

TYOLOGY OF GREEK SMALL-SCALE FISHERIES BASED ON SOCIAL, ECONOMICAL AND BIOLOGICAL ELEMENTS

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Abstract

A survey for the identification of the characteristics of Greek small-scale fisheries was conducted in 121 ports of 18 prefectures of Greece. The results showed the traditional, family-dependent and locally varying character of small-scale fisheries. Three groups of fishermen according to their dependence on fisheries were identified. Fishing activity exhibited a seasonal pattern. The identified complexity of small-scale fisheries should be taken into account for management implementation.

Keywords: small-scale fisheries, fishermen, typology, Greece

Introduction

Small-scale coastal fisheries comprise an important part of Greek fisheries in terms of landings, vessels and manpower [1, 2]. Overfishing problems have forced the European Union to reduce fishing effort through reduction in the number of fishermen and vessels [3]. The biological, economical and social characteristics of the system "small-scale fisheries" should be examined in order to optimize the management strategy and facilitate measure implementation.

Methodology

A total of 549 interviews of small-scale fishermen were conducted in 121 ports from 18 out of the 40 coastal prefectures of Greece. In order to obtain a representative sample of the Greek fishermen population, Greek prefectures were stratified according to the number of fishermen and the dependence on fisheries, the latter indicated by the total number of fishermen per population.

Results and discussion

Most Greek small-scale fishermen (64.6%) follow the family profession. The internal migration is low (85.7% and 68.8% live in the prefecture and in the place of their birth, respectively), while 65.5% are either illiterate or have attended preliminary school. The 61.3% working with other people on-board, work with members of their family. All these characteristics imply a closed, traditional system where measure implementation could be difficult.

Small-scale fishermen were categorised in 3 groups, according to their dependence on fisheries (Fig. 1). Group A: Dependence mainly on fishing, Group B: Dependence both on fishing and other sources and Group C: Dependence on other sources of income. These groups exhibited differences with respect to the total days of activity, income, vessel technical characteristics and level and means of information. Bearing in mind that current management policies aim towards reducing the number of fishermen, these groups should be treated differently in the licensing procedure in order to control fishing effort while at the same time minimizing social injustice.

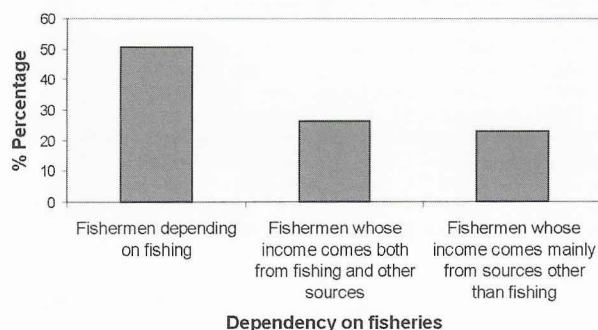


Fig. 1. Groups of fishermen according to their dependency on fisheries and estimated percentages for Greece.

The fishing activity exhibited a seasonal pattern with a peak in summer months (Table 1). Analysis of variance of monthly activity showed a significant difference between the 3 fishermen groups formerly identified (all P-values<0.01). Even though fishing pressure

Table 1. Mean and standard deviation of monthly days of activity of fishermen engaged in the Greek small-scale fisheries and of the three groups of fishermen identified according to their dependence on fisheries.

Month	Total	Group A	Group B	Group C
January	12.9±7.2	14.6±6.6	11.4±7.1	8.1±6.4
February	13.9±7.4	15.6±6.8	12.3±6.9	9.0±7.1
March	16.4±7.0	18.1±6.1	15.3±6.3	11.0±7.8
April	18.3±7.0	20.1±5.9	17.1±6.4	12.7±8.0
May	19.9±7.1	21.6±6.1	18.9±6.3	13.7±8.5
June	20.6±7.0	22.4±5.7	19.0±7.2	15.0±8.3
July	20.7±7.0	22.5±5.6	18.9±7.4	15.0±8.0
August	19.4±7.4	20.8±6.5	18.2±7.7	14.9±8.4
September	19.7±7.3	21.4±6.3	18.1±7.5	14.4±7.7
October	18.4±7.1	20.1±6.3	17.1±6.1	12.5±7.3
November	15.9±7.2	17.6±6.4	14.4±6.4	10.2±7.7
December	13.3±7.2	14.8±6.5	12.1±7.0	8.4±6.8

from small-scale fisheries is difficult to be monitored, it is bound to follow this seasonal pattern. This pattern varies among different areas of Greece.

A total of 18 different fishing gears (e.g. nets, longlines, beach seines, trolling lines) and 62 target species (e.g. *Mullus surmuletus*, *Pagellus erythrinus*, *Diplodus vulgaris*, *Boops boops*) were recorded during the survey, exhibiting intense seasonal and local variability. The latter is related to the type of the ecosystem (e.g. presence of lagoons, open sea), the biology of the target species and the existing legal prohibitions for gear use. The large number and combinations of gear and target species demonstrate the multispecies-multigear character of the Greek small-scale fisheries. The combination of these data along with activity records will result to the identification of the most important métiers [4, 5], the latter being a useful tool for fisheries management.

References

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