

Секція: Проблеми методології та практики управління

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METHODOLOGICAL APPROACHES IN ORGANIZATION OF NATIONAL SYSTEM OF FISHERY STATISTICS IN ESTONIA

Estonian Sea Inspectorate (ESI) has the responsibility of the collection and processing of data from off-shore fisheries in the Baltic Sea (vessels fishing beyond 20 meter depth line). County governments have the responsibility for collecting and processing data from coastal and inland water fisheries and also for data concerning recreational fishing. The Fisheries Department is responsible for collection and processing data from high-seas fisheries, aquaculture and processed data from Sea Inspectorate and County governments. Following data is collected and processed by the Sea Inspectorate: 2000 logbook sheets annually

(sheets from fishing vessels); 14 000 landing declaration sheets annually; 22 000 sales-notes annually; IN and OUT reports of foreign vessels to and from Estonian waters; observer reports from the vessels fishing in the NAFO Regulatory Area. Logbook sheets, landing declarations, first buyer receipts (sales-notes) are collected from more than 200 vessels and processed on a monthly basis. The collection of fishery statistics is based on the Estonian Statistical Act (1997) and the Estonian Fishery Act (1995) as the national legal instruments, as well as on corresponding secondary legislation. The latter act regulates the collection and processing of fishery statistics. Special governmental regulations have been introduced to establish the detailed rules for presenting, collecting, processing and disseminating the fishery statistics. Estonian fisheries administration is harmonizing existing Estonian fisheries legislation with the EU requirements. The Ministry of Environment, Fisheries Department is responsible for the transmission of fishery statistics to international organizations (FAO, ICES, NAFO, EIFAC). Method of collection, processing and compiling data on aquaculture, catches, landings and average prices are next. The sources of the data and the methods used to collect the data are as follows:

a) two-sheet questionnaires on aquaculture production and restocking. The collection of data on aquaculture production and restocking is performed by means of a two-sheet (total 4 pages) survey questionnaire sent by post to aquaculture producers. The producers must return the completed questionnaires to the Fisheries Department in February of the next year. The Fisheries Department in turn submits a summary report to the State Statistical Office by the month of March. The producers must submit data on the type of production and the annual production of fish and crustaceans for consumption and restocking. Also required are data on the method of culture, number of units, hectares, hatchery/nursery output to a controlled environment and to the wild, where and what kind of species cultured in metric tons and the first sales prices.

b) log-book sheets. Masters of the vessels fishing beyond 20 meters depth shall enter the catch data to the logbook immediately after each haul. Log-book

sheets for the previous month shall be forwarded to the Sea Inspectorate not later than the 5th day of the following month. The completed log-book forms give the skipper's catch estimates expressed in live weight for all species (incl. TAC species) and by the ICES areas in which the fishing took place, data on the fishing method and the gears used, the number of days fished and number of trips. The Sea Inspectorate has to communicate summary reports to the Fisheries Department at the 20th day of following month at the latest. Approximately 150 sheets are collected and processed monthly. Each month the master of vessel fishing on the high seas shall communicate data from log-book for the preceding month to the Fisheries Department.

c) coastal fishery log-book sheets. These log-books are for reporting catches in waters shallower than 20 meters (including catches in inland waters). Coastal fishermen must send sheets to the county government by at the latest the 5th day of the following month and the county government in turn should send the data to the Fisheries Department by the 15th day of the following month at the latest. The completed log-book forms give the fishermen's catch estimates, expressed in the live weight equivalent, for the different TAC species and other species caught, including data concerning number of hauls, the gear used and the fishing area (ICES rectangle).

d) reports made by fishing card (recreational fishing). The owner of a fishing card has to communicate the catch data to the county government at the latest ten days after the end of fishing card's validity. County government must send summary reports to the Fisheries Department by March of the following year at the latest. The completed report forms give the fishermen's catch estimates expressed in live weight for the different species (incl. TAC species). Permitted recreational fishing equipment is listed in the Fishery Act.

e) landing declarations. Immediately after each landing the master of a fishing vessel has to complete the declaration and communicate it to the Sea Inspectorate within 48 hours of the landing. The declaration covers the following data: catch area (ICES rectangle), port of landing, and exact quantities in product

weight, quality and size group of each species (incl. TAC species). The Sea Inspectorate has to communicate summary reports to the Fisheries Department by the 20th of the following month at the latest. Approximately 14000 sheets are received and processed annually.

f) sales notes (first-hand buyer's receipt). The first-hand buyer of fish has an obligation to submit receipts to the Sea Inspectorate within 48 hours of the purchase. This receipt includes the following information: data concerning the buyer, place of landing, dates (catching, buying), species, amount of each species and the prices. The Sea Inspectorate has to communicate summary reports to the Fisheries Department by the 20th day of the following month. Approximately 22 000 sheets are received and processed annually.

g) fishing vessel register. The Estonian Court has the obligation to keep the vessel register. Until July 1998 the Estonian Maritime Board was responsible for keeping the Ship Register, which included also fishing vessels in a separate list. Development of the Estonian Fishing Vessel Register started in 1998. There are 308 fishing vessels of greater than 12 meters in length in the Estonian vessel register. In 1997 and 1998, 236 and 224 vessels respectively were involved in the trawl fishery in the Baltic beyond 20 meters depth line. In addition to fishing vessels 18 500 small boats (with an overall length of less than 12 meters) are registered with the Sea Inspectorate. About 40 % of these are used for fishing in the coastal area up to the 20 meters depth line. There are 22 vessels fishing on the high seas. The master of a vessel landing fish in foreign ports or transshipping fish should complete a landing declaration and send it to the Sea Inspectorate. The form of this declaration is the same as that used in Estonian waters. Fishing areas refer to ICES sub-divisions and the statistical rectangles of the Baltic Sea as designated by the rules of International Baltic Sea Fishery Commission. If a vessel's activity covers more than one rectangle the catch is allocated to the rectangle or sub-division where most of the fish was caught. High-seas fisheries are recorded by the FAO Major Fishing areas. The production price for carp and trout is collected annually by questionnaires as mentioned above. The average

prices for all species are calculated from the data in sales notes. The average price is calculated by the means of weighted average. The prices include VAT (value added tax). In the Sea Inspectorate and in the Fisheries Department all data are computerized and cross-checked to avoid mistakes or misreporting. On the basis of these data received by the Sea Inspectorate the utilization of the quota allocated to the vessels, and consequently on that to the Estonia is controlled. When the amount of the fish caught reaches the limit of the vessel, its fishing activities are stopped. The aquaculture and catch data are published regularly. The State Statistical Office issues every year brochures «Estonian Statistics» (in April) and «Environment in Figures» (in June) where aquaculture statistics is available. In a brochure «Statistical Yearbook of Estonia» issued every year in August it is possible to find catch statistics. The collection of data on the aquaculture production does not involve the use of sample surveys. In order to guarantee a complete coverage, the list of producers is constantly up-dated. Neither does the collection of fisheries data involve the use of sample surveys. To increase reliability of the catch data the Sea Inspectorate compares data from landing declarations, sales notes and also log-books (fig. 1).

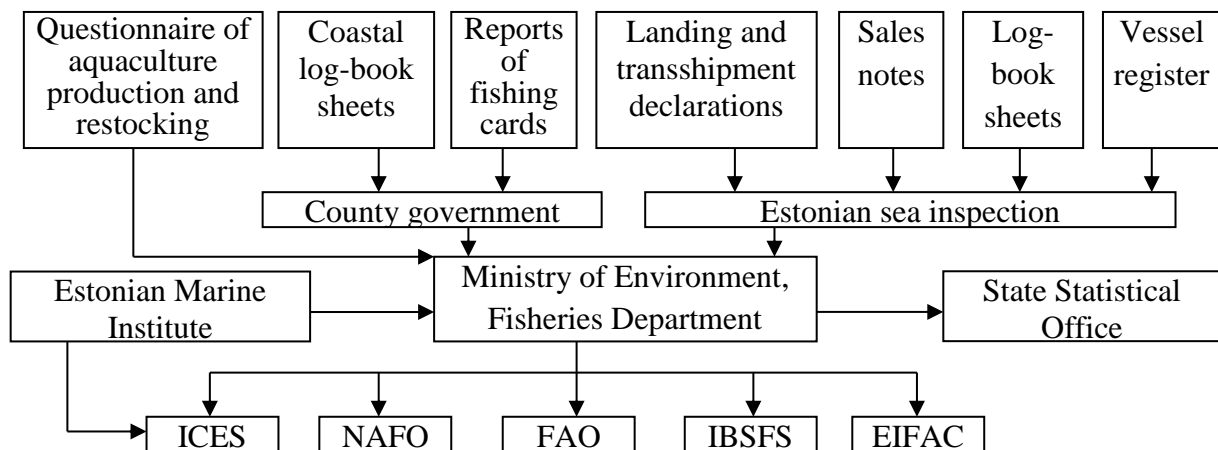


Fig. 1. Organization the system of fishery statistics in Estonia

For technical reasons it is not possible to compare the data from coastal logbooks with data from the sales notes. To improve this situation an integrated fisheries information system is under development in the Sea Inspectorate. This system will link several databases, for example those for the licenses issued, the

catch information and violations. Included in this system will be the fishing vessel register, which includes all vessels, registered in and flying the flag of Estonia involved in all types of fishery activities.