

Small-scale fisheries in Slovenia

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Abstract

Small-scale fishery is poorly known and basically not monitored. Officially, small-scale fisheries is not recognized as category within national fisheries. Practically, small boats equipped with passive fishing gears are regarded as components of the small-scale artisanal fishery sector. The current number of fishing units that may be attributed to the small-scale fishery sector is estimated at 73 vessels. Indicatively, the average yearly catch could be estimated at around 100 tonnes. The establishment of a basic monitoring system is indicated as a priority action.

Keywords: artisanal fishing; fishing vessels; fishery development; MED, Slovenia; MED, Adriatic Sea

1. Introduction

The knowledge on small-scale fishery in Slovenia is very poor. We know that small fisherman do exist but nobody knows the appropriate definition of what small-scale fishery is. The Slovene fishing fleet has never been officially classified into categories of small- and large-scale fishery, so the definition is missing. Nevertheless, unofficially the division between small- and large-scale fishery was always present. Small boats equipped with gillnets, entangling nets, pots, and long-lines were considered as belonging to small-scale fishery. On the contrary, fishing boats equipped with active fishing gear (e.g. purse seines, trawls or dredges) were considered as large-scale fishery.

The need for an appropriate definition of Slovene fisheries has arisen during the ongoing organization of the National Statistical System for marine fishery. The system is based on two different data collecting approaches: sampling for small-scale and logbook for large-scale fishery. The proposed categorization is based on overall vessel length (LOA), which means that vessels less than 10 m LOA are considered as small-scale fishery.

For the categorization of fisheries two scales, absolute and relative could be used. The relative scale deals with catch capacity, which is lower in small-scale fishery (Ruttan *et al.*, 2000). In the Slovene case, landing data for appropriate vessels are not complete or are entirely missing. In these circumstances the use of a relative scale is not appropriate.

This report is the first attempt at classification of Slovene fishery based on an absolute scale and considering the size of fishing vessels as well as the type of fishing gear.

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2. The definition of small-scale fishery

According to the data from the Fishing Vessel Register for the year 2003 in the framework of the national statistical system for marine fishery, the Slovene fishing fleet consists of about 107 fishing units. The main characteristics of the Slovene fishing fleet are given in Table 1. Overall length (LOA) distribution and the main purpose of fishing units is shown in Figure 1.

Table 1. Main characteristics of the Slovene fishing fleet.

	Min	Max	Total
Overall length [m]	3,4	29,13	
Engine power [kW]	2,57	597	6572
Gross tonnage	0,41	156,2	794

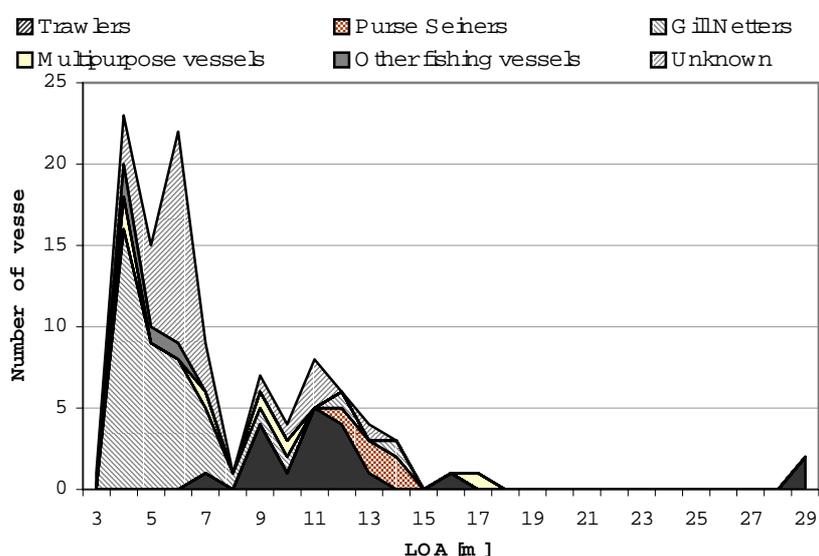


Figure 1. Overall length (LOA) distribution and main purpose of Slovene fishing units. Source: Fishing Vessel Register (2003).

To obtain a list of small-scale fishing units from the Slovene fishing fleet the following units were excluded:

- All units with LOA equal or above 10 m;
- All units using active fishing gears (in this case trawlers only) irrespective of their LOA.

A Proposed definition of Slovene a small-scale fishing unit based on an absolute scale: a small-scale fishing unit is every fishing boat for which the overall length is less than 10 meters and which has permission to use gears other than active fishing gears (e.g. trawls, dredges, purse seines, fishing machines).

As previously stated, there is no specific knowledge on the status of the national small-scale fisheries. Furthermore there is currently no monitoring system or programme which includes the small-scale fisheries sector.

3. Size of the small-scale fishery sector

3.1 Fishing units

According to the proposed definition, the Slovene small-scale fishing fleet would consist of about 73 fishing units. Their main characteristics are listed in Table 1.

The structure of the small-scale fishing fleet according to the purpose of fishing units is shown in Figure 2. The overall length distribution and the main purpose of fishing units are given in Figure.

Usually the owner of the fishing unit works alone and has no employed persons; only the owner's family is dependent on the profits from the catch sale.

Table 1. The main characteristics of the Slovene small-scale fishing fleet.

	Min	Max	Total
Overall length [m]	3,4	9,6	
Engine power [kW]	2,57	123	1655
Gross tonnage	0,41	5,3	118

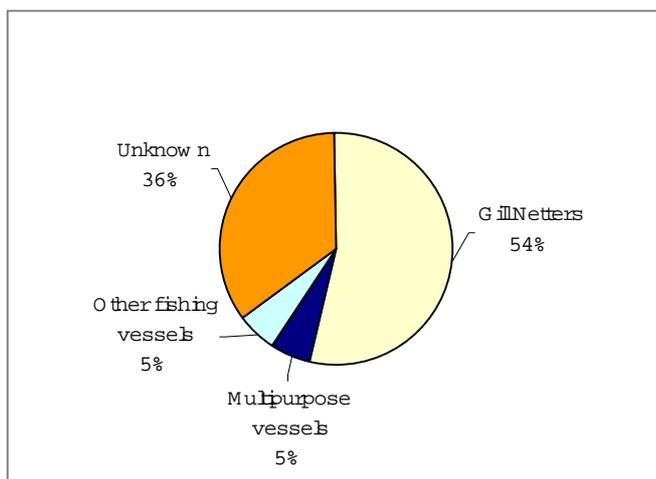


Figure 2. Overall length (LOA) distribution and main purpose of the Slovene small-scale fishing units.

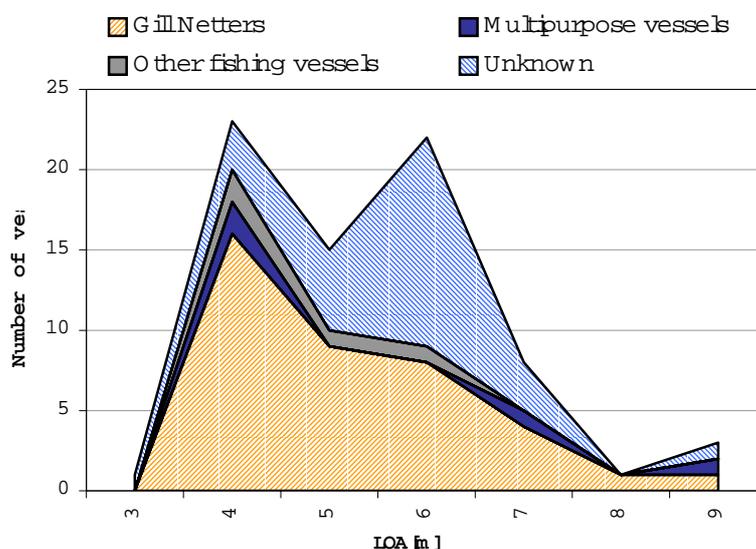


Figure 3. Structure of the Slovene small-scale fishing fleet according to the purpose of fishing units.

3.2 Catch

Catch data as available from the Statistical Office of the Republic of Slovenia are not suitable to estimate the quantity and quality of small-fishery catch. Tentatively, the approximate estimation of small-scale fishery catches was done by subtraction of the catch of species which are almost entirely fished by active gears (most pelagic species, e.g. Clupaeidae, Scombridae and demersal species, particularly *Eledone moschata*).

The yearly catch from small-scale fishery ranged from a maximum of 552 tonnes in 1983 to a minimum of 30 tonnes in 1997 (Figure 4).

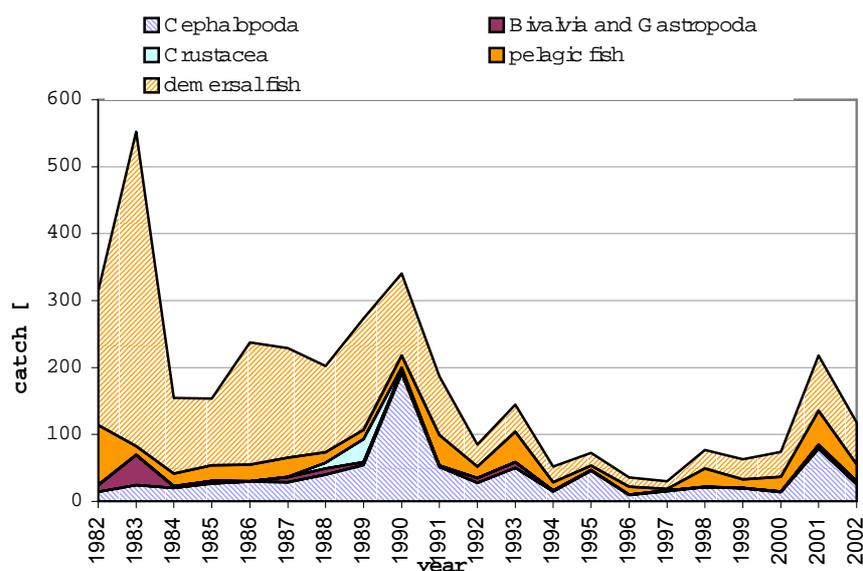


Figure 4. Approximate estimation of the small-scale fishery catch based on yearly catch data from the Statistical Office of the Republic of Slovenia. Species almost entirely fished by active gears were excluded.

Reduced access to fishing grounds in the early 1990s and adaptation of fishermen to the new geo-political situation are probably the most important reasons for the catch decrease. In the period from 1991 to 2002 the average annual catch was 96 tonnes. The catch structure for the same period is shown in Figure 5. The fishing grounds of small-scale fishing units are limited to the Slovene territorial waters.

4. Available scientific and technical knowledge on small-scale fisheries

Scientific investigations on small-scale fishery have never been performed. Knowledge on fishing gear is incomplete and is limited only to main categories of fishing gears that are in use by Slovene small-scale fishers. There are no data on construction and quantity of various fishing gears or data on spatial and temporal use and target species.

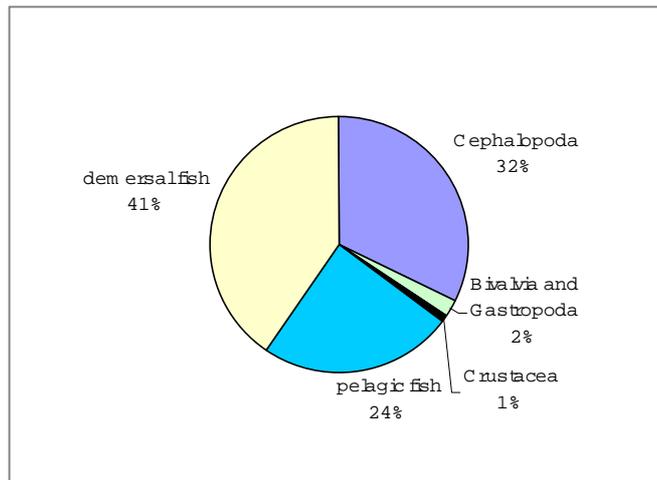


Figure 5. Small-scale fishery catch composition in period from 1991 to 2002. Approximation based on catch data available from the Statistical Office of the Republic of Slovenia.

5. National and international programmes

In the frame of FAO-AdriaMed the National Statistical System for Marine Fishery is being developed in Slovenia. By means of a sampling approach, the system will collect data from small-scale fishery. Data will not only cover catch and effort but also catch composition as well as spatial and temporal distribution of fishing activity.

The Fishing Vessels Register, which is part of the national statistical system, is almost complete. Currently the effort is directed towards the necessary regulations that will make the use of the fishery statistical system possible from the year 2004.

6. Identification of priorities and main gaps

Slovene small-scale fishermen are using a variety of fishing gears which are often hand-made or at least artisanally modified; some kind of local catalogue of fishing gears could be very useful. For example, the catalogue would be important as a reference text for collecting data in the framework of the national statistical system for marine fishery.

The Slovene small-scale fishery has always been excluded from fishery research programmes. As a consequence even the most basic data are missing. Regular monitoring that focuses on this sector of Slovene fisheries would provide a valuable contribution to fill the current gap in knowledge.

7. References

Ruttan, L. M., Gayanilo, F. C. Jr, Sumaila, U. R., Pauly, D., 2000: Small versus large-scale fisheries: a multi-species, multi-fleet model for evaluations and potential benefits. In: Pauly, D. and Pitcher, T. J. (eds.) *Methods for evaluation the impacts of fisheries on North Atlantic ecosystems. Fisheries Central Research Reports*, (8) 2: 64 - 75.