DCF Poland - Sampling plan description

Marine recreational fisheries for Diadromous species

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Background

In 2017 and 2018 a Pilot Study was conducted in Poland by National Marine Fisheries Institute (NMFRI) in order to develop a map of the Polish Exclusive Economic Zone with spatial and temporal distribution of salmon, sea trout and eel recreational fisheries by species and fishing techniques. The aim was to determine areas and time with highest recreational fisheries activities (hot spots) as well as to estimate the fishing effort, catch volume and composition for recreational fisheries for salmon, sea trout and eel. Based on national fishing regulation and results of the Pilot Study, sampling programme for marine recreational fisheries for diadromous species was included into regular sampling in Poland under the EU Data Collection Framework (DCF) and this Sampling Plan was implemented from January 2020.

Methodology

Due to the specificity of sea recreational fisheries targeting salmon, sea trout and eel, the applied methods for data collection must reflect the differences in both fishing techniques and spatial and temporal distribution of these fisheries.

1. Salmon and sea trout trolling fishery

Monitoring of recreational fisheries of salmon and sea trout conducted at sea with the use of trolling technique (trolling boats) shall be conducted over the periods from late winter to early spring and in the autumn (November-May the following year).

There are two basic categories of trolling boats active in this fisheries:

➢ Commercial boats, for which the recreational fishery is an official commercial activity. Such boats take on board up to 4-6 recreational fishermen who are fishing under the interim or full-year permit/license purchased by the boats' owners,
➢ Other boats, taking occasionally on board recreational fishermen holding individual fishing permits

Following data are collected annually:

- effort
- catch per unit effort
- catch composition

Following sources of information shall be utilized:

TROLLING BOAT COUNTING

Four fishing ports, located in Hel, Gdynia, Gdańsk Górki Zachodnie and Kołobrzeg are regarded as very important for salmon trolling fishing in Poland. During regular visits in marinas and fishing ports along the Polish coast (including four main ports mentioned above) Observers shall count all boats used for salmon trolling fishery. Boats are classified as a trolling boats based on the characteristic equipment installed on boats used for trolling fishing, eg., downriggers, rod holders, planners.

If possible, boats counting should be performed once a month with equal time intervals. Days with bad weather shall be chosen for this activity (when all boats would be expected to stay in port). These information shall be verified during on-site surveys and direct contact with a skippers.

CCTV MONITORING

The use of remote CCTV cameras for monitoring of recreational salmon trolling fishery effort proved to be a cost-efficient method providing accurate fishing effort estimates helping to reduce bias in recreational catch estimates. Remote CCTV cameras have been installed in two harbors i.e., Hel and Gdańsk Górki Zachodnie which were defined during the Pilot Studies as the most important for salmon and sea trout recreational fishery and were also chosen because of availability of technical infrastructure.

The cameras record boat movements between 04:00 and 18:00 each day. A high image frame rate; Full HD format (25 images per second) is set to ensure full coverage of the activity at each monitored marina and correct identification of trolling boats. Taking into account the capacity of cameras hard drives, data from them should be downloaded to the NMFRI server at three-month intervals.

AT SEA ON-BOARD OBSERVATIONS

Taking into account the high cost of participation in salmon trolling trips, depending on the available funds, it is advisable for the Observer to participate in 1-2 voyages per month during the fishing season in order to collect directly at sea the catch composition and biological data. These data shall be recorded on data collection form presented in Annex 1.

SELF-SAMPLING OF TROLLING CATCHES

To monitor trolling cruises frequency, catch per unit effort as well as catch species composition a self-sampling method of trolling catches has been applied. This method consists of two components:

- a fishing loogbook, containing cruise data as well as biological data of fish caught, distributed among the trolling boats' skippers/owners to fill-in on a voluntary basis (Annex 2),
- entering into contracts with trolling boats' skippers/owners,

2. On shore sampling – salmon, sea trout and eel

Following data are collected annually:

- estimates of catch size,
- effort,
- catch composition.

Following sources of information shall be utilized:

ON-SITE SURVEY

To monitor sea trout and eel recreational fisheries activities an On-site survey method is applied. This method is based on a digital questionnaire installed on tablets enabling a direct interviews among anglers fishing from the shore for sea trout and eel. This questionnaire is also used for a direct interviews among anglers attending trolling cruises for salmon returning to harbors/marinas from the sea.

Salmon questionnaire interviews shall take place monthly in periods from November to early May.

Sea trout questionnaire interviews shall take place monthly in periods from December to late April, identified as a sea trout fishing season from the shore. Based on expert knowledge as well as information collected from internet angling communities, main sea trout fishing hot spots were identified along the coast (Fig. 1).

Eel questionnaire interviews shall take place monthly from July to end of September – identified eel fishing season in Polish Maritime Areas. Similarly to the sea trout angling, fishing hot spots for eel were identified with the same basis - expert knowledge, internet data collection (Fig. 1).
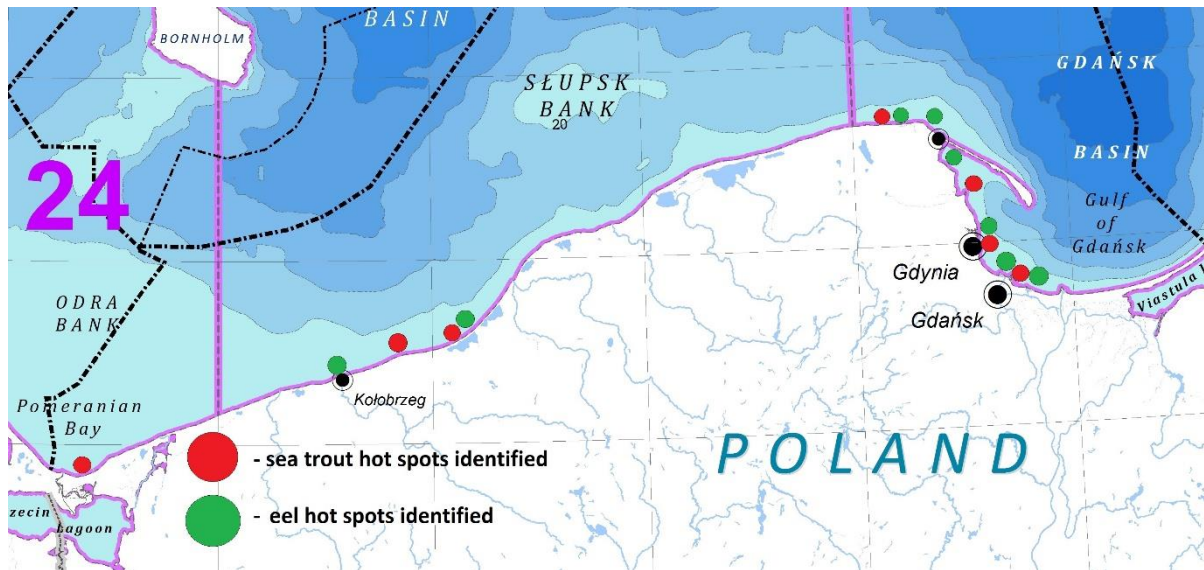

Figure 1. Identified hot spots for sea trout fishing from the shore (beaches). Identified hot spots for eel fishing from the shore (beaches, harbors/marinas).

Questionnaire interview contains the following sections (Fig. 2):

- angler's consent to conduct an interview and questionnaire date, time and location,
- angler's personal data – sex, age, place of residence, fishing permit type,
- catch data – targeted species, number of rods being used, fishing duration,
- biological data of fish caught,
- socio-economic data – expenses for particular type of angling within last 12 months and approach type (catch and release, retaining the catch or mixed).
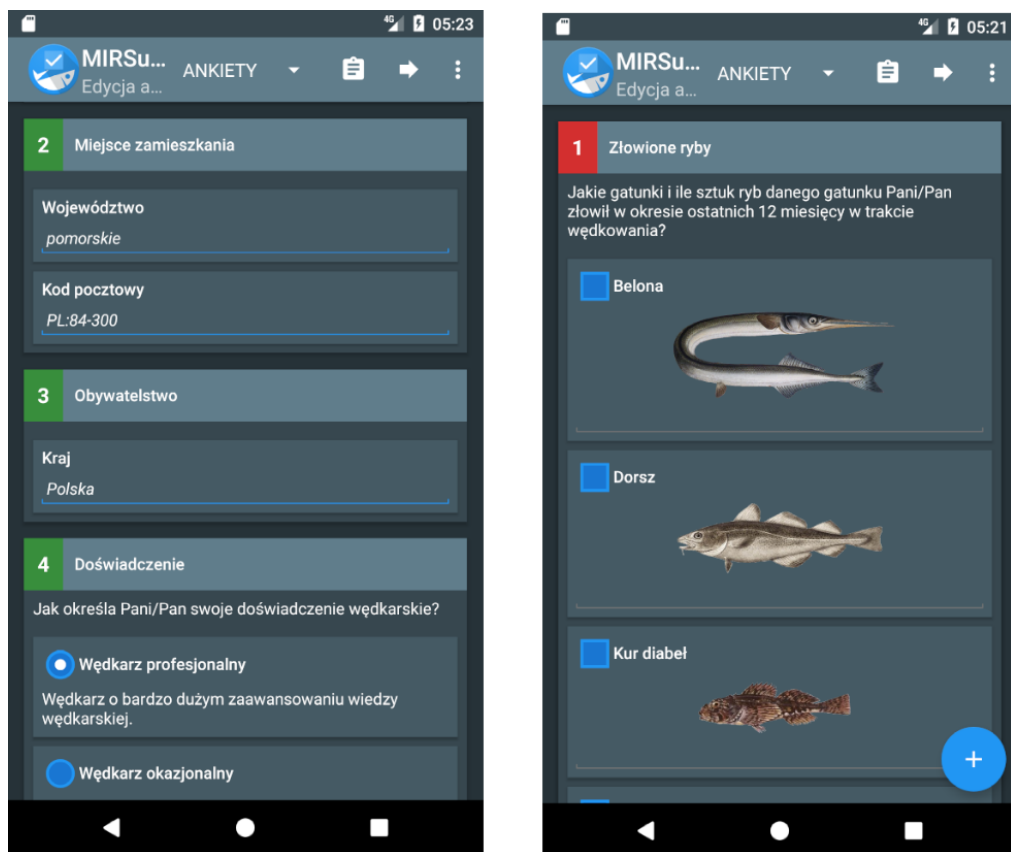
Figure 2. *Screen of the some sections of on-site questionnaire.*

OFF-SITE SURVEY

An annual off-site survey is targeting in general sea recreational fishing in Polish Maritime Waters. This survey is based on web-site questionnaire (Fig. 3) including information about the survey and describing the aim of this work with a instruction how to fill a web-based questionnaire (Fig. 4).

Information about the survey is distributed and made available on the Internet platforms, social media and NMFRI web-site (http://ankiety2.mir.gdynia.pl/sample-apps/Ankieta-wedkarska/)

Ankieta wędkarska

Połowy wędkarskie w wodach morskich z roku na rok gromadzą coraz większą rzeszę zwolenników. Różnorodność gatunków ryb i metod połowu umożliwiają połączenie aktywnego wypoczynku z możliwością przeżycia morskiej przygody. Atrakcyjność połowów wędkarskich w morzu bezpośrednio odzwierciedla liczba licencji wydanych przez Okręgowe Inspektoraty Rybołówstwa Morskiego, sięgająca w ostatnich latach 40 tysięcy rocznie. Połowy rekreacyjne stanowią ważny komponent w modelu zarządzania zasobami naturalnymi Morza Bałtyckiego, którego naukowe doradztwo zapewnia Międzynarodowa Rada Badań Morza (ICES).

Morski Instytut Rybacki – Państwowy Instytut Badawczy (MIR-PIB) koordynuje badania pilotażowe mające na celu wypracowanie założeń metodycznych do prowadzenia regularnego, naukowego monitoringu połowów wędkarskich (tzw. rybołówstwa rekreacyjnego) w Polskich Obszarach Morskich, z uwzględnieniem specyfiki polskiego wybrzeża, warunków technicznych oraz zwyczajów kulturowych. Wypracowane metody umożliwią dostarczenie informacji na temat struktury gatunkowej połowów wędkarskich, listy preferowanych gatunków, sezonowości jak również szacowanych wielkości połowów oraz ich potencjalnego oddziaływania na ekosystem morski. Badania realizowane są w ramach unijnego Wieloletniego Programu Zbioru Danych Rybackich (WPZDR), którego realizacja jest prawnym zobowiązaniem krajów członkowskich Unii Europejskiej wynikającym z przepisów UE.

Internetowe badanie ankietowe stanowi jeden z elementów prowadzonych badań. Zapraszamy wszystkich Wędkarzy do wypełnienia formularza i podzielenia się informacjami z naukowcami.

Dziękujemy za współpracę!

> Przejdź do ankiety

Figure 3. Screen of the main web site of the Polish web-based survey.

Figure 4. *Screen of the starting page of the Polish on-line questionnaire.*

References

Regulation (EU) No 1380/2013 of the European Parliament and of the Council of 11 December 2013 on the Common Fisheries Policy, amending Council Regulations (EC) No 1954/2003 and (EC) No 1224/2009 and repealing Council Regulations (EC) No 2371/2002 and (EC) No 639/2004 and Council Decision 2004/585/EC (OJ L 354, 28.12.2013, p. 22).

Regulation (EU) 2017/1004 of the European Parliament and of the Council of 17 May 2017 on the establishment of a Union framework for the collection, management and use of data in the fisheries sector and support for scientific advice regarding the common fisheries policy and repealing Council Regulation (EC) No 199/2008 (OJ L 157, 20.6.2017, p. 1)

Commission Delegated Decision (EU) 2019/910 of 13 March 2019 establishing the multiannual Union programme for the collection and management of biological, environmental, technical and socioeconomic data in the fisheries and aquaculture sectors (OJ L 145, 4.6.2019, p. 27).

Commission Implementing Decision C(2019) 9492 of 19.12.2019 approving the work plan of Poland for data collection in the fisheries and aquaculture sector for the period 2020-2021

Lejk A., Dziemian Ł., Wójcik I. Pilot Study - Marine recreational fisheries for Diadromous species (https://dcf.mir.gdynia.pl/wp-content/uploads/2020/05/Pilot-Study-Marine-recreational-fisheries-for-Diadromous-species-1.pdf)

Lejk A., Dziemian Ł., Szymańska M., Krakówka K., Bernaś R., Dębowski P.; *PS1-PL-2021_Report -*Pilot Study to develop recreational fishing monitoring methods in Poland under the Data Collection Framework (https://dcf.mir.gdynia.pl/wp-content/uploads/2021/05/PS1-PL-2021_Report.pdf).

Annex 1. Data Collection Form – salmon trolling trips

Karta rejsu trollingowego	MORSKI INSTYTUT RYBACKI PAŃSTWOWY INSTYTUT BADAWCZY		
Numer wyprawy			
Data (dd-mm-rr)			
Nazwa jednostki			
Port wypłynięcia			
Godzina rozpoczęcia/zakończenia połowu			
Pozycja rozpoczęcia/głębokość			
Pozycja środkowa/głębokość			
Pozycja zakończenia/głębokość			
Liczba wędkujących			
Liczba zestawów w wodzie			
Sumaryczna liczba złowionych ryb	SAL:	TRS:	inne:
Liczba ryb zatrzymanych	SAL:	TRS:	inne:
Liczba ryb wypuszczonych	SAL:	TRS:	inne:
Zebranie śladu GPS (tak/nie)			
Uwagi:			

Annex 2. Trolling logbook

Rejestr rekreacyjnych
połowów trollingowych

RYBACTWO I MORZE   MGMiŻŚ Ministerstwo Gospodarki Morskiej i Żeglugi Śródlądowej   Agencja Restrukturyzacji i Modernizacji Rolnictwa   Unia Europejska Europejski Fundusz Morski i Rybacki

Wieloletni Program Zbioru Danych Rybackich
Materiały przeznaczone na działania informacyjno-promocyjne związane
z realizacją operacji zbierania danych rybackich, w ramach Priorytetu 3.
Wspieranie wdrażania Wspólnej Polityki Rybołówstwa,
zawartego w Programie Operacyjnym „Rybactwo i Morze".

Data rejsu	
Port wypłynięcia	
Liczba uczestników rejsu*	
Liczba zestawów w użyciu	
Pozycja rozpoczęcia połowu	
Pozycja zakończenia połowu	
Czas połowu**	

*Liczba uczestników łącznie z załogą jednostki.   ** Od pierwszego wystawienia zestawów do ich wyciągnięcia.

Gatunek	Długość [cm]	Masa [kg]	Płeć [samiec/samica]		Obecność płetwy tłuszczowej [tak/nie]		Zabrana / Wypuszczona [z/w]	
			SAMIEC	SAMICA	TAK	NIE	Z	W
			SAMIEC	SAMICA	TAK	NIE	Z	W
			SAMIEC	SAMICA	TAK	NIE	Z	W
			SAMIEC	SAMICA	TAK	NIE	Z	W
			SAMIEC	SAMICA	TAK	NIE	Z	W
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			SAMIEC	SAMICA	TAK	NIE	Z	W
			SAMIEC	SAMICA	TAK	NIE	Z	W
			SAMIEC	SAMICA	TAK	NIE	Z	W