



## Policy Briefs

The purpose of these Policy Briefs is to ensure effective dissemination of information collected and generated as a result of the World Bank-funded Study of Good Management Practice in Sustainable Fisheries, the ACP Fish II Feasibility Study (EC), and a Workshop on Fiscal Reform in Fisheries (DFID and GTZ).

### World Bank Study

During 2003, the project 'Study of Good Management Practice in Sustainable Fisheries' was undertaken by SIFAR with funding from the World Bank. This resulted in an initial (brief) report followed by the substantive report which have contributed to a recent internal World Bank process aimed at justifying future investments in fisheries sector development.

### EC ACP Fish II Feasibility Study

During 2002/2003 SIFAR/FAO undertook a feasibility study on behalf of the European Commission (European Aid Cooperation Office - AIDCO). This comprised an extensive consultation process with fisheries sector participants from over 60 ACP countries, together with the preparation of a range of major project proposals covering capacity building for more effective fisheries management in Africa, the Caribbean and the Pacific.

## 1. The nature of success in fisheries management<sup>(1)</sup>

### Overview

It is widely acknowledged that fisheries management has been characterised more by its failures than its successes<sup>(2)</sup>. Reviews usually attempt to identify what is 'wrong' with fisheries management and offer suggestions as to how to put it right. However, from an alternative perspective, it is also possible to identify what is 'right' with fisheries management in particular instances and to offer suggestions as to how to build upon such success. A recent World Bank funded project 'Study of Good Management Practice in Sustainable Fisheries' examined the issue of success from both theoretical and empirical perspectives. In this first policy brief, the concept of 'success' is explored as a basis for the presentation of empirical findings based on a series of global case studies<sup>(3)</sup>.

### Key issues

#### 1. THE CONCEPT OF SUCCESS IN FISHERIES MANAGEMENT IS MULTI-DIMENSIONAL, INCLUDING SOCIAL, ECONOMIC, BIOLOGICAL ISSUES AND OTHER ISSUES<sup>(4)</sup>

Fisheries management is a multi-dimensional activity involving a wide-ranging set of tasks, which together are intended to achieve long-term optimal benefits from the utilisation of fisheries resources. FAO (1997) uses the following working definition of fisheries management:

“The integrated process of information gathering, analysis, planning, consultation, decision-making, allocation of resources and formulation and implementation, with enforcement as necessary, of regulations or rules which govern fisheries activities in order to ensure the continued productivity of the resources and the accomplishment of other fisheries objectives” (p.82)

In assessing a multi-dimensional activity such as fisheries management, a balance needs to be struck between management's performance in relation to the different dimensions identified. Three of these dimensions are highlighted below (social, economic and biological), although others may also be important in particular fisheries (such as ecological or environmental and technical considerations).

*Social success* requires that fish resources contribute to social welfare in a manner considered to be equitable. The precise nature of this contribution will vary from fishery to fishery. Through the political process, choices will have to be made. For instance, in some places it may be preferred to use fish resources to provide livelihoods to resource-dependent communities; in others the choice may be to use the wealth of the resource more widely.

*Economic success* requires that fisheries are operated in an efficient manner, avoiding problems of overcapacity. This will determine and affect the range of choices available to stakeholders. A key issue in economics is the resource rent that the fishery is capable of generating. Success requires that this rent is either capitalised (into the price of a right) or extracted (as a royalty). Leaving the rent in the fishery can lead to its dissipation through excessive levels of exploitation.

Another important issue is the relationship between resource rent and social welfare. The

## DFID Fiscal Reform in Fisheries Workshop

In October 2003, SIFAR organised a Workshop and Exchange of Views on Fiscal Reform in Fisheries - to 'promote growth, poverty eradication and sustainable management'. This took place in the context of a wider OECD-DAC Initiative, promoted through the UK Department for International Development (DFID), examining issues related to environmental fiscal reform.

assumption, implicit or otherwise, is often made that social welfare will be maximised if resource rent is maximised (economic efficiency maximisation). Since the latter will be achieved by the unrestricted transferability of permanent fishing rights, these kinds of rights are often suggested (at least by economists). However, social success may require that some trade-offs be made between equity and efficiency, which could require, for instance, some restrictions on transferability to protect vulnerable groups (fisheries managers may decide to 'spend' some of the potential resource rent on keeping people, their boats and gear in a fishery, effectively providing a social security net).

*Biological success* requires that management regulates the harvest so that it does not exceed the long-term productive capacity of the target stocks, either by directly harvesting the stocks or in some way undermining the resilience of the ecosystem. Biological success will underpin social and economic success. In certain cases such success requires that overexploited fish stocks be rebuilt because higher stock levels will enable greater catches to be taken on a sustainable basis in the long run with less variability.

Overall, successful fisheries management must strike a balance between these different dimensions (social, economic, biological and others). In order to do this, managers must ensure that appropriate information is available on each dimension. They must also ensure that there is a correct identification of objectives and constraints within fisheries management plans.

### 2. A STANDARD WAY OF EVALUATING SUCCESS IS TO COMPARE OUTCOMES TO OBJECTIVES<sup>(5)</sup>

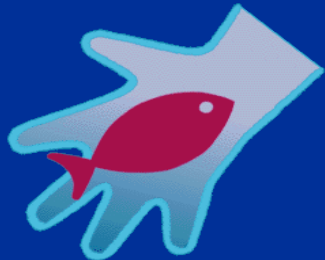
The major drawback with this approach is that if objectives are mis-specified then success in achieving them may still not equate to successful fisheries management. The litmus test for successful fisheries management is perhaps best assessed therefore in terms of the sustainability of the management arrangements themselves, since sustainable arrangements are likely to be those which include the various dimensions of sustainability.

There is also a need to distinguish between cause and effect, or cause and symptom, in order to design effective fishery management systems. The failure criterion to which attention is most frequently drawn is the fish stock itself. Yet (except for very extreme cases where fishing to extinction is profitable) overfishing the fish stock is in the interest of no one. Such overfishing arises because of a failure somewhere else, in some other dimension of the system, most notably in the area of incentives. Correcting such incentives may be expected to correct the overfishing problem. Policy measures, however, are frequently designed and recommended as if the failure to conserve fish stocks is a stand-alone problem to which measures should be applied directly.

### 3. SUCCESS IS DYNAMIC IN NATURE AND TO BE SUCCESSFUL A MANAGEMENT SYSTEM MUST BE ANTICIPATORY IN LOTS OF WAYS

One important element is that managers must anticipate that the definition of the problem itself will evolve over time. Historically, successful fisheries management turned around one fish stock and the fishers exploiting it. However, over the past few years, it has become commonplace to chastise management for not taking an "ecosystem-based" approach<sup>(6)</sup> to the problem. Managers who felt that they were successfully managing their fisheries now find that they are failing in this new dimension, or newly prioritised dimension.

The extent to which management is successful can also be complicated by attempting to evaluate management under conditions of change which have nothing to do with management interventions themselves. Managers may be blamed (take credit) for negative (positive) effects that are unrelated to their actions. In addition, when things go wrong they may look around for external factors to blame – analyses of collapsed fisheries almost always list a host of external factors (temperature changes, salinity changes, climate change, El Niño etc.), whereas the one common factor tends to be overexploitation.



SIFAR - Support unit for International Fisheries and Aquatic Research

April 2004

HTML Version

#### 4. WEALTH (OR RESOURCE RENT) IS CLEARLY A KEY ELEMENT IN SUCCESSFUL FISHERIES MANAGEMENT, BUT THE DISTRIBUTION OF BENEFITS BETWEEN STAKEHOLDERS (EQUITY) IS ALSO IMPORTANT<sup>(7)</sup>

A first requirement is for management instruments to be implemented which allow wealth (resource rent) to be generated. It is also very important to address the distributional question at the outset because experience strongly suggests that inequitable systems (which largely means in terms of benefit sharing, although this may also mean access arrangements) may not be sustainable. Great care needs to be taken concerning how the instruments are implemented because it may be very difficult and/or expensive to change the implementation<sup>(8)</sup>.

It could be argued that fish resources are the property of the nation and are managed by Government on behalf of the nation. Statements such as this are often found in fisheries legislation. On a strict reading, such statements would imply that all rents should be extracted by the Government on behalf of the nation as resource owner. However, there are reasons for thinking that a fair share of rents between the nation and fishers is likely to be in the general interest.

First, as a practical matter, taxing resource rent at 100% is extremely difficult, if not impossible. The inherent variability in fishing means that the taxation system would have to have a degree of flexibility which rarely if ever exists in such systems.

Second, experience around the world clearly shows that very high levels of tax (whatever the tax base) encourage the private sector to adopt tax avoidance behaviour (legal or not) which is very expensive to control. As a result, net tax revenue is often higher at lower tax rates.

Third, and the most important argument from a fishery management viewpoint, leaving the private sector with a share of the resource rent gives fishers a stake in the well-being of the fish stock and in the economic improvement of its exploitation. If a share is to be left to the private sector on a sustainable basis, a successful management system must find an instrument enabling the value of the rent to be revealed. In many countries the chosen instrument is the ITQ - Individual Transferable Quotas. In this case, fishers should have an incentive towards sustainable exploitation so as to maintain and increase the value of their use rights. This stake in the future of the resource may also help with enforcement of management measures since non-compliance will impact on the value of ITQs.

In conclusion, successful management needs to address the wealth issue very early on. The fact that many fisheries are in poor economic condition when management is implemented should not blind the authorities to this need. Correction after the event is often not an option.

### Key literature

Charles, A.T. (2001) *Sustainable fishery systems*. Oxford: Blackwell Science.

Cochrane, K.L. (ed.) (2002) *A fishery manager's guidebook. Management measures and their application*. FAO Fisheries Technical Paper No. 424. Rome: Food and Agriculture Organisation of the United Nations.

FAO (1995). *Code of conduct for responsible fisheries*. Rome: Food and Agriculture Organisation of the United Nations.

FAO (1997). *Technical guidelines for responsible fisheries No. 4: Fisheries management*. Rome: Food and Agriculture Organisation of the United Nations.

FAO (2002). *The state of World fisheries and aquaculture*. Rome: Food and Agriculture Organisation of the United Nations.

Garcia, S.M. and R. Grainger (1997) Fisheries management and sustainability: a new perspective of an old problem? In: *Developing and sustaining World fisheries resources: The state of science and management: 2nd World Fisheries Congress*. Hancock, D.A. et al (eds). Collingwood, Victoria, Australia: CSIRO Publishing. pp. 631-654.

McGraughran, D.A. (1997) Seventy-five years of Halibut management success. In: *Developing and sustaining World fisheries resources: The state of science and management: 2nd World Fisheries Congress*, Hancock, D.A. et al (eds). Collingwood, Victoria, Australia: CSIRO Publishing. pp. 680-686.

---

(1) This Policy Brief draws upon work undertaken for the World Bank/SIFAR/IDDRA Project 'Study of good management practice in sustainable fisheries'.

(2) A review of the international fisheries literature is provided by Bennett (2003) as part of the project identified in footnote (1).

(3) The case-studies and overall findings of the project are presented in the other Policy Briefs in this series.

(4) The relationship between fisheries management systems and other systems in society (i.e. the wider context of fisheries management) in relation to sustainability, governance and policy is outlined in Garcia and Grainger (1997) and also in Policy Briefs 12: [Key concepts I: Fisheries management systems and governance](#), and 13: [Key concepts II: Fisheries policy, the policy process and policy analysis](#), in this series.

(5) For a further examination of performance assessment see Policy Brief 11: [An approach to assessing fisheries management performance](#) in this series.

(6) See: FAO (2003) [Technical guidelines for responsible fisheries No. 4, Suppl. 2. Fisheries management - the ecosystem approach to fisheries](#). (The Guidelines resulted from a Technical Consultation on the Ecosystem Approach to Fisheries, Reykjavik, 16-19 September, 2002).

(7) The important relationship between wealth generation and distribution in fisheries is emphasised widely in documents such as FAO (1997).

(8) While this Policy Brief focuses on the importance of wealth generation and distribution in fisheries management (as an entry-point), it should also be recognised that other perspectives on fisheries and other issues are also important (and inter-related) including the nature of governance and management systems (e.g. co-management and centralised management), and associated tools (e.g. role of property rights, fishing capacity reduction programmes and alternative employment for fishery stakeholders). FAO (2002) and previous reports in this series provide an update on recent developments in these domains.

[Click here to return to the list of Policy Briefs](#)