

MareFrame



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Fisheries certifications and how Mareframe project output inter-relates with their requirements

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Certifications - are they part of present and future management of marine resources?

- **20+ years on from when the initiative started, they certainly are, at least in developed countries and in countries wishing to sell product into developed ones**
- **Simple economics underpins their importance (volumes and value-added)**
- **Consumers and the markets increasingly demand sustainably sourced protein**
- **The scientific knowledge behind certification initiatives is continually improving and fisheries (and their managers) need to develop new ways of conserving marine resources for future generations**

The Marine Stewardship Council as an example

- The MSC's *vision* is of the world's oceans teeming with life, with seafood supplies safeguarded for the current and future generations.
- Its *mission* is to use its ecolabel (e.g. below) and fishery certification programme to contribute to the health of the world's oceans by recognising and rewarding sustainable fishing practices, influencing the choices people make when buying seafood and working with those who share the vision of the seafood market being operated on a sustainable basis.

The questions that reputable certification programmes ask

- 1. *Sustainability of fish stocks:*** Are enough fish being left in the seas to ensure that fishing is taking place at a level that ensures it can continue indefinitely and the fish population remain productive and healthy?
- 2. *Minimising environmental impact:*** Are fisheries causing negative impacts on other species and habitats within the ecosystem, all of which must remain healthy.
- 3. *Effective fisheries management:*** Are fishing operations managed to comply with appropriate laws and are they able to adapt to changing environmental and social circumstances?

Aim of the project at inception:

To try to remove barriers preventing more widespread use of an Ecosystem-based Approach to Fisheries Management (EAFM) by developing or stimulating (the collection of):

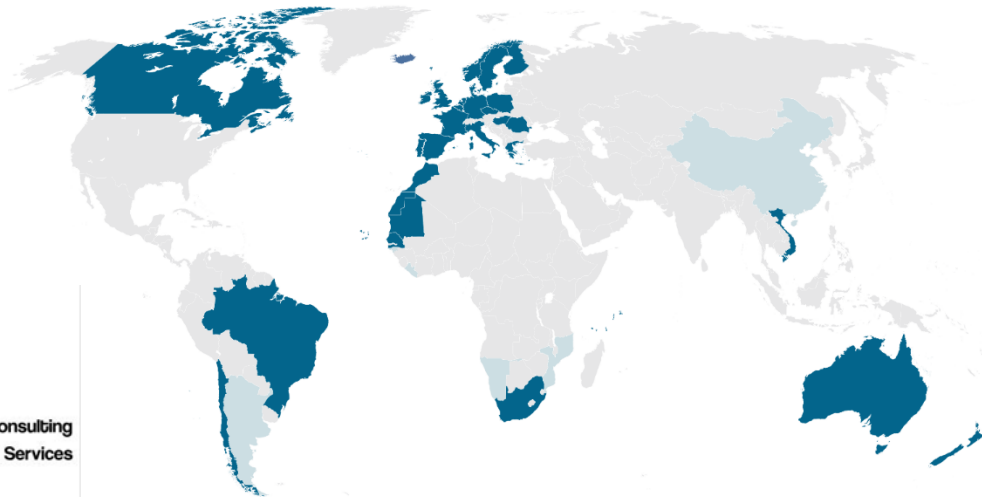
- Novel data based on new tools and technologies
- Ecosystem models and fresh assessment methodology *inter alia* based on indicators of Good Environmental Status
- A Decision Support Framework (DSF) adapted to the needs of managers and operators that will support implementation of the Common Fisheries Policy (CFP), the Marine Strategy Framework Directive (MSFD) and the Habitats Directive (HD)

By increasing the use of EAFM across the board, the project sought to find the means to make fishing more economically, environmentally and socially sustainable

THE ASPIRATION OF MAREFRAME, PUT MORE SIMPLY

As Anna reminds us:

ALL TOGETHER towards sustainable management, better use and economic sustainability of marine resources.....BLUE BIOECONOMY – BLUE GROWTH



In what areas do the products of certification programmes and the MareFrame project converge?

- In the drive to include as much environmental/ecosystem information as feasible in the decision-making process;
- In the effort to continue to improve the models used for, and to address the uncertainties inherent, in the fishery evaluation process;
- In raising the importance of social issues in evaluating sustainability;
- In seeking new data sources relevant to decision-making;
- In highlighting the importance of the inclusivity of all parties in evaluation and decision-making, no matter what their level of direct involvement in specific fisheries.

And above all:

- **To (try to) ensure that decision-making and -support as well as evaluation are process-driven and fully transparent;**
- **To strive to continually improve the scientific basis underpinning resource usage**

In overview, P2 of the MSC (identified as “Ecosystem components”) now covers:

- Retained species (in terms of target and bycatch)
- Bycatch species (discarded)
- Endangered, Threatened and Protected (ETP) species
- Habitat
- Ecosystem

All are evaluated in terms of outcomes, management and the level of information and evidence. Opinion does count, but hard factual, transparent and replicable (scientific) information correctly holds sway

So what can we as scientists do better to meet the needs of certification programmes AND enhanced decision-making about our marine resources?

- **Collect more and better data;**
- **Make those data more transparently available in a form that can be used to inform decision-makers;**
- **Integrate data-based biological, numerical, economic, environmental and social perspectives in an understandable form**

A recent (ecosystem) example of how science has seemingly failed to meet reasonable certification needs

- **In the latest version of the evaluation framework, it has proven necessary to identify whether a species/stock being assessed for certifiability is key lower trophic level (LTL).**
- **The default criteria for decision-making are:**
 - *Do a large proportion of the trophic connections in the ecosystem involve the stock, leading to significant predator-dependence?*
 - *Does a large volume of energy passing between lower and higher trophic levels pass through the stock?*
 - *Are there few other species at the same trophic level through which energy can be transmitted from lower to higher levels, such that a large proportion of the total energy passing between low and high trophic levels passes through the stock (ie the ecosystem is 'wasp-waisted')*

And the result?

Unless the answer to all three questions is an *evidence-based* “No”, the fishery/stock is evaluated as key LTL, generally affecting its certifiability negatively, even if a stock of the same species elsewhere is not evaluated as key LTL

So what do we need to do to prepare for such cases?

We need to provide advance evidence in the form of a DSF based on factual, modelled information rather than on often “opinion-based” trophic foodwebs drawn from analyses of prey



- **To conclude (in my opinion), certification programmes are here to stay, and so is the need for evidence-based science and modelling presented in the form of a DSF to facilitate the effective management of resources according to the manifold criteria of sustainability.**
- **To do this, more data, and more integration of various forms of data, not just biological and numerical, need to be provided in support.**

