



Strategic research priorities for the CFP with regard to global commitments (MSY, EAF, MSFD)

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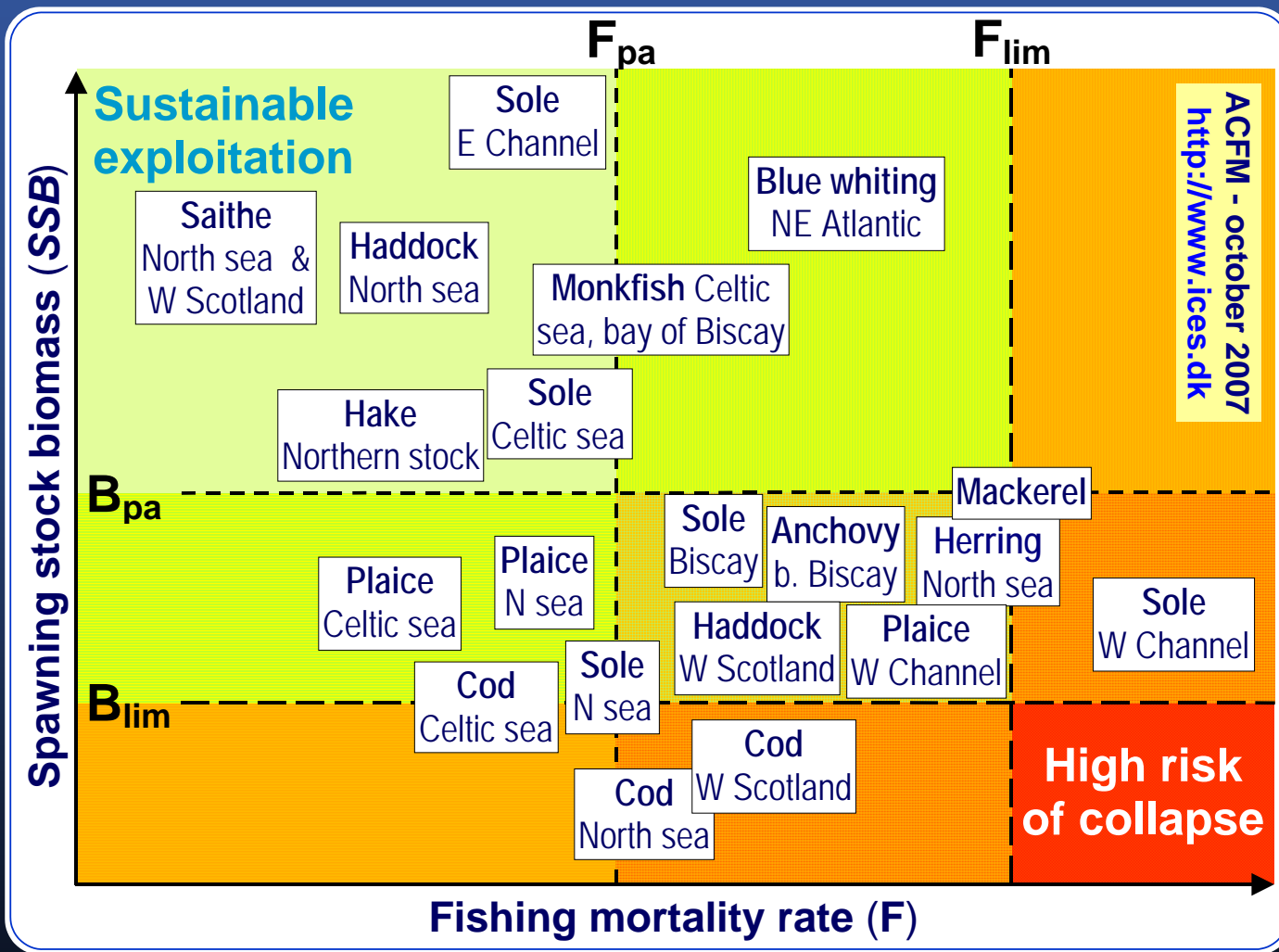
A stronger dialogue between scientists
and fishermen for a renovated CFP

Committee on Fisheries
Brussels – 09 09 2008



Matter of concern

data: ICES



State of some TAC-managed stocks compared with ICES biological reference points



MSY: a target direction

for the definition of restoration measures

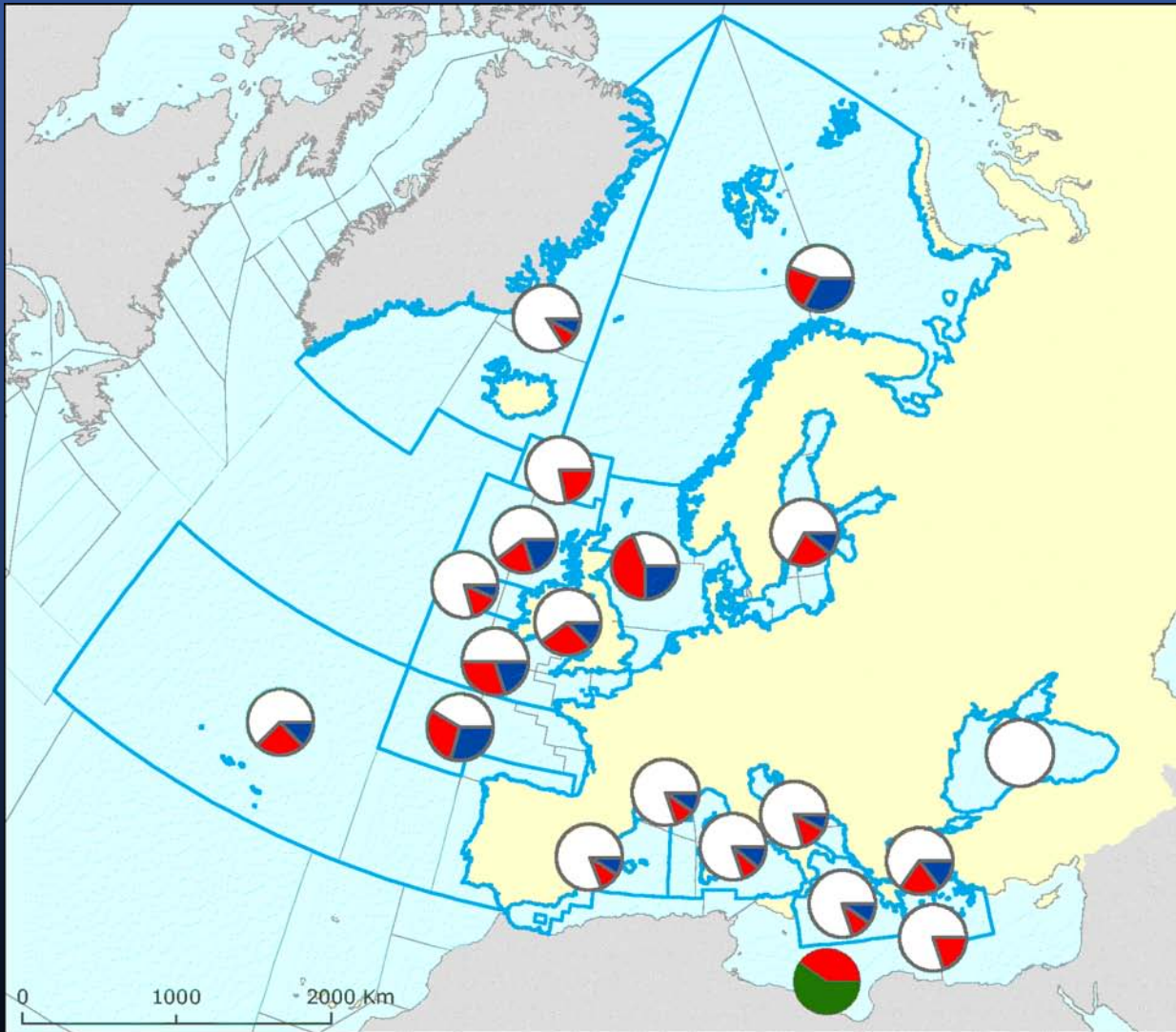
- Remark: precautionary biological reference points *are not* management goals
- MSY is a monospecific management goal, but reducing fishing pressure and approaching MSY will be a progress towards restoring harvested fish communities and ecosystems
- Targeting MSY also facilitates progress towards MEY (maximum economic yield)



Level of knowledge of fish stocks

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Fish stocks of economic importance, 2005 and 2006



Stock status in European seas

□ Non-assessed

■ Overfished

■ Within safe limits



Status for Mediterranean large pelagics

□ Non-assessed

■ Overfished

■ Within safe limits

□ Fishing areas

European Environment Agency



EEA (2007)



MSY-related research priorities

- **Basic need:** a comprehensive gathering of time series of reliable data.
- Ecological ‘sizing factor’ of MSY: ecosystem productivity; research needed in:
 - food webs dynamics,
 - factors driving variations of biological production,
 - combined effects of fishing and climate.
- At the fishery scale:
 - precise knowledge of effective fishing capacity change,
 - and of fishing effort deployment.
- Uncertainties: see IPCC approach,
IPCC. *Guidance Notes for Lead Authors of the IPCC Fourth Assessment Report on Addressing Uncertainties*, 4p., July 2005, <http://www.ipcc.ch/>



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Objective: MSY target achievement in the frame of implementation of ecosystem approach to marine management

Joint effort framework: make the most of real-time observations of fishermen ('custodians of the sea')

Fishermen' share of responsibility:

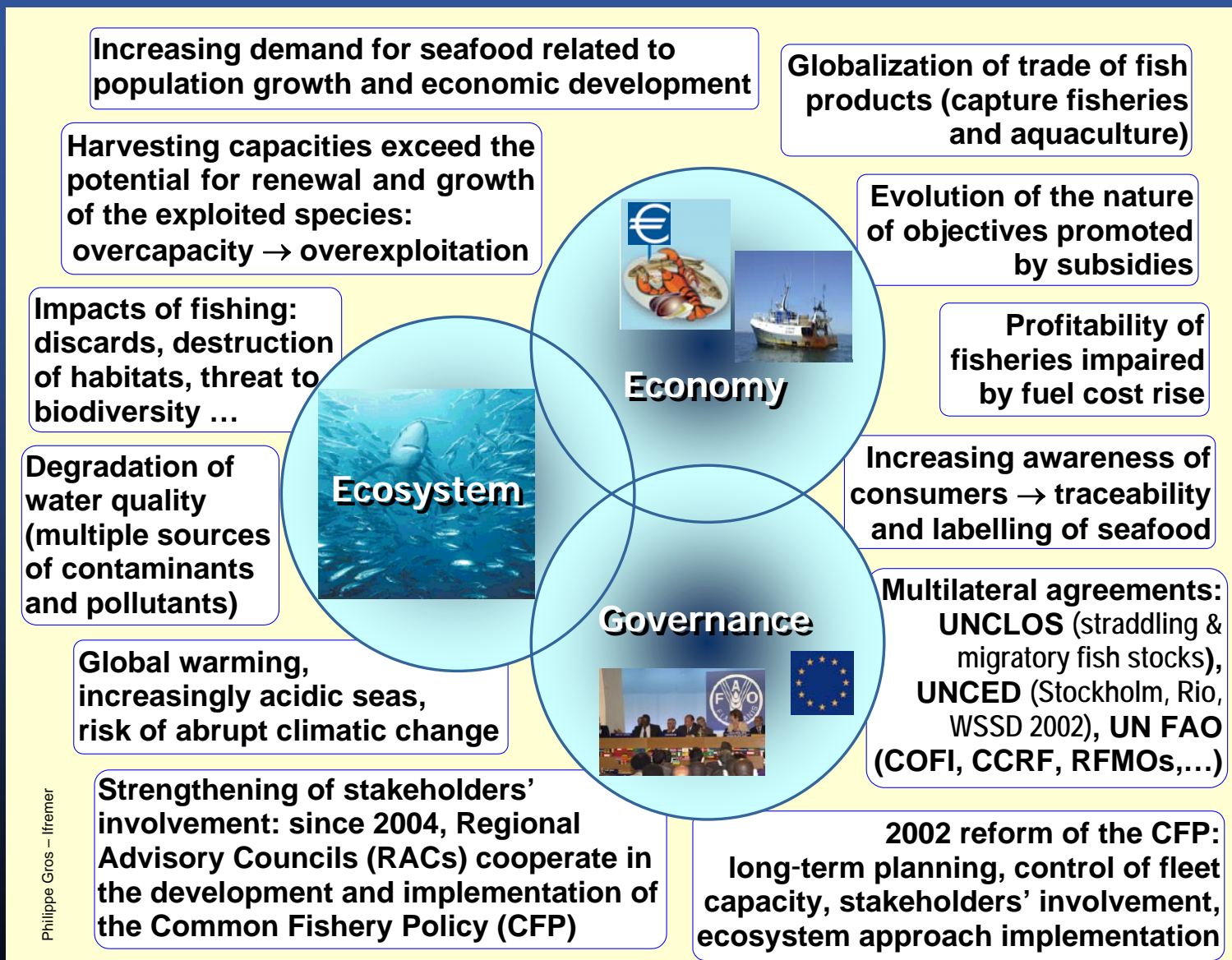
- provide support to data collection, as a supplement to DCR process
- biological data: by-catch and discards
- help to offset the time lag inherent to assessment + management process (data collection → analysis and assessment → management decision → enforcement ≈ a three-year process); **example:** the case of occurrence of strong variations in abundance of recruits

Fisheries scientists' share of responsibility:

- provide specifications: sampling designs, species identification
- deliver related training courses
- keep fishermen informed of 'added data' impact

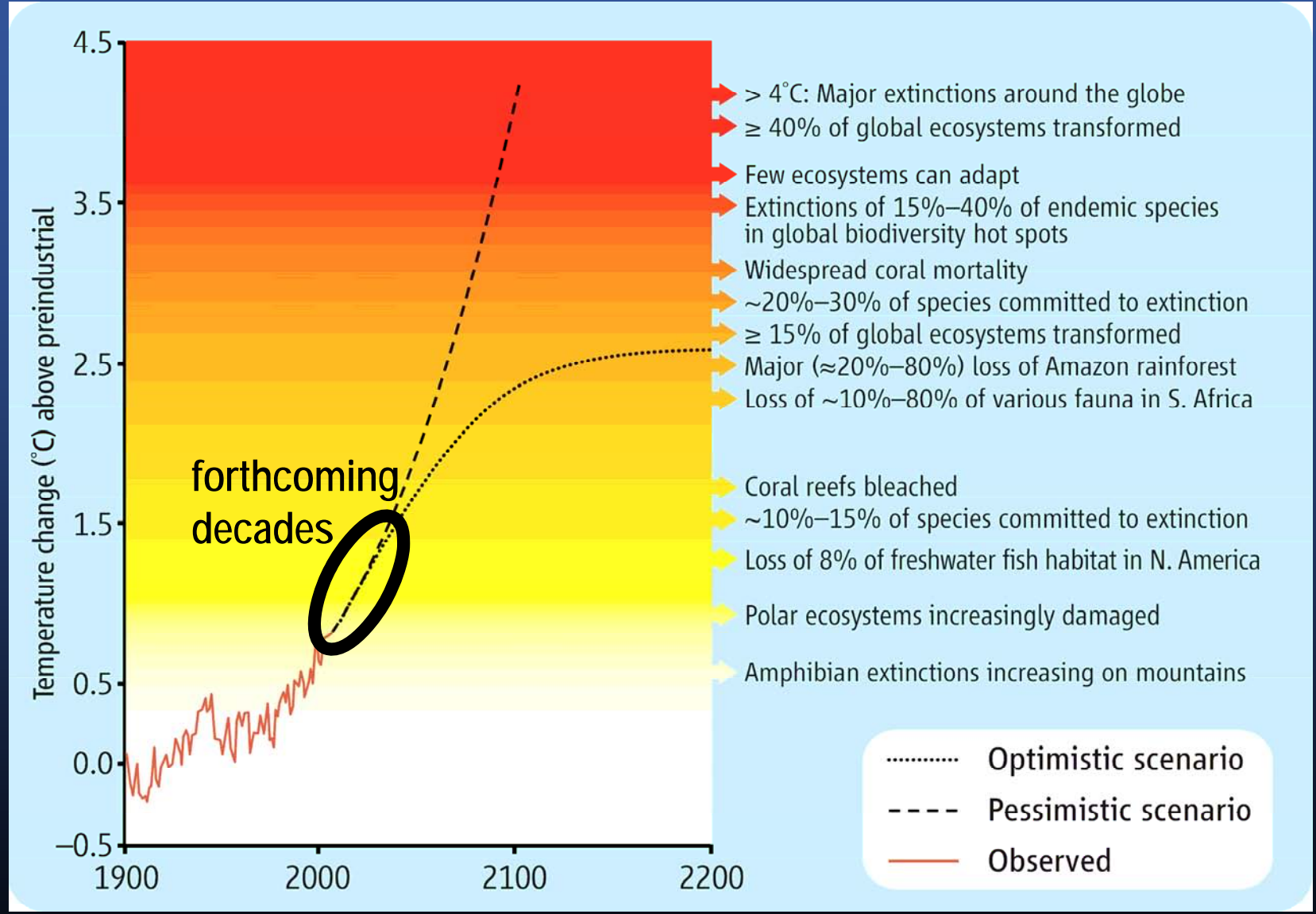
Open question: the early warning of ecosystem regime shifts, whose usual identification is currently based on a *posteriori* analyses of multivariate time series (cf. the North sea example)

Key drivers of the fisheries system dynamics





Example of global warming





Broad domains of EAF-related research priorities

- **Ecosystem:** processes of their dynamics; response to exploitation and other disruptions; societal consequences.
- **Resources:** harvested populations dynamics; evolution under natural and anthropogenic forcings.
- **Exploitation:** dynamics of fisheries exploitation systems in relation to their ecological, economic and institutional contexts.
- **Governance:** functioning and performance of fisheries governance systems.
- **Tools:** observation, experimentation, individual markers, statistical and dynamics modelling, risk analysis, EAF indicators, dissemination and transfer.



EU Integrated Maritime Policy; COM(2007)575 final



Environmental pillar

Marine Strategy Framework Directive (MSFD); 2008/56/EC
'to achieve or maintain good environmental status in the marine environment by the year 2020 at the latest' (Art . 1, subject matter)
the general basis for implementing cross-sectoral ecosystem approach to the marine environment



recitals (9), (39), (40), (44), (45), Annexes III & V

Common Fisheries Policy (CFP); Council reg. (EC) 2371/2002

*'ensure exploitation of living aquatic resources that provides sustainable economic, environmental and social conditions [...]
apply the precautionary approach [...] aim at a progressive implementation of an ecosystem-based approach to fisheries management'* (Article 2)



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Objective:

implementation of ecosystem approach to marine management

Joint effort framework: field experiments

Fishermen' share of responsibility:

state funded schemes involving scientific partnership in controlled experiments, e.g. *in situ* tests of selectivity devices, assessment of 'alternative' fishing techniques, reduction of fuel consumption

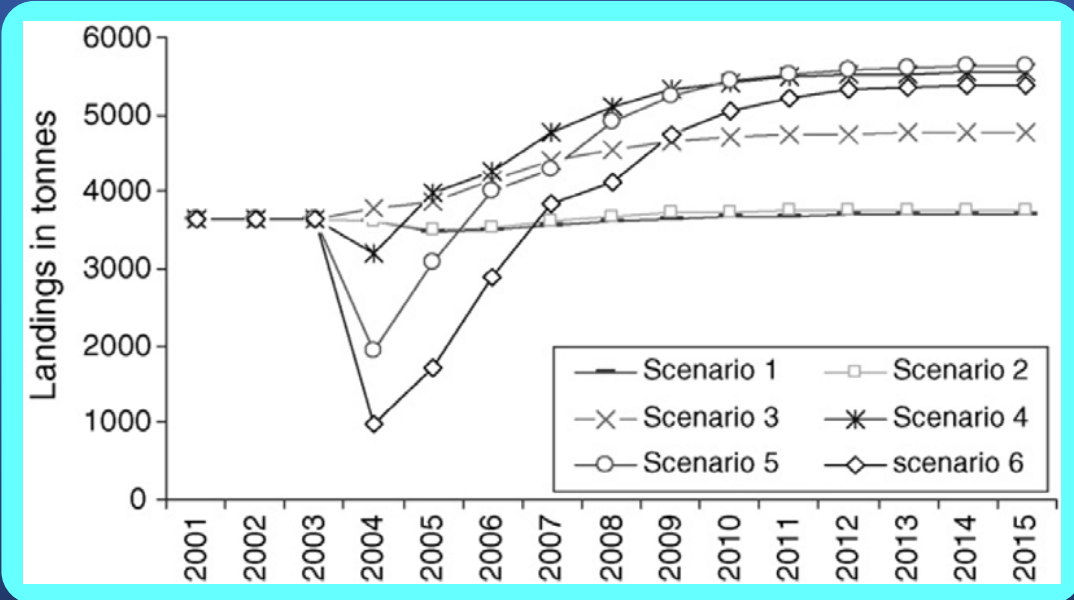
Fisheries scientists' share of responsibility:

- provide specs sheet: experimental designs, data analysis
- achieve cost-benefit analyses of different scenarios

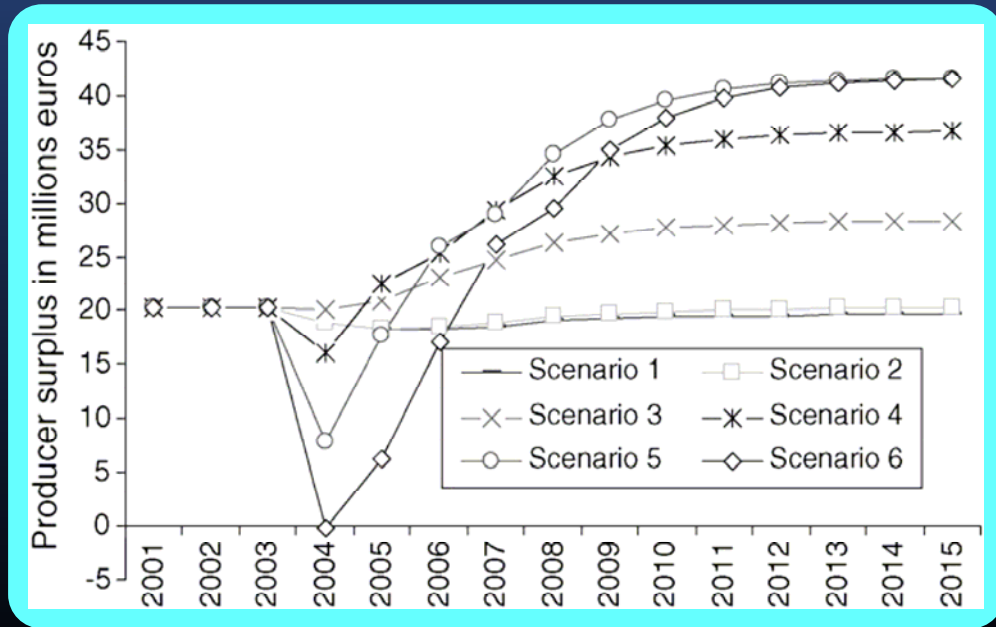


Effect of gear selectivity improvement: scenarios

evolution of *Nephrops* landings



evolution of producer surplus





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Objective: implementation of ecosystem approach to marine management

Joint effort framework: a 'reference fleet'

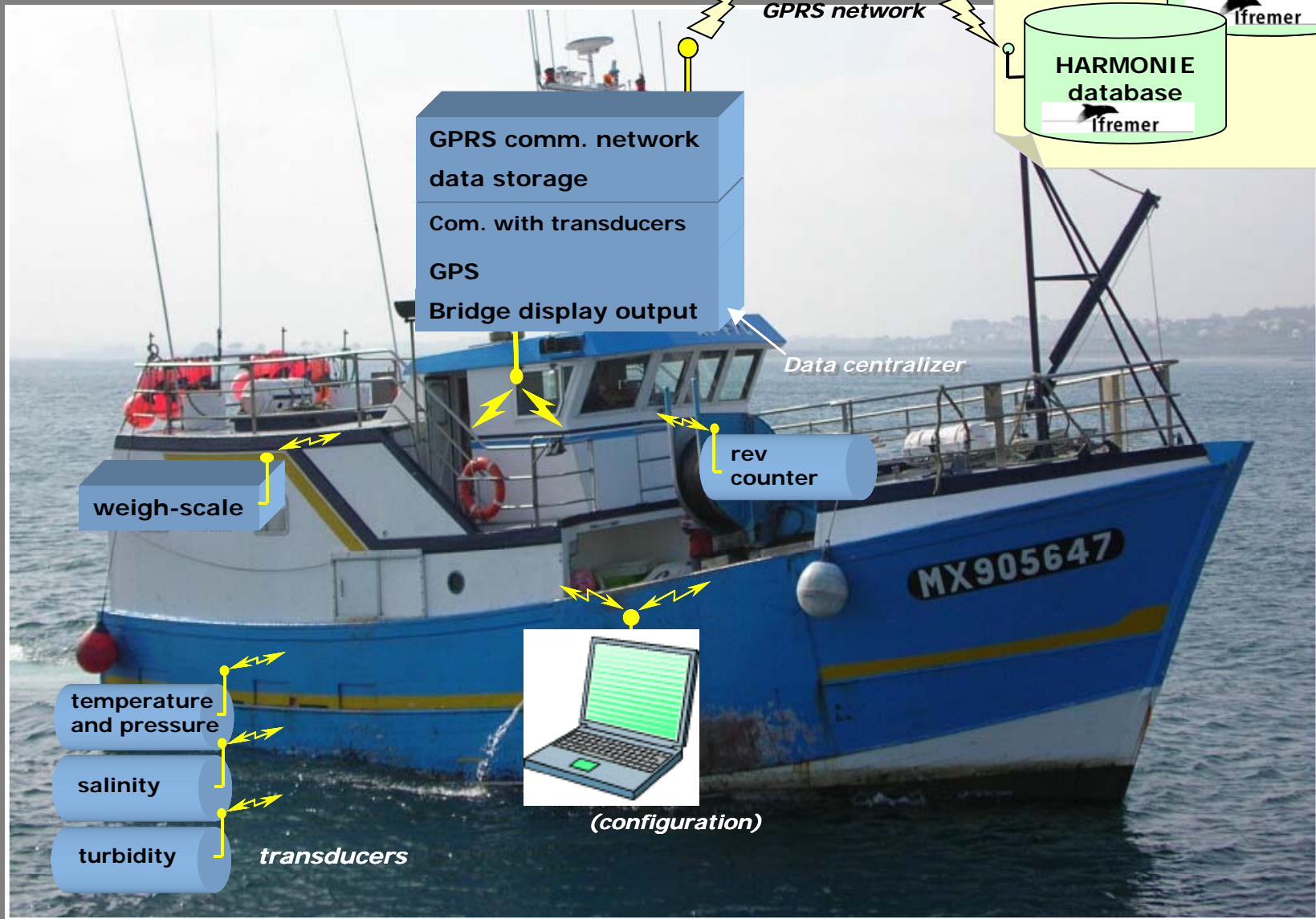
Collaborative action: example of the RECOPESCA project. A voluntary 'representative panel' of fishing vessels equipped of sensors for fine-scale simultaneous record and data transmission of fishing effort, related catch, and hydrological parameters (temperature, salinity). Solely for scientific purposes, including operational oceanography

Fisheries scientists' share of responsibility:

- development and implementation of the system
- data management and analysis
- a 'fact sheet' distributed to panel members



The RECOPESCA system – here a gillnetter





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Objective: efficient stakeholder participation in the improvement of the assessment-advisory process, and in the implementation of ecosystem approach

Joint effort framework: the Regional advisory councils (RACs) frame

Example: collaborative initiative with SWW-RAC for realizing an atlas of fisheries in the southern western waters. The fishery is the relevant scale for the implementation of management measures purposes

Fisheries scientists' share of responsibility:

- establish with stakeholders the definition of 'fishery', taking account of geographic area, 'métiers', ecosystems, *inter alia*
- provide a typology of SWW fisheries

**Thank you for
your attention**





European Parliament – Committee on Fisheries
09 September 2008





The Code of Conduct for Responsible Fisheries (FAO, 1995)



Article 12 – Fisheries research; § 12.1

“States should recognize that responsible fisheries requires the availability of a sound scientific basis to assist fisheries managers and other interested parties in making decisions. Therefore, States should ensure that appropriate research is conducted into all aspects of fisheries including **biology, ecology, technology, environmental science, economics, social science, aquaculture and nutritional science** [...]”.