

INTEGRATED ENVIRONMENTAL AND ECONOMIC ACCOUNTING IN FISHERIES

A Joint Initiative of the
Fisheries Department and Statistics Division of the
Food and Agriculture Organization of the United Nations (FAO/FI/ESS),
Institute of Advanced Studies of the United Nations University (UNU/IAS)
and
United Nations Statistics Division (UNSD)

Prospectus

1. BACKGROUND

The resources provided by nature are central to the economic performance of the fishery sector and the well-being of the fishing communities and other people who make directly or indirectly a living from it. They comprise manifold fish species, coral reefs, sea grass beds, mangroves and other estuarine vegetation, nutrients received from rivers and land run-off, fresh water itself, and many other resources which ensure the growth, reproduction and health of the fish stocks. These varied components of natural capital in combination with human-made physical capital (i.e., machinery, fishing vessels and gear, etc.), human capital (skills, knowledge) and human work (labor) sustain the capacity of the sector to contribute to food production and food security. While the fishery sector's contribution to Gross Domestic Product (GDP) is small for most countries, its contribution to animal protein intake is globally in order of 17 percent, and much higher in many countries, especially those with low incomes and large populations (e.g. China, Bangladesh, the Philippines and others).

At present, only some countries maintain separate economic accounts for the fishery sector, and very few of them publish estimates of the fishery sector GDP. Those countries which prepare separate accounts, usually treat fisheries in the same manner as any other industry. Many fisheries, however, have characteristics which distinguish them from typical industries such as car manufacturing or the production of textiles. An important feature of the fishery sector is its high reliance on the functions and services of environmental assets including fish stocks, ocean currents, fresh water resources, coral reefs, mangroves and other types of forests, etc. Globally, these functions and services are becoming increasingly scarce due to the aggregate effects of excessive fishing, use of destructive fishing techniques, unsustainable culture practices (e.g. mangrove destruction through, *inter alia*, coastal shrimp culture) and habitat degradation by mostly other sectors of the economy. The economic consequences of such unsustainable developments are presently only inadequately, or not at all, reflected in national accounts. The costs associated with overfishing and habitat degradation are generally not systematically accounted for and thus policy-decisions are taken based on incomplete, or even erroneous information.

Another special characteristic of the fishery sector is the difficulty of precisely defining the production, asset and consumption boundaries. This difficulty relates to, for example, geographical and institutional boundary definitions because of the shared nature of many environmental resources including fish stocks and because of often ambiguous property rights conditions.

2. OBJECTIVES

The primary objective of this initiative is to produce guidelines for integrated environmental and economic accounting of capture fisheries and aquaculture in order to facilitate and promote the more wide-spread inclusion of the fishery sector in national accounts. This will allow for a better appreciation of the interrelationship between the production of fish, for primarily direct human consumption, the creation of income and employment, and the physical flow and quality of environmental goods and services. The guidelines will take as their basic framework the UN System of National Accounts (SNA) and the interim version of the UN System of Integrated Environmental and Economic Accounting (SEEA).

A secondary objective is to contribute to the methodological discussion on integrated environmental and economic accounting. The expected contribution comes about indirectly through, on one hand, the special characteristics of fisheries and their implications for accounting concepts and methods, and on the other hand, the participation in this methodological discussion by fishery scientists, biologists, oceanographers, fisheries economists, and others, whose views otherwise would hardly flow into this debate.

The three collaborating institutions have ongoing and prior activities related to national accounting. UNSD is the lead unit in the UN System on this subject and has been closely involved in the development of SNA and SEEA. UNU/IAS has organized jointly with the Economic Planning Agency of the Government of Japan an International Symposium on Integrated Environmental and Economic Accounting Theory and Practice in Tokyo in March 1996. FAO has published a manual on agricultural accounts in 196 entitled: *A System of Economic Accounts for Food and Agriculture* and the envisaged guidelines will complement it for the fishery sector.

3. PROCEDURE

The steps envisaged for producing these guidelines are as follows:

- a) Launching of a three-month electronic workshop starting August 1997, the objective which is to obtain inputs and advice from a wide cross-section of experts in various disciplines including natural sciences (especially fishery biology), social sciences (especially fishery and ecological economics) and statistics (especially fishery statistics, national economic accounting and resources/environmental accounting) in various countries and regions.
- b) After the workshop, authors will be contracted to prepare the first draft methodological guidelines. The draft will be peer reviewed by experts and will be made available on the Internet for comments.
- c) Prior to publication, and if agreeable, the final draft guidelines may also be reviewed by international working groups dealing with national accounting methodology, e.g., the Inter-Secretariat Working Group on National Accounts (ISWGNA), and the London and Nairobi groups, respectively.

The guidelines are expected to be published in the summer of 1998. The application of the guidelines to case studies is subsequently foreseen.

REGIONAL COOPERATION IN STRENGTHENING THE APPLICATION OF FISHERY STATISTICS

One very important recommendation of the 1992 UN Convention on the Law of the Sea (UNCLOS III) and the various regional and international initiatives as offshoot of UNCLOS III, was the need for strong cooperation among agencies in the region. Such cooperation could serve as a vehicle to assist the coastal nations in reinstating the almost demolished fishery resource base in Southeast Asia; facilitate sustainable development of fisheries in the region; and as a tool in achieving a systematic collection, compilation, and processing of fishery and aquaculture statistics for the rational management of fishery and aquatic resources.

For the aforecited reasons, FAO, SEAFDEC, and APFIC facilitate the compilation and utilization of fishery statistics in the region through their regional fishery statistics program. FAO has enhanced the improvement of the collection of fishery and aquaculture statistics in the region through the formulation and application of databases that it had developed. SEAFDEC on the other hand, publishes the annual Fishery Statistical Bulletin for the South China Sea Area, continues the compilation and publication of tuna fishery statistics in the Southeast Asian region as well as the catch and effort statistics of the region; and together with APFIC, continues to improve the compilation and processing of fishery and aquaculture statistics in the region.

FAO, SEAFDEC, and APFIC also collaborate with other organizations and agencies in the region in the implementation of their respective fishery statistical programs. These programs are aimed at addressing statistical issues and needs common among the nations. While facilitating cooperation in the compilation and appreciation of fishery statistics, these regional organizations also noted the increasing concern about timeliness, reliability, and compatibility and comparability of the data collected by the national agencies which could also be tackled as a collaborative effort among the agencies concerned.