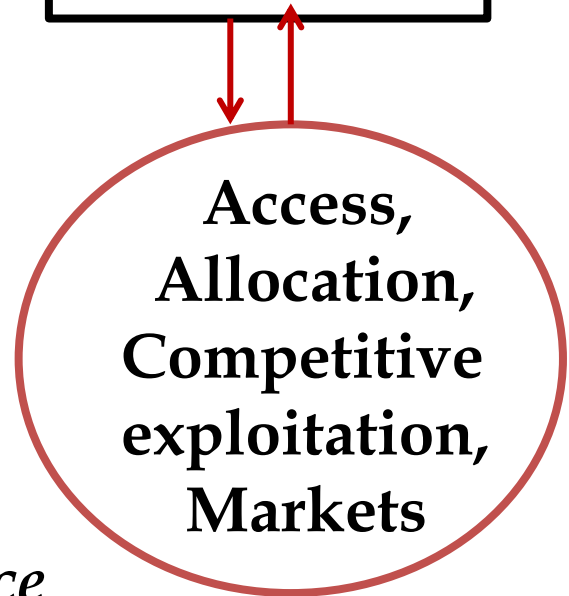
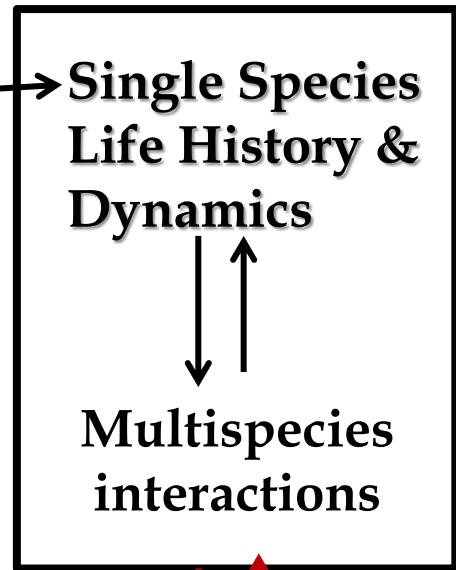
The basic questions are deceptively simple

- How many fish are in a stock?
- How hard is it fished?
- How many fish SHOULD/COULD there be?
- Is the fishing rate and fishing pattern sustainable?
- What COULD/MUST we do about it, and how quickly?
- What tools, and what governance framework, do we need?
- What other factors & user groups need to be considered?
- Does the fishery affect other elements and interests?
- How should we take into account these other interactions?



Oceans & their
Variability

Regime shifts & Climate change



Research, Assessment, Advice, Governance

Interactions with other users of the oceans

To put today into context, I want to start with a few vignettes to set the scene

In the 1860s and 1880s, North Sea fishermen asked why catch per unit effort and the mean size of fish in the catch were in decline.

In contrast, Prof Thomas Huxley, President of the Royal Society saw huge numbers of fish landed on the fish markets, & declared in 1884

"The Seas are Inexhaustible"

Around this time the overfishing question was raised, but not answered, by successive Royal Commissions, but the outcome was the start of fishery investigations, and we have been battling to manage fisheries ever since.

