



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

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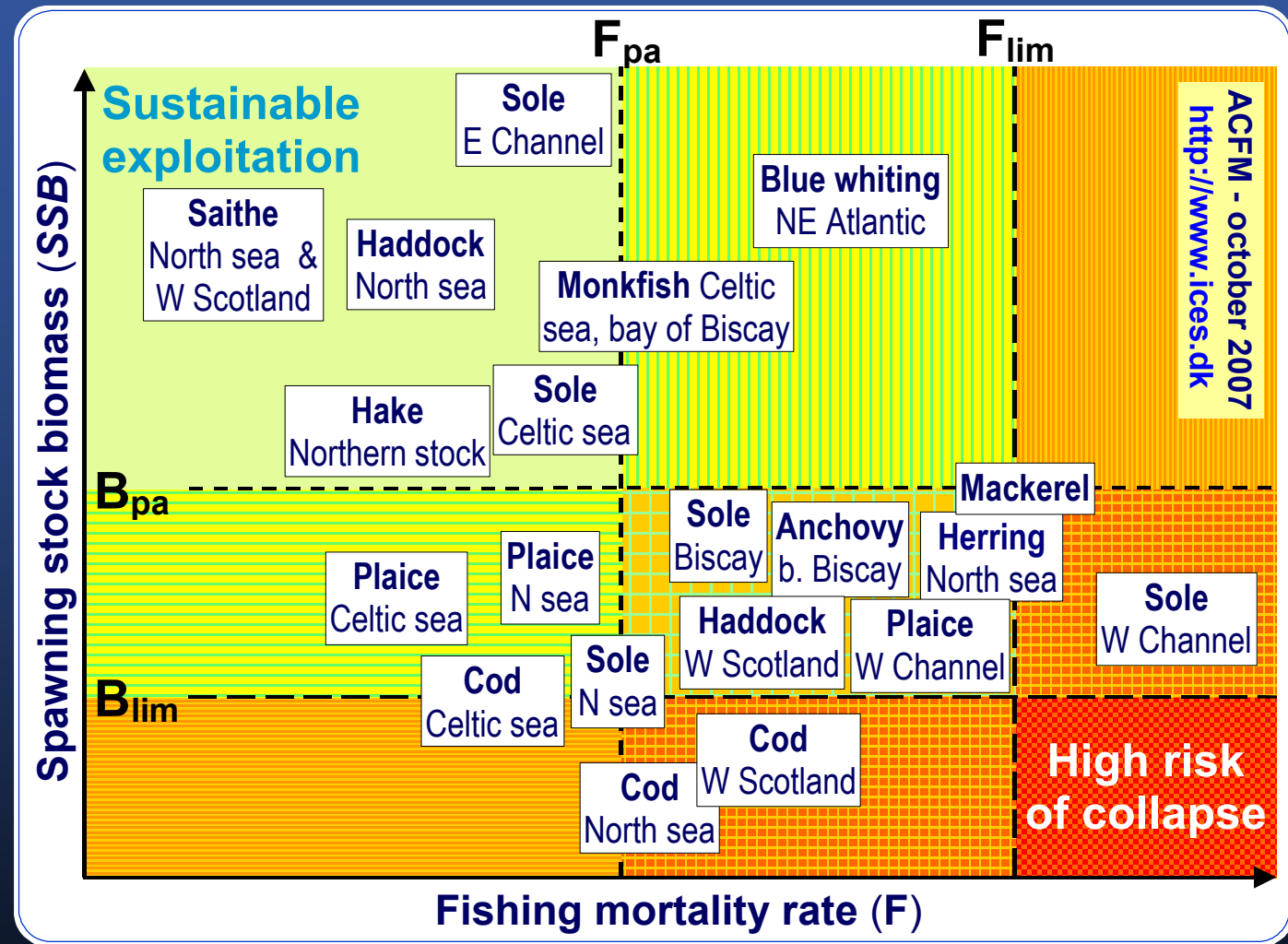
A stronger dialogue between scientists
and fishermen for a renovated CFP

Committee on Fisheries
Brussels – 09 09 2008



Matter of concern

data: ICES



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

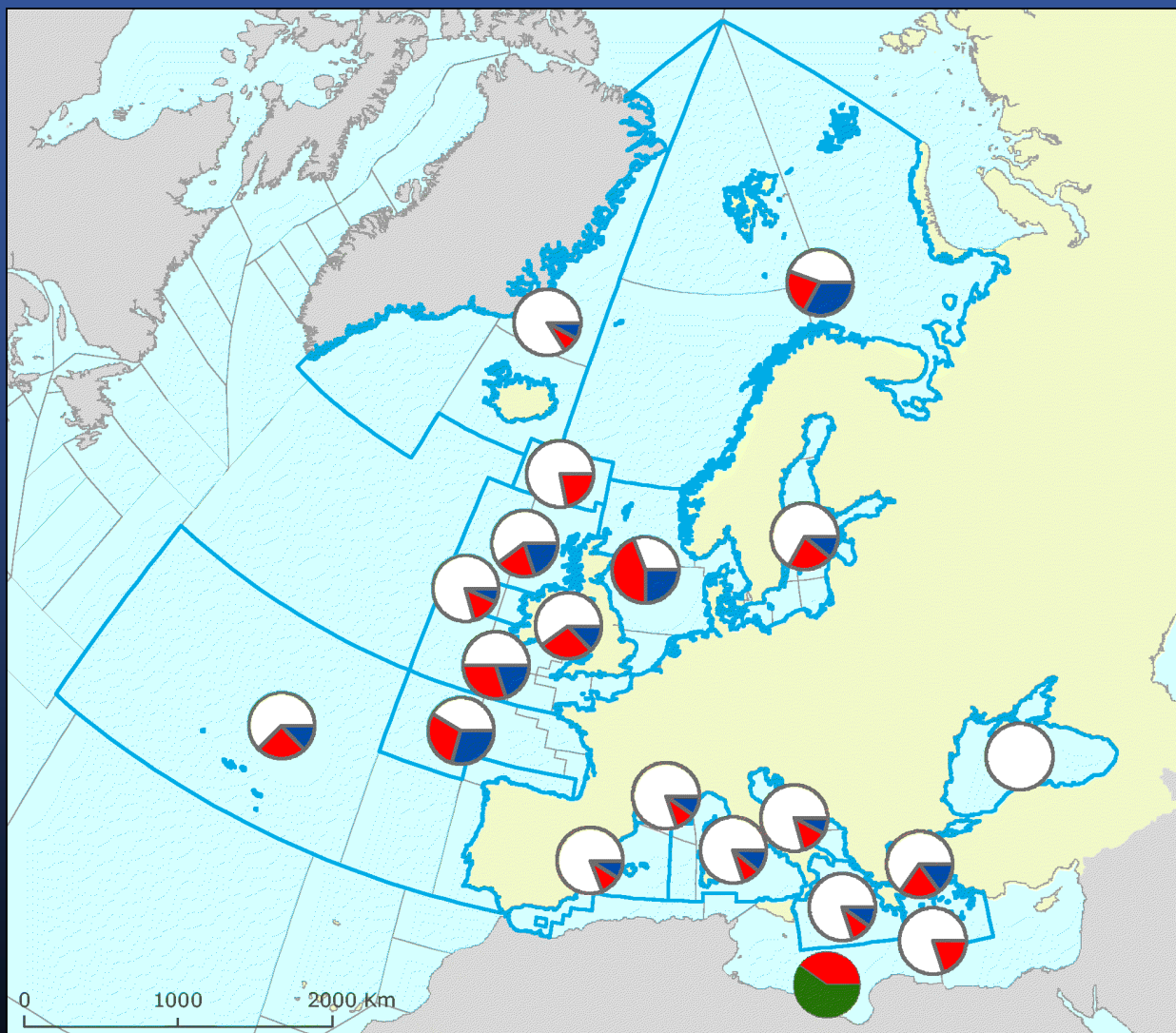


MSY: a target direction for the definition of restoration measures

- 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



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





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

Increasing demand for seafood related to population growth and economic development

Harvesting capacities exceed the potential for renewal and growth of the exploited species:
overcapacity → overexploitation

Impacts of fishing:
discards, destruction of habitats, threat to biodiversity ...

Degradation of water quality
(multiple sources of contaminants and pollutants)

Global warming,
increasingly acidic seas,
risk of abrupt climatic change

Strengthening of stakeholders' involvement: since 2004, Regional Advisory Councils (RACs) cooperate in the development and implementation of the Common Fishery Policy (CFP)

Globalization of trade of fish products (capture fisheries and aquaculture)

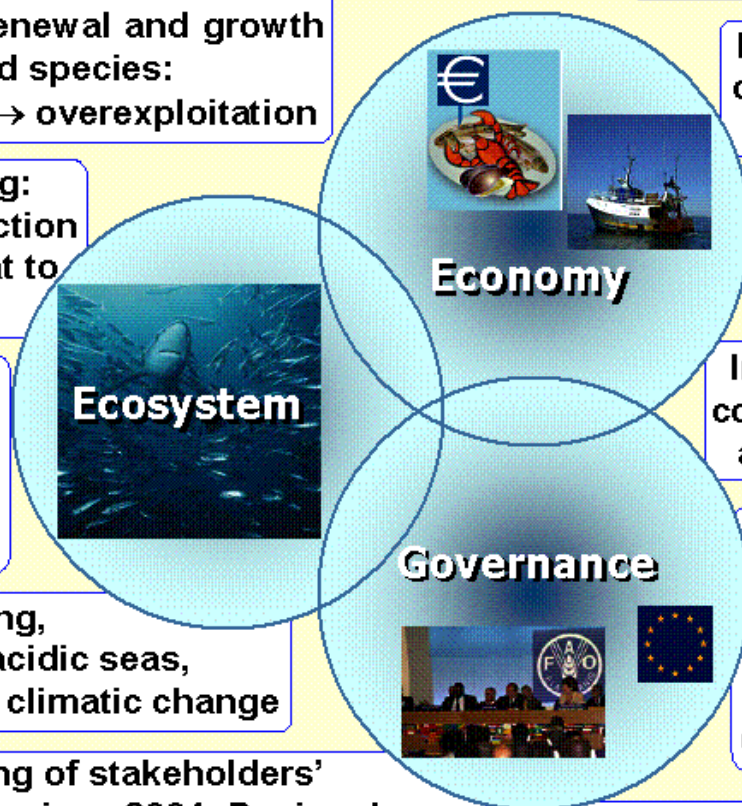
Evolution of the nature of objectives promoted by subsidies

Profitability of fisheries impaired by fuel cost rise

Increasing awareness of consumers → traceability and labelling of seafood

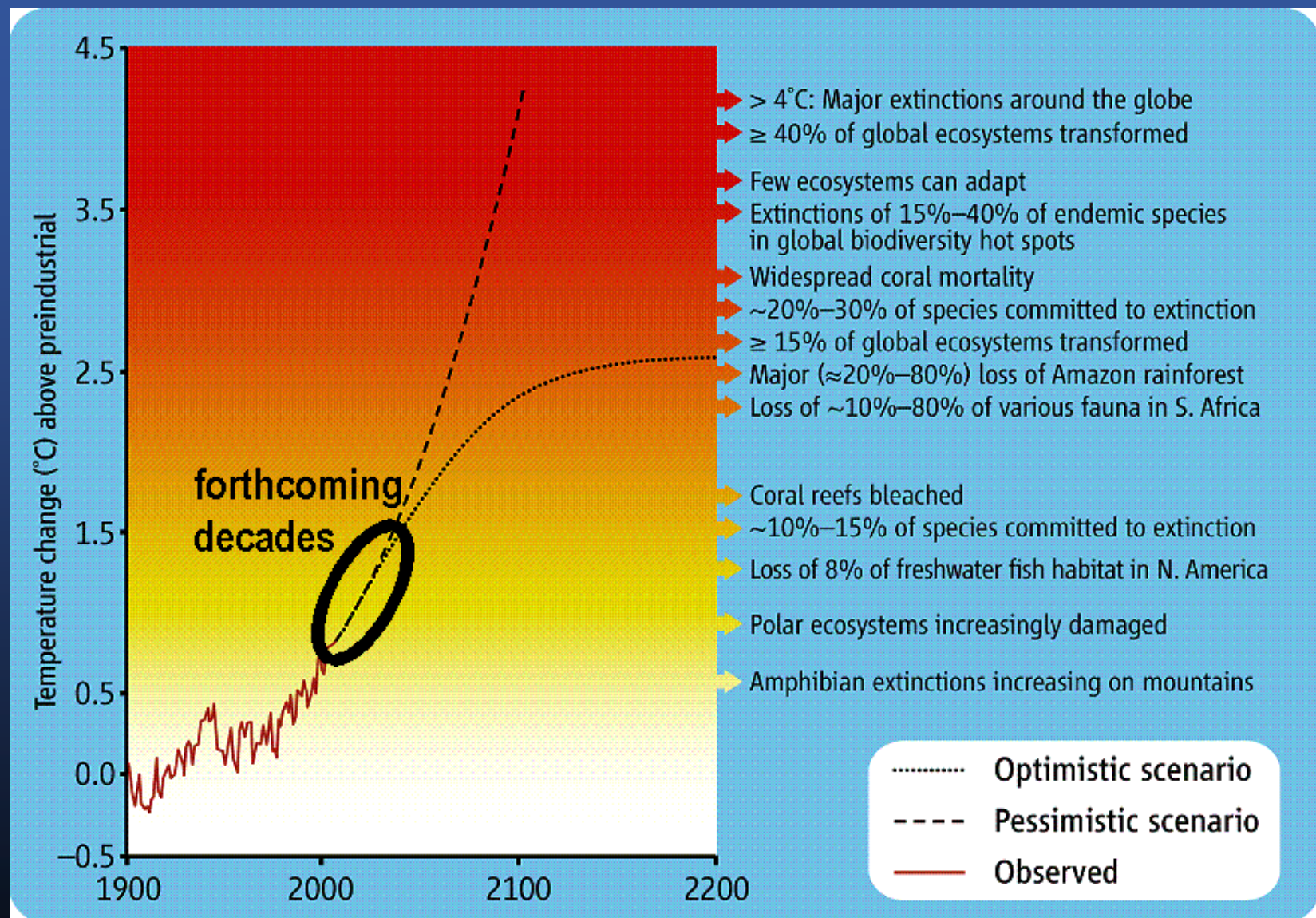
Multilateral agreements:
UNCLOS (straddling & migratory fish stocks),
UNCED (Stockholm, Rio, WSSD 2002), UN FAO (COFI, CCRF, RFMOs,...)

2002 reform of the CFP:
long-term planning, control of fleet capacity, stakeholders' involvement, ecosystem approach implementation





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:

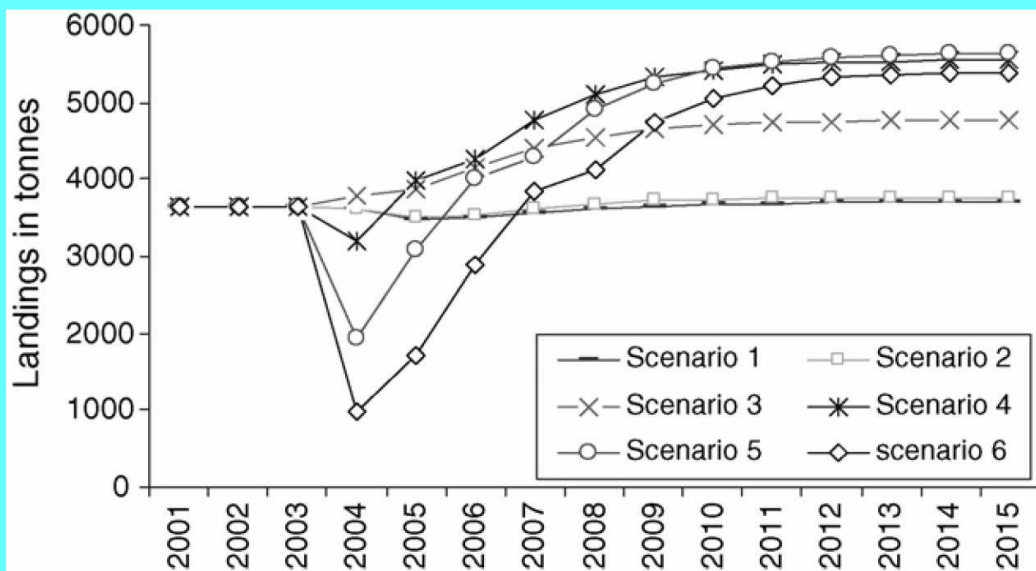
state funded schemes involving scientific partnership in
controlled experiments, e.g. *in situ* tests of selectivity
devices, assessment of 'alternative' fishing techniques,
reduction of fuel consumption

Fisheries scientists' share of responsibility:

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

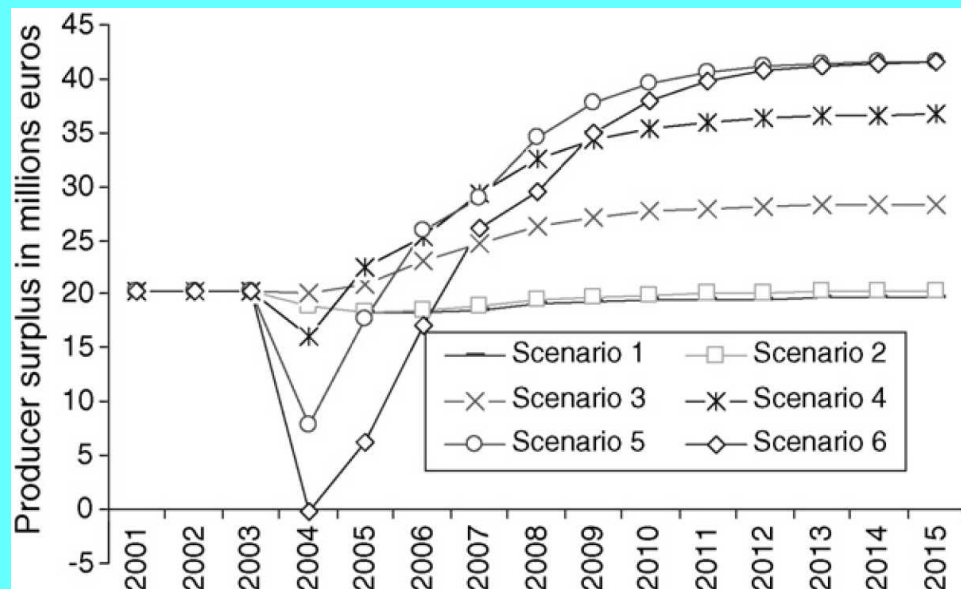


Effect of gear selectivity improvement: scenarios



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'

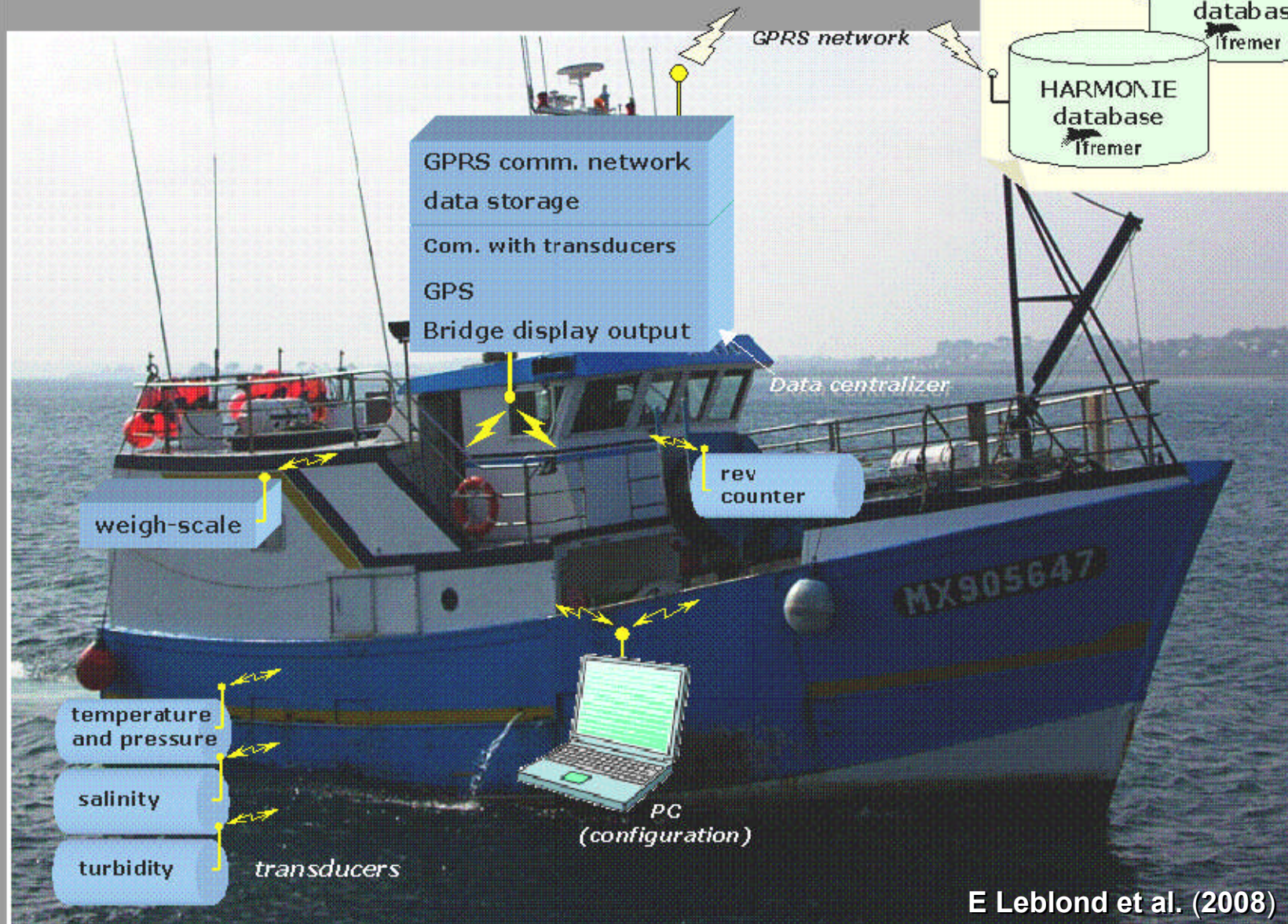
Collaborative action: example of the RECOPESCA project. A voluntary 'representative panel' of fishing vessels equipped of sensors for fine-scale simultaneous record and data transmission of fishing effort, related catch, and hydrological parameters (temperature, salinity). Solely for scientific purposes,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



E Leblond et al. (2008)



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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**

