

FISHING, A RESOURCE IN THE TOURIST RAZIM – SINOE AREA

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Abstract

Fishing is one of the tourist resources available to the Danube Delta area. Analysis of this resource highlights the link between this activity and the number of tourists arriving in the area contributes to the development of tourism in the Razim-Sinoe area. For this study, the statistical data provided by the National Statistics Institute, Tulcea County Department and the Danube Delta National Institute for Research and Development were used. The data were processed and converted into tables, graphs and then interpreted and analyzed. Ichthyofauna of the lagoon area is very diverse comprising dozens of species: catfish, carp, bream, crucian carp, rudd, rapacious, pike, zander, perch. Following the available data, there is a decrease by about 50 % in catches, between 2003-2013, both within each species and in total, from a quantity of 5,635 tons in 2003 to 2,307 tons in 2013. Catch experienced a dramatic drop caused by a number of shortcomings of fisheries. Such problems of fisheries are connected with the fishing law, but also with the fish marketing. Fishing facilities face a wide range of shortcomings of technical, organizational or management, making it difficult to start or materialize licensees projects. These deficiencies of fish facilities and that the authorities do not invest in their redevelopment, are observed in the number of tourists visiting this area, where there are 44 accommodation units. The number of visitors was 73,767 in the year 2014, of which 53,322 Romanian and 20,445 foreign tourists. The months with the highest number of tourists are July, August and September.

Key words: deficiencies, fisheries, fishing, natural water, tourists

INTRODUCTION

Fishing is the representative activity, often combined with agrotourism in the Razim-Sinoe area [4]. On the surface of the analyzed territory, fish farming on an industrial scale is the main economic activity, organized especially on designated areas [3].

Discussing about "Fisheries", we must think to fish biology, fishing methods and areas. From this point of view, fisheries can be classified into two major categories: (i) fisheries of freshwater fish (predominantly) and fisheries of marine fish in the marine area (often of a mixed profile) [1].

In this context, the paper purpose was to analyze fishing as a resource in the Razim-Sinoe area.

MATERIALS AND METHODS

The statistical data provided by the National Statistics Institute, Tulcea County Department and the Danube Delta National Institute for

Research and Development were used in this study. Then, the collected data were processed and converted into tables, graphs and then interpreted and analyzed.

RESULTS AND DISCUSSIONS

Organization of fishing activities. Commercial fishing in inland waters is conducted in natural water basins constituting the national public domain, respectively Razim-Sinoe, with the adjacent canals and lakes.

Fishing is done with fixed gear or mobile, using small fishing boats. The number of fishermen formally comprises 414 people organized in 12 associations of professional fishermen located at: Sarichioi (29 employees), Sabangia (21 employees), Dunavăț (30 employees), Holbina (13 employees), Popina-Holbina (12 employees), Jurilovca (178 employees), Iazurile (14 employees), Murighiol (56 employees), Plopu (11 employees), Istria (30 employees), Sinoe

(30 employees), Nuntași (15 employees). These companies have employees in the area and their number varies from one society to another [2] [10].

a)The marine sector. By 1980, the share of fisheries in the Black Sea coast was small, representing only 8% of the total catch of marine and oceanic fisheries, being produced by a stationary fishing along the coast between Sulina and Mangalia. Since the 80s, along with passive fishing when it took the active fishing by establishing inshore fishing fleet (vessels traler first 2 - 25m), catches have doubled. After 1990, the decline begins by gradually reducing fishing activities, especially fishing effort, the decrease in equipping.Capturile Plummeted by half, continuing a decline from year to year.

b)The internal waters. The fish production has decreased by nearly seven times until 1989. After 1990, after the privatization of the fishery, the total domestic fish production declined from 74,000 tons in 1989 to less than 10,000 tons at the moment. A similar evolution took and inland fisheries, which decreased from 19,582 tons to 8,000 tons at present. Before 1989 the total fish production of Romania (including ocean fisheries) reached 300,000 tons/year, and for this reason, Romania was situated on the 3-4 position in Europe [7].

Membership catches

(a)The marine catches. The number of fish species in the Black Sea fell from 50 species in 1960 to 10 species at present. A main cause of the decrease in the number of species in the Black Sea is the reduced salinity, which led to the disappearance of the last basic fishing species.

Regarding the Pelagic species, the own share of catches in the Romanian sector of the family Clupeidae is the main group of fish (over 70% of the total catches), represented by 4 species: sprat, gigiri, shad. Among them, an important contribution was brought by sprat (85-90% of the total catch), followed far away by the Black Sea sprat (3%) and mackerel (1.5%). In addition to these species, there are catches of anchovy, mackerel, mullet.

(b)The inland waterways sector.

Ichtyofauna in the lagoon area is very diverse comprising dozens of species such as: catfish, carp, bream, crucian carp, rudd, rapacious, pike, zander, perch [9].

Table 1. The situation of the two catches recorded in the Razim-Sinoe during 2003-2013 (tons)

Year	Total	Caras	Roach	Flat-fish	Sleep	Carp	Zander	Luce	Perch	Other species
2003	5,635	2,276	647	524	45	119	214	7	13	378
2005	4,417	1,368	586	1,382	22	63	99	4	4	193
2007	2,908	998	289	1,032	20	41	85	28	3	58
2009	2,928	1,016	297	940	80	119	141	52	16	50
2011	2,592	920	272	822	110	125	80	78	27	55
2013	2,307	1,152	155	569	78	191	62	38	12	49

Source: National Institute of Statistics, Department of Statistics Tulcea, 2014

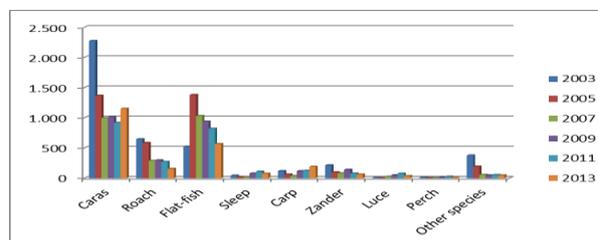


Fig. 1. The evolution of catches in the Razim-Sinoe area

Source: Own determination.

Watching the data (Fig.1), it was noticed a decrease in catches, between 2003-2013, both within each species and in total, from 5,635 tons in 2003 to about 50 % less, 2,307 tons in 2013.

Problems faced by fisheries. Studying the evolution of catches, one may find the reasons why it has experienced such a dramatic decline. In this respect, it was identified a number of shortcomings by fisheries:

a)Problems of fishermen: the decline of fisheries in line with the decline of valuable species of fish; changing the structure of catches of species; intensification of fishing; resource management divided among several institutions; faulty or nonexistent monitoring; lack of investment, administration and research.

b)Right to fish: divergences on the effectiveness of the way and the form of awarding fishing rights: allocation of fishing rights directly by fisheries ARBDD; the granting fishing rights of fishermen's private associations; the granting of fishing rights to private companies by auction.

c) Marketing of fish: a system of collecting fish from fishermen, inadequate market economy, deficiencies in the marketing of fish after collection stage.

Identifying deficiencies facing the fisheries arrangements. Fishing facilities face a wide range of shortcomings of technical, organizational or management, making difficult to start or materialize trade projects: most of the companies do not pursue the objectives set out in the specifications (are cases of land alienation and abandonment); companies using leased ponds for fish, pollute the river with some small amounts of pollutants; fishing facilities proposed to be subject to ecological reconstruction work registered major technical deficiencies such as: channels draining showing a higher degree of clogging, pumping stations are decommissioned, surface water of ponds is much diminished due to invasion of the emerged reeds vegetation, the basins are covered 40-50% by this vegetation [5].

Table 2. Classification of the fish facilities in the Razim-Sinoe area according to the degree of functionality

Functional facilities	Arrangements impaired (proposed rehabilitation of infrastructure)	Dysfunctional infrastructure (suitable for ecological reconstruction work)
Sarinasuf	lazurile III (400 ha)	Popina
Murighiol (242 ha)	Enisala	Ceamurlia I-II
lazurile I-II (513 ha)	Lunca I-II-III (277 ha)	Enisala (92 ha)
6 Martie (Salcioara)		Dunavăț I-II
Lunca I-II (779 ha)		Murighiol (2,018 ha)
Babadag și Sabangia		Holbina I-II

Source: Zonal Plan landscaping Danube Delta National Institute for Research and Development, Town Planning, Bucharest, 2008

It is observed from Table 2 that the number of functional improvements is 6, a number equal to those inoperative. Therefore, it is necessary to access European funds for their rehabilitation.

Regarding the technical characteristics of ponds in fish farming, they are classified into two categories: a consumption growth and growing brood fish. Depending on each destination, they can be used or not for fishing, and for attracting a large number of tourists in the area [8].

Thus, fish farming is directed to: growing brood (Summer I) in one of the ponds II, and the other being designed to increase fish consumption (Summer II) at Lunca I, III, 6 Martie, Babadag, Sabangia, Sarinasuf and

Murighiol.

We will continue to analyze the technical deficiencies identified in the operation of fish facilities. These weaknesses leave a mark on the number of tourists arriving in the area for tourism or fishing purposes (Table 3) [10].

Table 3. Technical deficiencies identified in the operation of fish facilities

Fishery name	Concession area (ha)	Categories of technical infrastructure deficiencies
Babadag	1,800	-Dams degraded (90%) because peaty soils
Ceamurlia I,II	3,500	-draining channels clogged -ponds vegetation cover after (40-60%) -disused pumping stations -dams and hydro installations degraded
Dunavăț I,II	3,245	-ponds vegetation cover after (20-40%) -dams partially degraded
Enisala	420	-ponds vegetation cover after (60-80%) -Food draining clogged channels and channel partially clogged -disused pumping stations
lazurile I,IV	600	-embankments damaged -subdivision damaged levees -salty soils
Lunca I,III,IV	1,934	- ponds vegetation cover after (40-60%) - draining channels and pits quality fishing - dams partially degraded
Murighiol	242	- ponds vegetation cover after(40%) - supply ducts and draining partially clogged
Popina	6,176	- hard cover pond vegetation and forest vegetation (willow, small willow) - supply ducts, exhaust, clogged drains - pumping stations inoperative - partially damaged mains
Sarinasuf	590	-ponds vegetation cover after(50%) - submersed vegetation - damaged levees
6 Martie	1,050	- ponds vegetation cover after(20-30%) - partially damaged levees

Source: Zonal Plan landscaping Danube Delta National Institute for Research and Development, Town Planning, Bucharest, 2008

These deficiencies of fish facilities and that the authorities do not invest in their redevelopment, are observed in the number of tourists visiting the area. In the area there are 44 accommodation units [7]. The tourist number accounted for 73,767 in the year 2014, of which 53,322 Romanian tourists and 20,445 foreign tourists. The months in which there is a large number of tourists are July, August and September [7].

If these deficiencies should be rectified in the shortest possible time, the area would be of a greater availability and attractiveness and the number of tourists will be higher. This would lead to the economic development of the area.

CONCLUSIONS

Catch experienced a dramatic drop caused by a number of shortcomings of fisheries. Such problems of fisheries are connected with the

fishing law, but also with the fish marketing. Fishing facilities are facing a wide range of shortcomings of technical, organizational or management nature, making difficult the materialization of trade projects: most of the companies do not pursue the objectives set out in the specifications (there are cases of land alienation and abandonment); companies using leased ponds for fish and pollute the river with some small amounts of pollutants; fishing facilities proposed to be subject to ecological reconstruction work are facing major technical deficiencies regarding: channels draining showing a higher degree of clogging, pumping stations are decommissioned, surface water of ponds is much diminished due to invasion of the reeds vegetation emerged, about 40-50% of the surface is covered by this vegetation.

These deficiencies of fish facilities and that the authorities do not invest in their redevelopment have a deep impact on the number of tourists visiting the area, where 44 accommodation units are waiting for them. The number of visitors was 73,767 in the year 2014, of which 53,322 Romanians and 20,445 foreign tourists. The months in which there is a large number of tourists are July, August and September.

Analyzing the weight of the number of tourists, it was noticed an important flow during the summer season.

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