

Introduction and background

Poor sustainability in marine capture fisheries has been characterized as stemming from and manifesting itself through “the interaction of many interrelated factors”, including: (i) the absence of guaranteed rights; (ii) the supremacy of short-term socio-economic considerations over long-term ones; (iii) a perverse incentive structure reinforcing and allowing externalization of private costs; (iv) the increased demand from a growing human population and consequent rising prices; (v) poverty and lack of alternatives in many areas; (vi) ineffective governance and weak enforcement; (vii) disturbances such as pollution, climate oscillations, wars; (viii) scientific and administrative uncertainty; and (ix) competition between users, within and between sectors (Garcia and Boncoeur, 2004).

Garcia and Boncoeur followed-up with a prescription of corrective actions including: (i) the granting of more effective rights of use; (ii) improved transparency; (iii) more participation in decision-making; (iv) better understanding of the resources and the communities depending on them; (v) a more precautionary approach to management; (vi) more active consideration of the ecosystem interrelationships; (vii) better monitoring and enforcement; (viii) more equitable distribution of benefits; (ix) integrated development and management policies; and (x) a stronger role of consumers.

This review attempts to provide a standardized analysis of marine capture fisheries management in twenty-nine Pacific Ocean countries¹, with the goal to establishing how far they have come in implementing the corrective actions that constitute, *a priori*, the necessary ingredients towards sustainable fisheries.

As a means to this end, a detailed questionnaire, the *State of World Marine Capture Fisheries Management (SOWMCFM) Questionnaire*, was developed by FAO to assist country review authors to organize information on direct and indirect legislation affecting fisheries, costs and funding of fisheries management, stakeholder involvement in management, transparency and conflict management, and compliance and enforcement into two major components: national fisheries management in general, and tools and trends in the top three fisheries (by volume) in each of the three marine capture fishing sectors (commercial/industrial, small-scale/artisanal/subsistence and recreational).

After completing the questionnaire, each country review author was guided by an annotated outline of the written review, providing a starting point series of questions pertinent to understanding fisheries management. Each country review followed a seven-part outline and attempted to address the following questions:

POLICY FRAMEWORK

- Where are the objectives set forth (national, regional or local legislation)?
- When was the legislation first adopted? Has the legislation been revised? When?
- If the legislation had been revised in the past 10 years, were changes made to specifically incorporate recent international fisheries management norms/mandates (FAO Code of Conduct for Responsible Fisheries, United Nations Fish Stocks and the Compliance Agreement, etc.).

¹ This publication is accompanied by a similar review for the Indian Ocean (De Young, 2006) and will be followed by Atlantic and Black Sea/Caspian Sea/Mediterranean Sea reviews.

- Is there other, non-fishery specific legislation that impacts the overarching objectives of fisheries management (e.g. sustainable development or other social and economic objectives)?

LEGAL FRAMEWORK

- Who is responsible for fisheries management?
- Who is responsible for monitoring and enforcement?
- Is it the same agency for the above items at different jurisdictional levels in the country? If not, how is responsibility divided?
- If there are different agencies responsible for various aspects and/or different jurisdictional levels, are they required to coordinate management measures for the same stocks?
- Is the legal framework or process for fisheries management influenced by non-fisheries specific legislation (e.g. requirements for actions under environmental impact statements, cost benefit analyses, endangered species legislation, marine protected area legislation or designations that affect fisheries but were not adopted for the purpose of fisheries management)? If so, how?

STATUS OF FISHERIES IN THE COUNTRY

- This section provides a brief overview of the fisheries in the country (e.g. the number of exploited stocks, the total value and volume of fisheries, the contribution to the Gross Domestic Product (GDP), the relative proportion of that contribution from the various types of fisheries, the largest fisheries by volume and value in the country).

MANAGEMENT ACTIVITY

- How are management measures developed and implemented? Who is responsible? To what extent are stakeholders involved?
- How many fisheries in the country are managed (approximate or actual)?
- Of the total number of exploited species/stocks, what percentage has some form of management?
- Has the number of managed fisheries changed during the past five years? Ten years?
- What events or other factors drove changes in the management actions, measures and/or mechanisms adopted?
- Are stocks regularly assessed to determine their status? If so, how many are overfished, depleted, or fully utilised?
- Are fishery managers legally required to adopt measures to address overfishing and rebuild depleted stocks?
- What management tools are used?
- Have the tools changed over the past ten years? If so, are there any identifiable trends towards or away from the use of various management tools? Why?
- Are there gears or management tools that are prohibited? Why?
- Has the introduction of management measures adopted in the past ten years improved the status of the fisheries/stocks?
- What are the principal impediments to more effective management?

COSTS AND REVENUES OF FISHERIES MANAGEMENT

- How have budgets/costs/revenues changed over the past ten years? Why?

IMPLEMENTATION OF GLOBAL FISHERIES MANDATES AND INITIATIVES

- If the country has signed, ratified or acceded to the United Nations Conference on the Law of the Sea (UNCLOS), the United Nations Fish Stocks Agreement

(UNFSA) and/or the FAO Compliance Agreement, please describe actions to implement the provisions in domestic fisheries.

- If the country has taken steps to implement recently adopted International Plans of Action relating to capacity management, illegal, unreported and unregulated (IUU) fishing, shark management and/or seabird by-catch in longline fisheries, please describe the actions taken to date.

PARTICIPATION IN REGIONAL FISHERY BODIES (RFBs)

- Briefly describe the extent to which the country participates in regional fishery management organizations.
- Is there an established legal mechanism to implement management measures adopted by regional fishery bodies? If so, is the mechanism regularly followed in a timely manner to ensure compliance with measures adopted by the RFBs?

Each country review was complemented by a series of annexed tables, providing detail on the three major fisheries by volume in each of the commercial/industrial, small-scale/artisanal/subsistence, and recreational sectors.

Generally, undertaking such a process entails considerable constraints. The choice of one author per country created the possibility for time lapses² between the receipt of various reviews and had the potential to generate biased reviews. In addition, there were difficulties inherent in comparing different management environments; stemming from lack of data and transparency, official versus effective management, definitional differences as to what constitutes large-scale or small-scale fisheries, and whether a stock-based or gear-based definition of individual fisheries was applied. Therefore, although cross-country comparisons may provide some insight into different management schemes and their impacts on sustainability, the ensuing sub-regional and regional reviews did not claim statistical robustness.

One must note that these country reviews are not official government reviews³ but an attempt by one individual to collect as much information as possible through published documents, personal communications with relevant stakeholders, and their own experiences in these fisheries. This approach permitted the author to provide what one hopes to be an honest review of the strengths and weaknesses in the country's fisheries management regime and to provide some guidance on how best to move toward attaining sustainable fisheries.

Sub-regional reviews were drafted, based on the individual country reviews and following the same schematic described above, while including topics addressing regional management aspects, such as the joint management of shared stocks. A presentation of the combined questionnaire responses is proffered, given the limitations of such an exercise, as a snap-shot of fisheries management in the Pacific Ocean during the 2003/2006 period. This initial attempt will provide the base-line for a long-term understanding of how and if, and perhaps why, management regimes are evolving and whether these attempts prove successful in attaining national, regional, and international goals with respect to these fisheries.

It is the hope of the editor that this review provides fisheries managers, policy-makers, and stakeholders with a constructive review of their own national marine capture fisheries management schemes and a vehicle for learning about others' experiences in managing fisheries in the face of multiple and potentially contradictory objectives.

² Note that the data published in this volume may have been revised and/or updated since the drafting of individual reviews. Therefore, caution in using these data is warranted.

³ However, officials from fisheries ministries/departments were invited to provide comments on the reviews.

REFERENCES

De Young, C. (ed.) 2006. Review of the state of world marine capture fisheries management: Indian Ocean. *FAO Fisheries Technical Paper*. No. 488. Rome, FAO. 2006. 458p.

Garcia, S.M. & Boncoeur, J. 2004. *Allocation and Conservation of Ocean Fishery Resources: Connecting rights and responsibilities*. Paper presented at the 4th World Fisheries Congress, Vancouver, Canada.