

## Small-Scale Fisheries in Brazil

HORACIO ROSA

*Superintendencia do Desenvolvimento da Pesca  
Brasilia, Brazil*

### INTRODUCTION

Both industrial and small-scale fisheries are practiced along the whole coast of Brazil; the latter being also found in inland waters.

The small-scale fisheries are characterized by the lack of infrastructure and boats of less than 20 tons, a large number of which are row or sail boats. They can be grouped as "subsistence fisheries", carried out with such rudimentary equipment and under such conditions, that the financial yield does not normally reach the minimum subsistence level of the fishermen; and as commercial fisheries carried out by professional fishermen. Small-scale fisheries are carried out in inshore waters, estuaries, lagoons, rivers, and lakes and they complement the industrial fisheries.

The fishermen in Brazil are organized in "colonies", each colony with a minimum of 300 members. There are about 240 colonies in the country with a membership of about 90,000 registered members. The colonies have certain social welfare functions such as schools, medical, and dental services and, according to their statutes, they promote among their associates the organization of production and consumption cooperatives.

The colonies are affiliated with the Federation of Fishermen established in each state and territory of the country. These in turn are affiliated with the National Confederation of Fishermen.

### THE SMALL SCALE FISHERIES

The small-scale fisheries contribute about 50% of the total fish production of the country or approximately 950,000 tons.

There has been a gradual mechanization of the craft used by the small-scale fishermen. Of the 121,271 boats registered in 1960, only 3,176 or 3% were motorized. In 1968, of the 54,695 registered units 9% were motorized, 53% were row boats and 38% were sail boats.

To assist the small-scale fishermen a Plan of Assistance to the Small-Scale Fisheries (PESCART) has been implemented since 1973 by the Superintendency of the Development of Fisheries (SUDEPE) – the federal fisheries service of Brazil, in collaboration with other national, regional, or state institutions and programs. The basic objectives of the PESCART are to: (1) raise the technical level of the small-scale fishermen; (2) raise the income of the small-scale fishermen and consequently the standard of living of their fishing communities. Specifically it assists in the following sectors: (a) methods of capture; (b) processing, distribution and marketing; (c) training; (d) credits and loans; (e) cooperative and community development.

During the period 1973-1976 PESCART invested about U.S. \$2.4 million in the development of its activities, and it operates 79 extension service units with a staff of 185 technicians assisting 64,000 fishermen and their families.

In 1976, 320 maritime engines of 10 to 100 h.p. were introduced by PESCART in the small-scale fisheries, as well as 20 boats from 1 to 10 tons and a further 50 smaller boats. Nine hundred loan projects were approved as were 60 credit schemes amounting to U.S. \$230,000. Twenty-nine cooperatives were strengthened or organized.

#### Assistance to the Small-Scale Fishermen in the State of Santa Catarina

Santa Catarina is a good example of the result of active assistance of PESCART and other institutions. There are 14 extension units in operation. The state has a coastline of 531 kilometers; there are 22,000 small-scale and industrial fishermen.

The catches of the small-scale fisheries are increasing. The catches in 1974 were 29,800 tons representing 23.5% of the total catch of the state, an increase of 1.8% over the catch of the previous year. The majority of the boats are powered by small diesel or gasoline engines but there are also row and sail boats.

The increase of the catches of the small-scale fisheries is due largely to the assistance given during the last 6 years by the association of Credit and Assistance to the Fisheries of Santa Catarina (ACARPESC) in cooperation with PESCART, SUDEPE, and other institutions.

The objective of the assistance is to increase the productivity of the small-scale fishermen and raise their standard of living at the community level. ACARPESC is giving assistance to 140 fishing communities.

The results of the extension work carried out in 1976 were as follows:

- (1) Three hundred and thirty-nine gasoline engines were replaced by diesel engines resulting in a reduction of the operational costs of the boats of about U.S. \$600,000. The operation was initiated in 1975 when 405 gasoline engines were replaced by diesel engines. The total replacement in 1975/1976 was of 744 engines and the saving during the same period was of about U.S. \$1.3 million. There was no reduction of the catches.
- (2) The traditional single species capture practices were the main cause of small catches, depletion of the species and consequently a low income per capita. The diversification of the fisheries has been successful, resulting in a continuous production during the year and a reduction of excessive effort on a few species.
- (3) Fish handling and preservation were improved by the introduction of isothermic boxes on board some of the boats, the installation of small freezers, cold storage units, and the use of isothermic trucks.
- (4) A conservation program was initiated as a result of which over 200 fishermen used new fishing methods to protect various species, particularly shrimp.
- (5) Credit schemes were initiated in 1975 and, at the end of 1976, 625 loans had been granted to a total of about U.S. \$68,000. The loans were made

mainly for the introduction of diesel engines, various types of fishing boats and gear, and the purchase of isothermic trucks and freezers.

- (6) A program to eliminate the excessive number of fishermen was developed.
- (7) Courses were given in various fields to utilize idle manpower.
- (8) Programs were developed to improve the diet, medical and dental care, and housing of fishermen and their families.
- (9) A program was carried out to (i) improve the 16 fishermen colonies of the state and to increase their membership, which is about 15,500 fishermen; (ii) to teach the fishermen the principles and advantages of the cooperative systems. A unit was installed in one of the colonies to buy fishing equipment at wholesale prices and sell it to the fishermen with a small profit to cover the administrative expenses. The unit will be developed initially into a consumption, and eventually into a mixed cooperative.

#### CONCLUDING REMARKS

The extension services, the systems of credits and loans and the educational and social assistance being provided by PES CART in cooperation with federal and state institutions, are being successfully developed within the available financial resources. However, the improvement of the colonies, and the expansion and strengthening of the cooperatives, still require substantial efforts to make them effective instruments in the organization of the activities of the small-scale fishermen and their communities.

The main problem of the cooperatives is the need for efficient management to demonstrate to the fishermen in a short period the benefits that they may bring to them and their communities. It is expected, however, that through extension services and educational and social assistance the small-scale fishermen will be eventually prepared to manage effectively their own colonies and cooperatives.

## La Industria Pesquera en Pequeña Escala en el Brasil

### RESUMEN

La pesca en pequeña escala contribuye aproximadamente con un 50% de la producción total de pescado del Brasil lo cual representa unas 950,000 toneladas.

Este trabajo describe los programas de asistencia a los pescadores en pequeña escala, que está llevando a cabo la Superintendencia para el Desarrollo de la Pesca –SUDEPE– servicio federal a la pesca del Brasil– en colaboración con otras instituciones federales y estatales; un buen ejemplo de los resultados de la asistencia a estos pescadores lo es la información suministrada al Estado de Santa Catarina sobre los programas que se están realizando.