

# IS THE CURRENT BYCATCH REPORTING FORMAT USEFUL FOR THE ASSESSMENT OF BYCATCH RISK?



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**INTRODUCTION:** The impact of gill nets on the Baltic porpoise resources (*Phocoena phocoena* L., 1758), which in 2008 was recognized by the IUCN as critically endangered, is widely known. Knowledge of the location and circumstances of catch as well as the number and quality of the actual and potential causative factors should be a measure of risk assessment from fishery on marine mammals, but also other protected species (birds, fish). Assuming good will and integrity of fishermen, data entered into the logbooks and fishing reports should be a very reliable source of information for fisheries management, particularly in protected areas.



Fig.1 Puck Bay

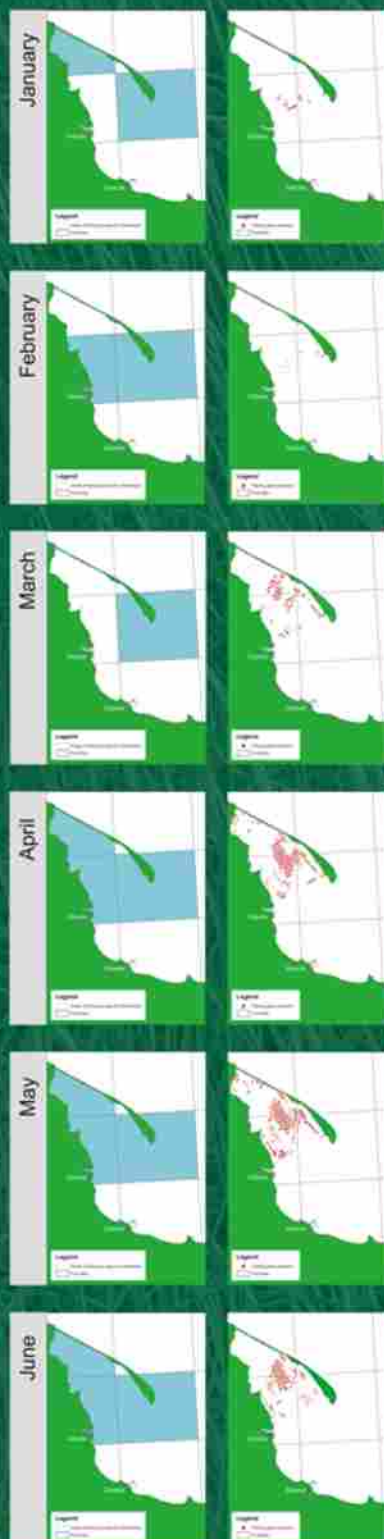


Fig.2 Analysis of fishing areas in the Bay of Puck, based on data from the fishing reports and surveys (in situ)

**METHODS:** It was studied if it was the case in Puck Bay (Southern Baltic) (Fig.1) - a region with more than 30% of reported cases of porpoise bycatch, although this basin is only 1.2% of the Polish exclusive economic zone and the scale of gill net fishing effort was from 14.0 to 23.4% of the Polish fleet (2004-2010).

Information on the potential and actual fishing gear used in Puck Bay region was obtained in two ways. First, we collected the data from the official record of vessels coming from Fishing Monitoring Centres-FMC. That data allowed us to assess the potential fishing effort scale. Second, the information about the actual scale of fisheries have been collected by a monthly survey of the deployment of gear in the Bay of Puck /in situ/ within the framework of the "Active protection against harbour porpoise bycatch" project carried out by SMIUG. The two sets of data were compared to examine if they coincide.

**RESULTS AND DISCUSSION:** In order to determine the suitability of catch reports in bycatch risk assessment, we analyzed the data in the fisheries reports. Special attention was paid to the type of gear and place of deployment. That information enabled us to create a map depicting the fishing activity in the Puck Bay. The results of data analysis showed low accuracy of information on the exact location of set nets. Data provided by fishermen are assigned only to catch squares (10/10 NM) without geographic coordinates of the catch. It creates a problem for the proper assessment of fishing activities in the protected areas (Natura 2000), which cross the boundaries of the designated catch squares. In such cases, it is difficult to give precise figures on the number and type of gear set in a designated area. No solution to that problem is provided by the vessel traffic monitoring system (VMS), which applies only to units over 12 meter long that are fishing mostly outside the coastal zone.

The data from fishing reports was verified by reviewing and comparing with the collected data (in situ) (Fig.2). The analysis showed that the data from catch reports do not coincide with the data collected in the field. The reason for this is the assignment of the data in the reports to the catch squares rather than to exact geographic location, and often erroneous data entry. The given figures should not be regarded as the factual reflection of the reality.

Also the current format and filling instructions of logbooks regulated by the EU (for boats over 8 meter long) as well as national regulations concerning monthly catch report (for boats less than 8 meter long) were analysed in reference to their capabilities of recording bycatch of protected species (Fig.3). None of these forms provide space nor means to do that.

**SUMMARY:** Fishing reporting forms (fishing logbooks and monthly catch report) do not fully reflect the actual distribution and size of fishing effort. This creates a serious impediment in the proper assessment of bycatch risk for the harbour porpoises. In particular, it is true for that part of fishery, which is not under VMS surveillance system and operates in the coastal zone-habitat preferred by porpoises.

The current fishing reporting format and monitoring system for fishing vessels is insufficient to determine the scale of the bycatch threat. Monitoring schemes for incidental catches of porpoise using observers (the EC Regulation No 812/2004) did not bring any solution to the problem mainly due to the wrong assumptions and performance.

In the absence of a proper risk assessment of bycatch in fisheries, the ecosystem approach in the management of that sector in terms of reducing bycatch of protected species does not seem possible. It will also create difficulties in maintaining appropriate indicators of the preservation of natural biodiversity in compliance with Marine Strategy Framework Directive (2008/56/EC) and the Baltic Sea Action Plan of HELCOM and its recommendation 17/2 "Recovery plan of Baltic harbour porpoise" and the purpose of the ASCOBANS Agreement or requirements of Habitat Directive (92/43/EEC).

Fig.3 Model of a European Union fishing logbook in accordance with Regulation No. 404/2011