

FISHERY





Definition

The indicator shows the number of freshwater species living in rivers and lakes in the Republic of Macedonia and the fish species represented in fishponds that are subject to aquicultural production.

At present, the indicator shows the status of:

- catch of two economically significant fish species in fishing waters;
- total catch of other fish species in fishing waters;
- total aquicultural fish production in fishponds.

Units

Number of fish species, kilograms (tones) fish catch.

Policy relevance of the indicator

List of relevant policy documents

The Study on the State of Biological Diversity in the Republic of Macedonia and the National Strategy for Biological Diversity Protection with Action Plan establish integrated approach to the protection and sustainable use of biological diversity components

including fishery.

Spatial Plan of the Republic of Macedonia.

Legal grounds

The Law on Fishery and Aquiculture regulates the management, planning, commercial management and aquiculture of fish in fishing waters, fish ponds, semi fish ponds, cages and other fish breeding resources..

Targets

The overall fish production in the Republic of Macedonia has been envisaged to grow by 2.300 tons by 2020. The main mass in this grow will consist of trout fish (1.435 tons or 62% of the total catch) mostly from fishponds.¹

Key policy issue

How sustainable is the fish catch in the Republic of Macedonia?

Key message

Fish and fish stock exploitation in fishponds and artificial water accumulations in the Republic of

¹ Spatial Plan of the Republic of Macedonia

Macedonia is under permanent supervision, with constant care for the fish stocks and regular stocking with economically important fish species. In this way, sustainable development and exploitation of fish as an important economic resource is provided, as well as for sports fishing. Exploitation of fish stocks from natural lakes has been coping with permanent problems for a longer period, including over-fishing and uncontrolled fish catch in those aquatic ecosystems. These activities affect particularly the endemic fish species, such as Ohrid trout (*Salmo letnica* Kar.), as well as other endemic species represented by small populations in certain aquatic ecosystems. Scientific institutions in the Republic of Macedonia, in the frames of their annual programmes and their primary activity of freshwater ecosystems monitoring and protection, carry out regular monitoring of the fish stock status, within the limits of their possibilities.

Figure 1. Total fish catch

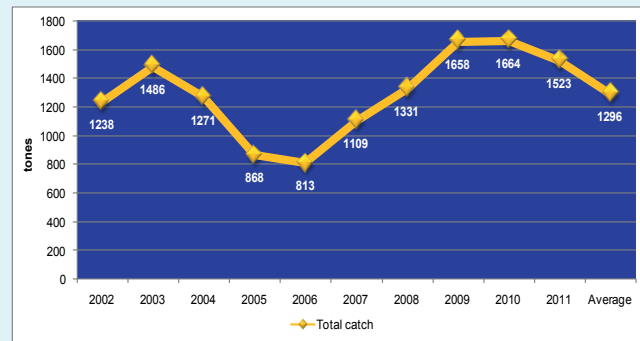


Figure2. Total catch of the main fish species

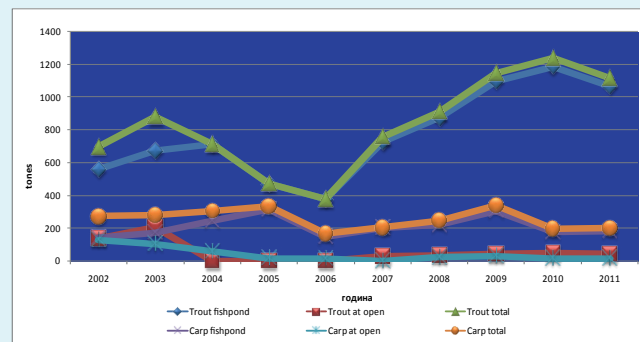
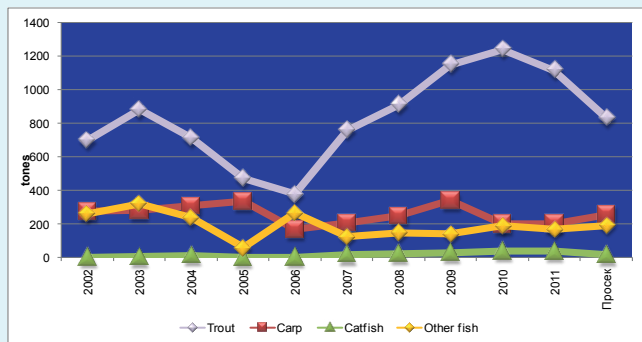


Figure 3. Total fish catch by fish species



Assessment

Table 1, with regard to total catch (production of commercial fish and fishing by sports fishermen), shows that the average fish catch in the Republic of Macedonia is 1 296 tonnes of different fish species. In the period 2003 to 2006, the yield has decreased because some fishing companies, business entities and concessionaires have lost their licences for fishing activities in certain water basins, and significant number of sports fishing clubs have been terminated.

Increase by 104.6% in the total fish catch was noted in the period 2006 to 2010. Figure 3 shows that the carp is

predominant fish species in ravine waters with raising trend from 2006 to 2011 (167 tonnes to 202 tonnes), while trout is leading in high land waters with rising trend from 2006 to 2011 (378 tonnes to 1.114 tonnes).

Methodology

Methodology for the indicator calculation

- Source of data and methodology for the indicator calculation

The source of data on the characteristics of fish stocks in the Republic of Macedonia is the State Statistical Office and their methods are used for data processing.

- Uncertainty

Uncertainty derives from the assumed incomplete data on fish catch in rivers and lakes. The uncertainty increases further because of the limited number of literature data on genetic structure of fish populations in natural aquatic ecosystems.

Data specification

Title of the indicator	Source	Reporting obligation
Fish stocks characteristics	– State Statistical Office	– FAO – Fisheries and Aquaculture Department

Data coverage:

Table 1: Total fish catch in the Republic of Macedonia in tones

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	Просек
Total catch	1.238	1.486	1.271	868	813	1.109	1.331	1.658	1.664	1.523	1.296

Table 2: Total fish catch and fish production in the Republic of Macedonia in tones

Catch and production of consumable fish								
	Trout			Carp			Catfish	Other fish
	fishpond	at open	total	fishpond	at open	total	total	total
2002	560	138	698	145	130	275	4	261
2003	672	208	880	174	106	280	5	321
2004	711	1	712	248	59	307	15	237
2005	471	1	472	316	19	335	2	59
2006	377	1	378	150	17	167	4	264
2007	728	30	758	204	2	206	21	124
2008	874	36	910	222	25	247	25	149
2009	1.101	46	1.147	307	33	340	31	140
2010	1.188	50	1.238	178	19	197	41	188
2011	1.069	45	1.114	183	19	202	40	167

General metadata

Code	Title of the indicator	Compliance with CSI/EEA or other indicators		Classification by DPSIR	Type	Linkage with area	Frequency of publication
MKNI 041	Fish stock characteristics	FISH 3	Fish stock characteristics	S		<ul style="list-style-type: none"> – Water – Biodiversity – Tourism 	annual