

Insights on the Developmental Aspect and Future Importance of Artisanal Fisheries*

The prevailing concept of fisheries is generally that of the superior efficiency of commercial vis-à-vis small-scale or artisanal fisheries. In most of the developing countries, however, in the face of the problems of the commercial sector (stagnation of catch levels, creation of exclusive economic zones and steep increases in fuel prices), small-scale fisheries are on the contrary proving to be a vital sector, having numerous socioeconomic benefits and possessing their own dynamism and a remarkable capacity for adaptation.

The Popular Stand: Superiority of Commercial Over Small-Scale Fisheries

Studies show that in a number of developing countries, fisheries are or should be given priority because of both their importance as suppliers of animal protein and contribution to the national economy.

However, the general idea is that in fisheries, development most often should first emphasize the rapid growth of the fleets, especially the commercial, and that it should also concentrate on an often excessive increase in fisheries-related infrastructure (installation of ports, distribution systems, storage, processing and marketing) with a massive drain of capital. All of this is based on belief in the greater efficiency of commercial fisheries and on the goal to consequently minimize the contribution of the small-scale sector.

The deliberate favoring of commercial over small-scale fishing is clearly illustrated by the considerable difference in the national budget currently allotted to each sector by many developing countries. For example:

- In Sierra Leone, between 1974 and 1979, only 6.7% of the national fisheries budget was for small-scale fisheries, versus 67% for the acquisition of a fleet of 34 commercial vessels. Even worse, a 36.5%

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tax was being imposed on imported small-scale fishing equipment (the same rate as that applied to so-called "semi-luxury" products) versus 10% for equipment for the commercial fisheries.

- In Senegal, the imbalance is not as great and is improving. Since the 1960s, outboard motors, fuel and certain engines have been sold tax-free to small-scale fishermen. For the first four 4-year Development Plans after independence (1960), the commercial fisheries absorbed the majority of investments, up to 80% under the Fourth Development Plan. For the Sixth Development Plan (1981-1985), the proportion is 66% for the commercial and 25% for the small-scale fishery sectors.

- Similarly, between 1976 and 1980, the Ivory Coast invested US\$70,000,000 in marine fisheries, of which the greater part was for developing commercial fishing (tuna fishing boats, port, storage plants).

In this context, small-scale fishing is seen to have been hastily reduced to a traditional sector, almost exclusively oriented towards the small-town markets and frequently considered as obsolete in the face of the present economic requirements. And while the importance of its social impact is in general willingly recognized, the many other advantages of small-scale fisheries have not been stressed enough, amply justifying this attempt to correct the long-neglected imbalance.

The profoundly evolutionary character of this sector, which affects many aspects of social and economic life in developing countries, has been ignored.

And Yet Facts Show. . .

In most developing nations, small-scale fisheries are revealing themselves to be economically more viable than commercial fisheries, if the entire local situation is taken into account.

- In Senegal, for example, artisanal fisheries produce almost 70% of the total marine catch and are more efficient in many ways: rate of return on total assets ($\frac{\text{net sales}}{\text{investment}}$) of 50-70% versus 3-7% for commercial fisheries; source of livelihood of 30,000 small-scale versus about 3,000

commercial fishermen; less than 5% rejects in the catch due to the use of traditional processing versus at least 50% for the commercial sector; greater selectivity of catch than for commercial fisheries; and lastly, a rate of added value of almost 60% versus around 30% for commercial fisheries.

Generally, small-scale fisheries utilize 20-30 times more manpower than commercial fisheries; their amortization/depreciation is much faster than in commercial fisheries because investment costs are considerably lower than those required for the smallest commercial fishing unit. Commercial units are usually entirely imported, knowhow included, while in small-scale fisheries, only outboard motors and synthetic nets are imported and indigenous technology is used.

The costs of processing and distributing traditionally processed fish products in small-scale fisheries are likewise much lower, permitting a greater accessibility to these businesses on the one hand and to the products on the other, which



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are generally highly appreciated by the local markets. (However, the cost of transporting fresh fish is very high.)

Finally, the introduction of improved methods in small-scale fisheries is generally more rapid and easily accessible to the fishermen since the latter for the most part already possess their own technology (e.g., the Imraguen fishermen of Mauritania) or have inherited one from other reputable fishing communities (e.g., the Ghanaian or the Senegalese, whose methods and bravery are known to all of west Africa).

Commercial fishing, on the contrary, requires not only equipment that is becoming more and more sophisticated, but also a complete transfer of technology that is very costly and entirely new, thereby giving rise to the necessity to train sufficient manpower to make use of and maintain these technologies and related structures. Such transfer could lead to a problem of "reception", that is, requiring adaptation to a way of thinking that is different.

What Should be Done?

The necessity to reconsider the usual approach to the development concept itself may be demonstrated by various characteristics of small-scale fisheries.

The approach that is generally recognized as the most exact for this subject consists in effect of promoting the transfer of technology. While the intention behind the transfer may be laudable, it may reveal itself very often to be a source of dependence and poorly suited to the true needs of its recipients, since it is born most often of preconceived ideas which culminate in the establishment of prefabricated models of development. Such models do not sufficiently take the local technology or situation into account.

However, since technology is inseparable from the economic and social context in which it is practiced, one may wonder if the best innovations in fisheries might not be more apt to come from the fishermen themselves. This applies to both technical and social innovations, the latter providing the supporting framework without which technology would have no effect.

Events such as the failures of fishing cooperatives in many countries clearly

show that technology can produce its effect only through the process of its social adoption by those who utilize it. All the factors of modernization (external aid in the maintenance of vessels and gear, inflow of equipment and of new techniques, etc.) can become effective only if they do not clash with the customs and attitudes of the intended beneficiaries of the transfer.

Furthermore, it is particularly desirable in the small-scale fisheries sector that all external assistance take into account the existing customary techniques and attempt by means of a primary multidisciplinary and concerted study to define how best to integrate its contribution to the real and felt needs of the fishermen or their representatives.

Aid must be Integrated and not Imposed to be Useful and Accepted

Small-scale and commercial fisheries are two radically different ways of exploiting the same resources.

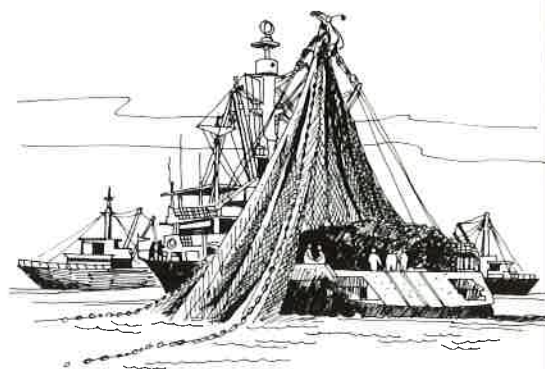
- While commercial fishing is a function of a precise type of technology, the technology of small-scale fishing is developed by the fishermen but is neither adapted nor imposed on the latter. It is rather a function of the social conditions in which its practice comes about.

- While commercial fisheries were conceived as an entrepreneurial activity, it is clear that small-scale fisheries arise from a compromise between entrepreneurship and the response of rural communities in developing countries to their problems; it is for the fishing communities a source of employment whose practice is effected within the limits of the funds available to them.

For these reasons, their major role in the economy of developing nations and their inherent dynamism lend to small-scale fisheries a capacity for continual adaptation. Likewise, their active participation in many aspects of development unmistakably imparts to small-scale fisheries a significance which can never be replaced by the accidentally complementary development of commercial fisheries.

How the Situation can be Improved

During the past decades, experience in most developing countries having access to a fishery resource has shown that in the face of a commercial fishery sector which is not always profitable but systematically becomes a cause of



dependence on foreign capital (profits on which are rarely reinvested locally besides!), small-scale fisheries are often preferable because of the numerous socioeconomic benefits brought about (employment, added value, foreign exchange and other induced effects). It seems evident that small-scale fisheries should be allowed to expand rapidly, since they can with a minimum of improvement contribute significantly to a country's real development.

It would appear desirable to review the general concept which declares small-scale fisheries to be an "obsolete" form of production which must be made to develop into a "superior form", meaning commercial. While it is obvious and necessary that small-scale fisheries should evolve, this evolution must be directed towards new, more dynamic small-scale fisheries, not just towards some kind of commercial fisheries.

Any improvement in productivity requires a parallel improvement in the flow of marketing. Without this, any gain in productivity may be lost, because the channels of distribution are inadequate.

In the same way, small-scale fisheries development will involve improvements to fishing villages, which are generally relegated to marginalization because of the difficult conditions in which they exist, such as lack of sanitation, health and educational facilities.

Since a minimum of infrastructure and training are indispensable to this development, it is now the role of the authorities concerned to make the choice of necessary arrangements, and to reorient the greater part of the budget currently given to the commercial fisheries sector, in favor of the small-scale fisheries sector and its evolution. ●