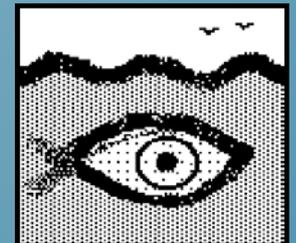


Bycatch of harbour porpoise in Polish semi-drift gillnet fishery



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PUCK BAY in IIIId, in 26 ICES subAREA



Hel, 1920s and 1930s



Morskiego Urzędu Rybackiego.

Obfity połów delfinów.

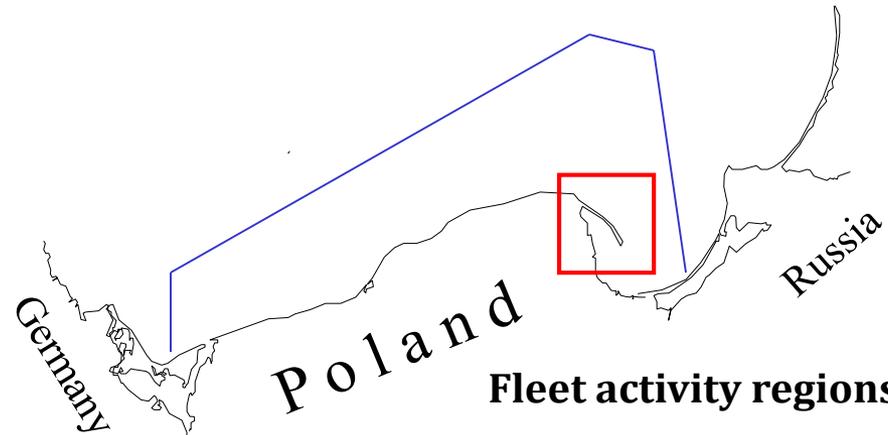
Z nadejściem wiosny i rozpoczęcia połowu łososi pławnicami (sieciami dryfującymi) równocześnie w sieci te dużo łowi się zwykle delfinów. W b. sezonie połow delfinów szczególnie jest obfity. Za ostatnie 5 tygodni rybacy z Helu, Kuźnicy, Jastarni i Boru złowili tym sposobem ok. 120 szt. delfinów. Delfiny są znacznymi szkodnikami, gdyż wyjadają dużo ryb i niszczą sieci, dlatego też chętnie są tępienie przez rybaków. Również i władze rybackie za każdego złowionego delfina wypłacają rybakom premje po 5 zł.

Z połowów rybackich na Helu. Wzięcie nasze przedstawia obfity do 150-ciu kg i przewiezionych na morzwani - delfinów bałtyckutrze "Bór 16". Widzimy moment złowionych przez polskich rybaków tych szkodników z kuteru wyladowania tych ryb o wadze od 75-100 kg. Widać moment wyladowania tych ryb z kuteru na molo w porcie rybackim Hel.

Data on harbour porpoise by-catch/catch

in Polish fishery in 1922-1935 and 1950-2006

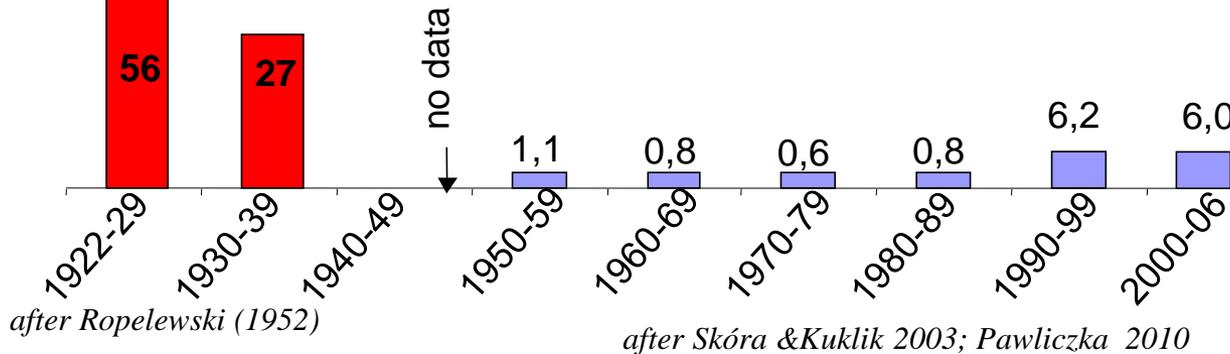
Years 1922-35	Number
1922	250
1923	16
1924	20
1925-27	Not many
1928	48
1929	114
1930	23
1931	34
1932	95
1933-35	Several hundred annually



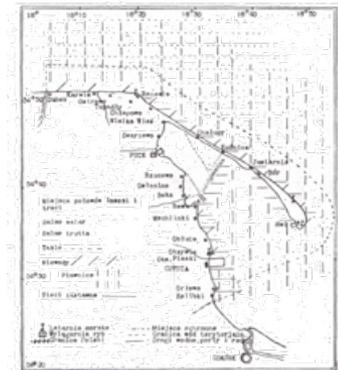
Fleet activity regions:

zone 1922-1939 years

zone 1995-2006 years



Average number per year in decades



Baltic Sea

Gulf of Gdańsk

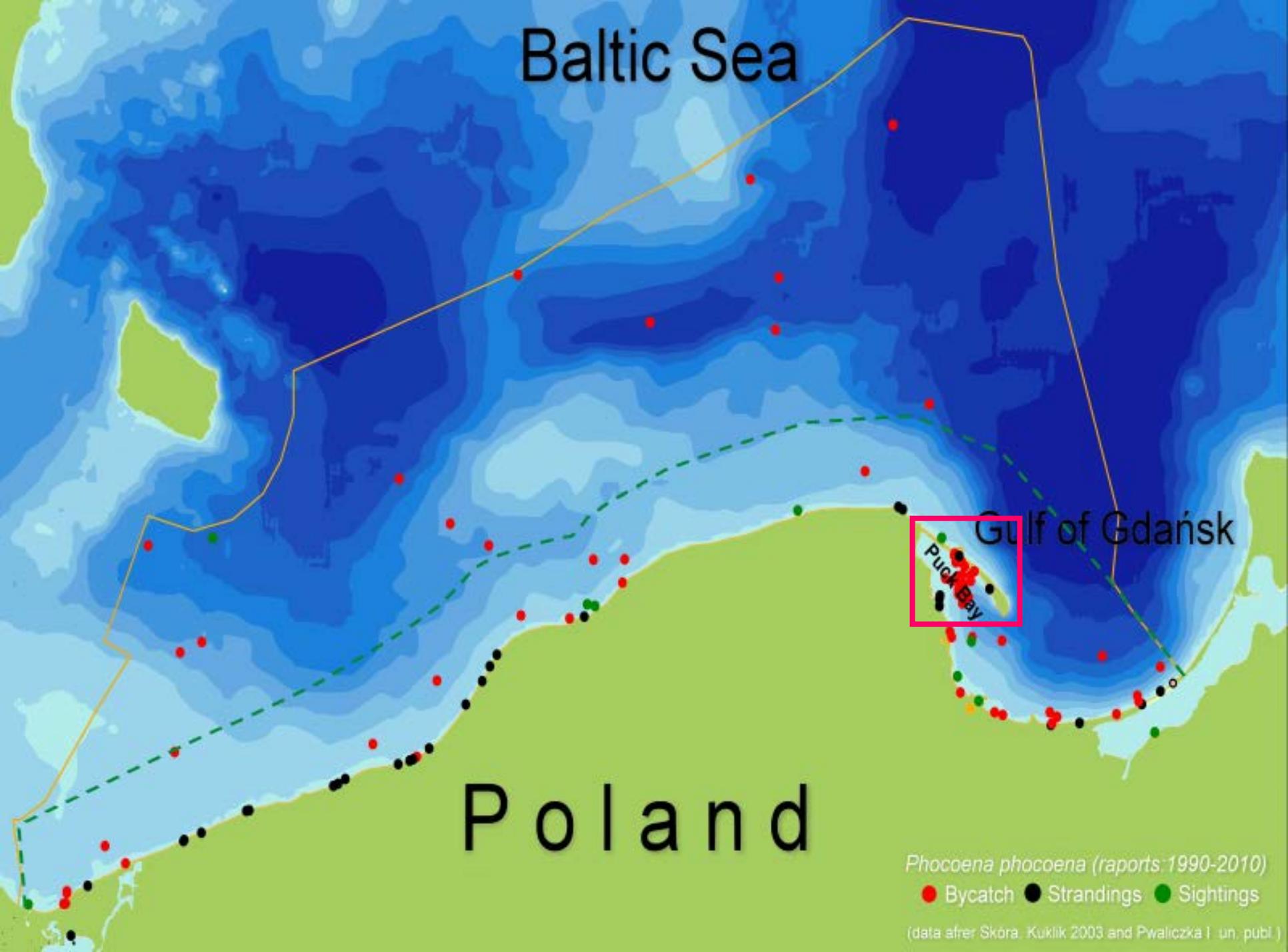
Puck Bay

Poland

Phocoena phocoena (reports:1990-2010)

● Bycatch ● Strandings ● Sightings

(data after Skóra, Kuklik 2003 and Pwaliczka | un. publ.)



Polish data on harbour porpoise collected by *Hel Marine Station*

1990 – 2003 (May) → 84 reports (bycatch, sightings, strandings)

1990 - 99 - 44 reported bycatch (*Skóra & Kuklik 2003*)

until 2018

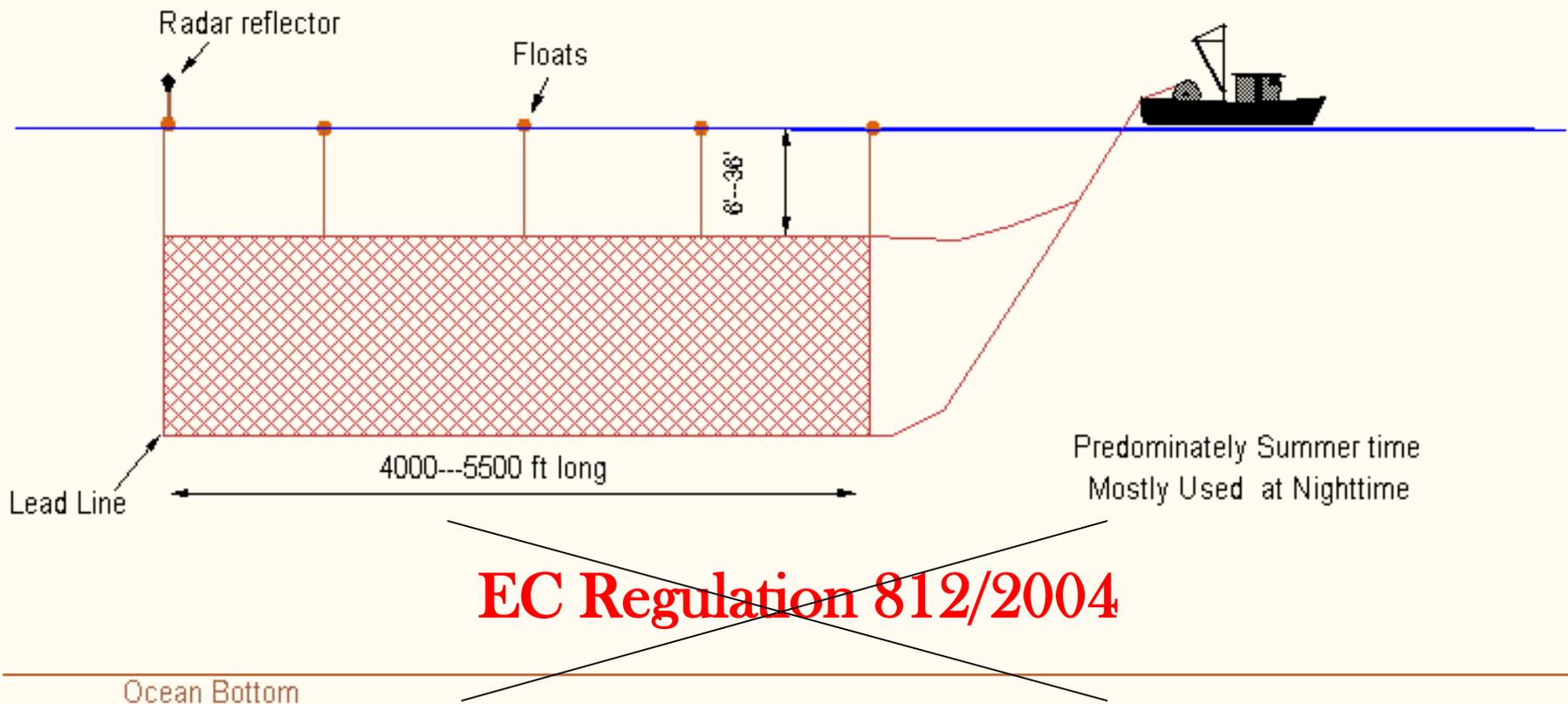
73 % (61 individuals) → by-catch (+11)

14 % (12 individuals) → strandings (+56)

13 % (11 individuals) → sightings (+16)



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~~EC Regulation 812/2004~~

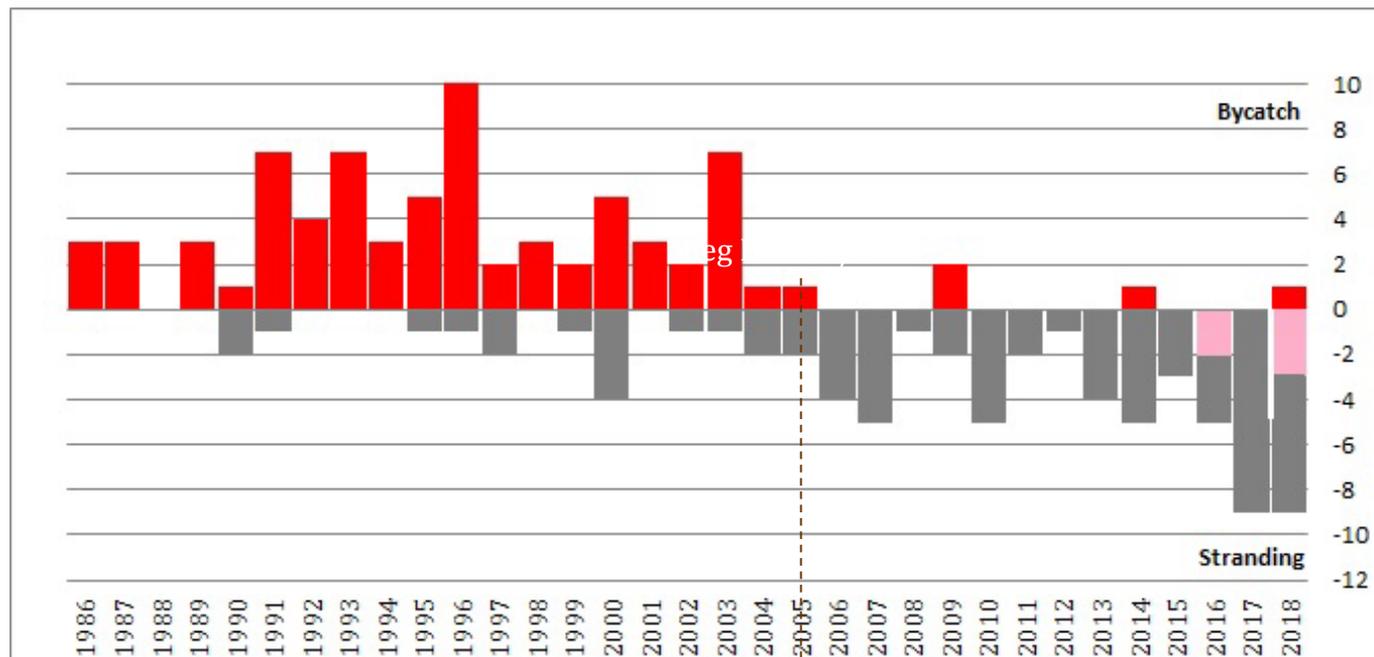
Drift Gillnet

Przytów morświnów



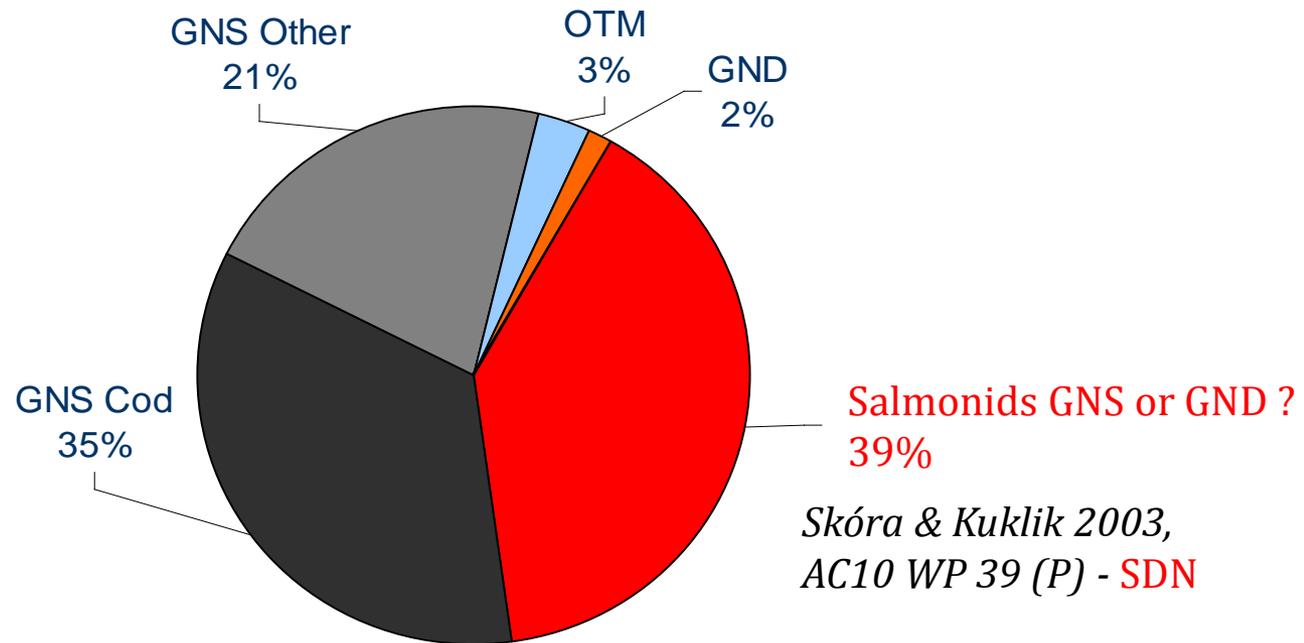
Harbour porpoise reported bycatch and strandings in Polish waters

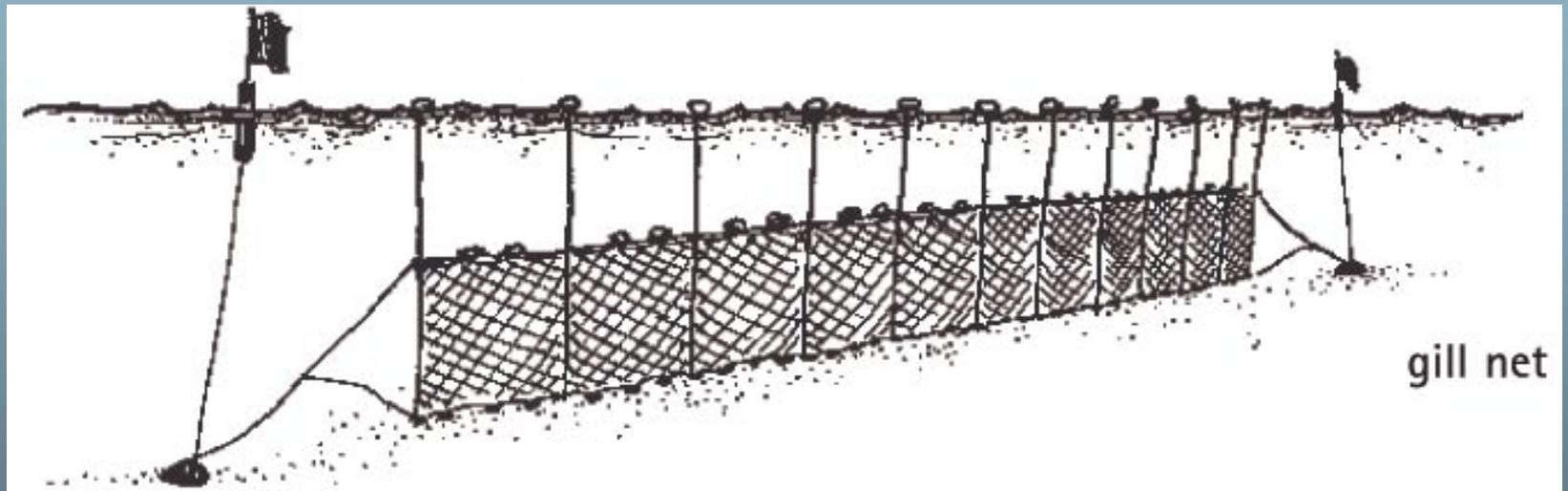
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
str	1	2	2	4	5	1	2	5	2	1	4	5	3	5	9	9
byc	7	1	1	0	0	0	2	0	0	0	0	1	0	0	0	1



Gears responsible for harbour porpoise bycatch

(data 1990-2009 from reported bycatch)

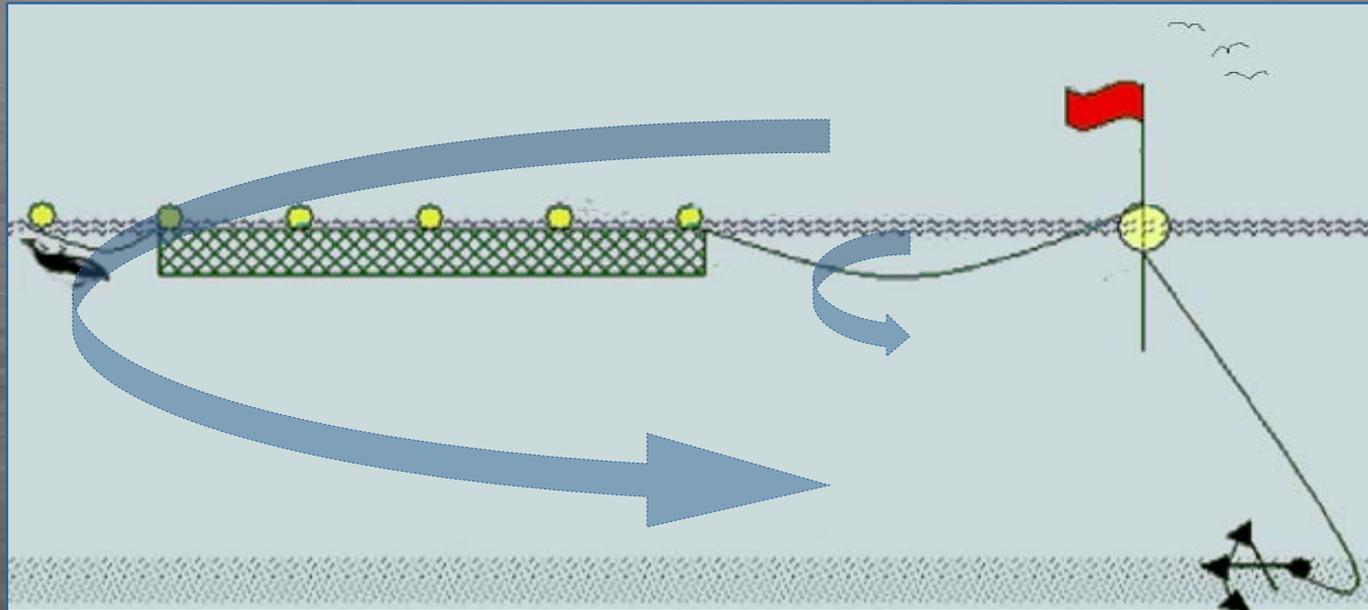




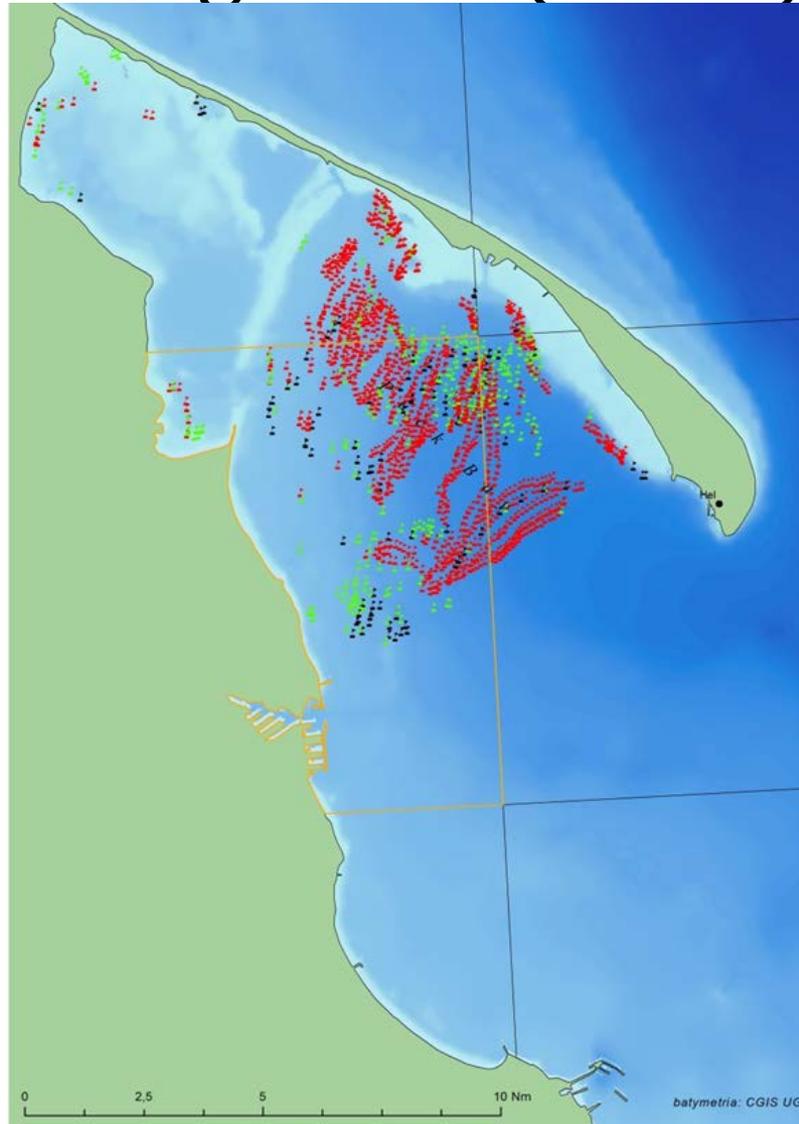
Bottom set gillnets

Semi-drift GNS ?

- Net length – from 30 to 60 m
- Net depth – from 4 m to 8 m
- Bottom anchored at one side

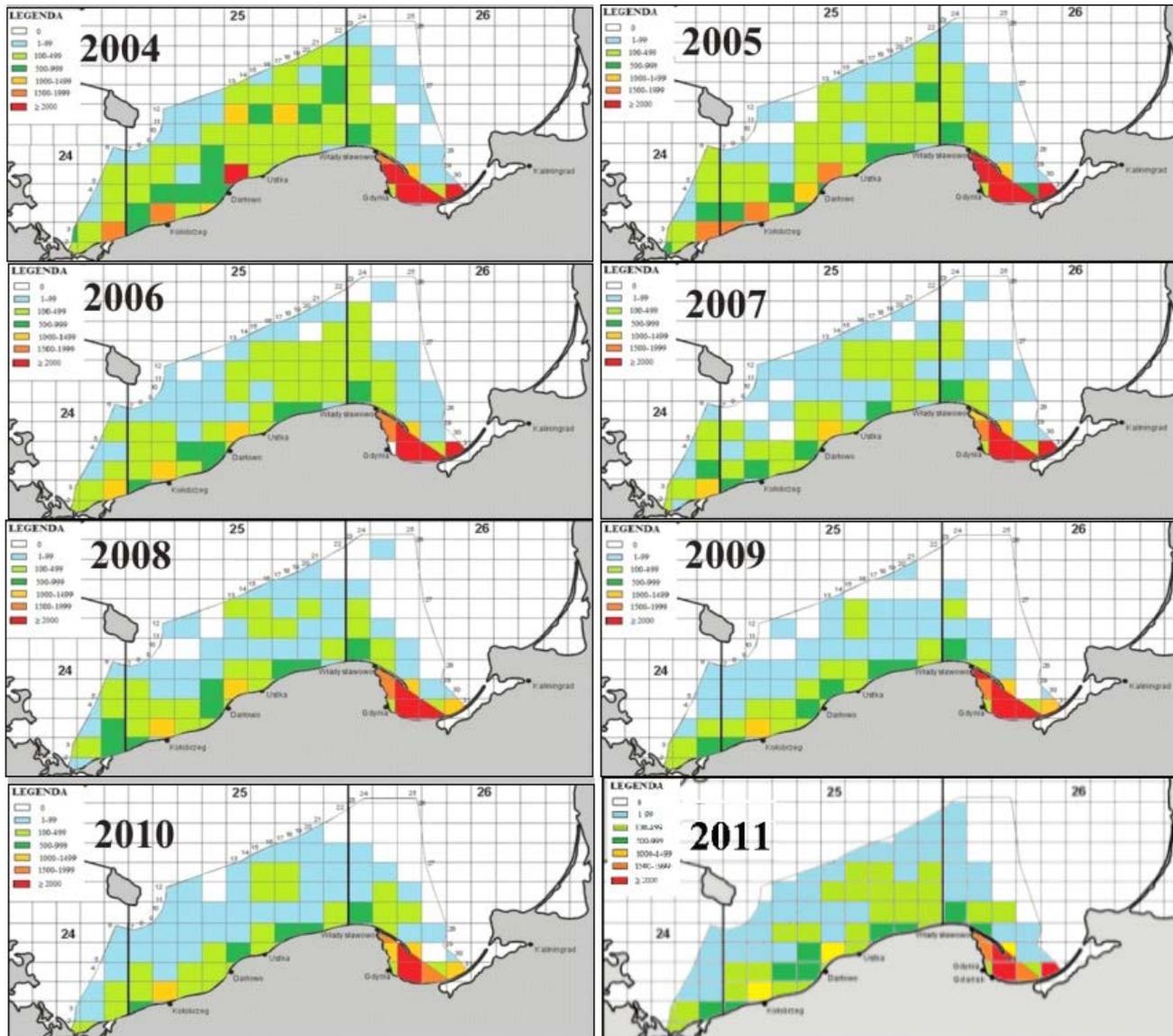


Distribution of fishing effort in Puck Bay – gillnets (2009)





Gillnet fishing effort

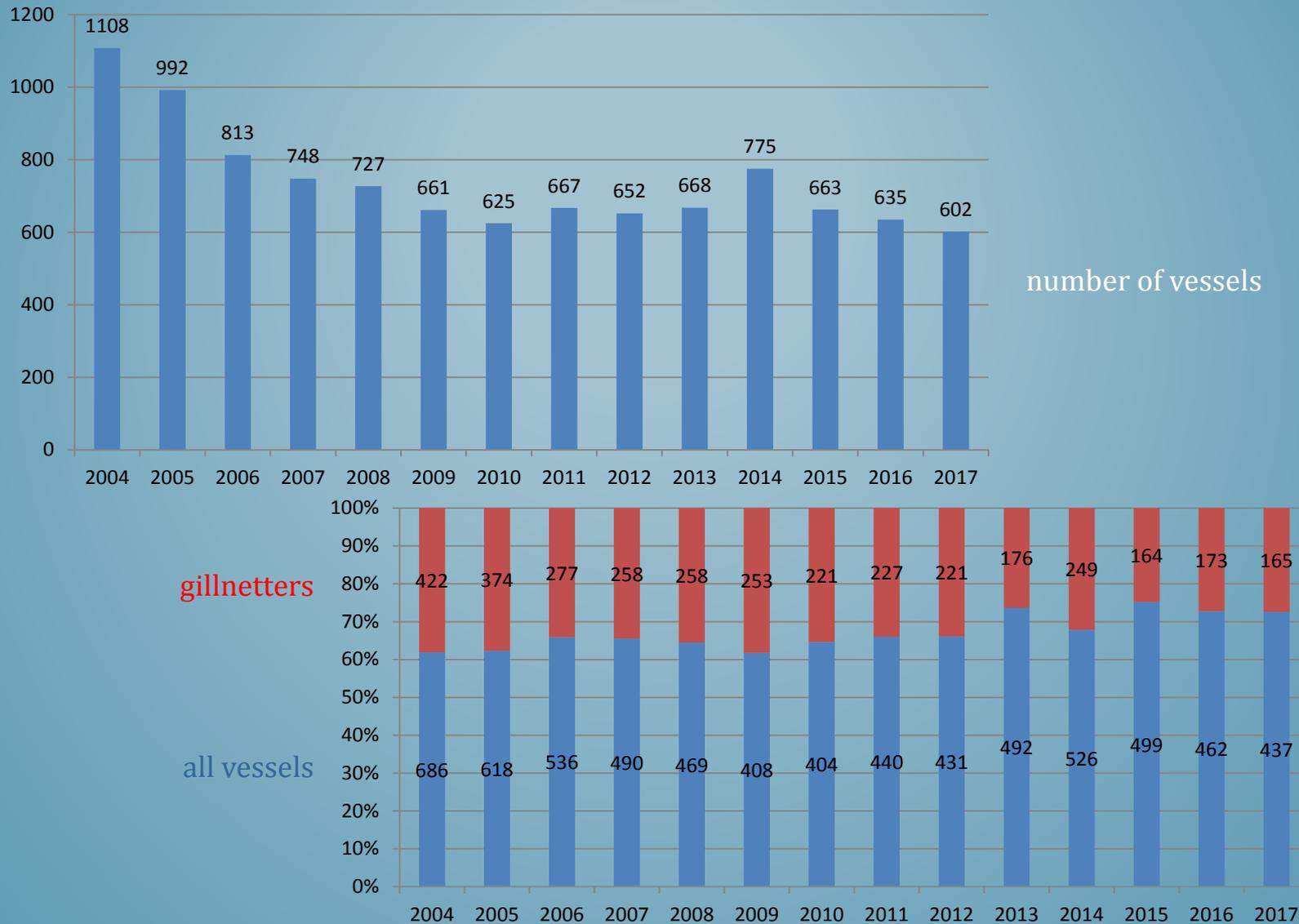


Data after CMS

Lack of monitoring of small boats



Time changes in Polish fishing fleet structure



data: Fishery Monitoring Centre

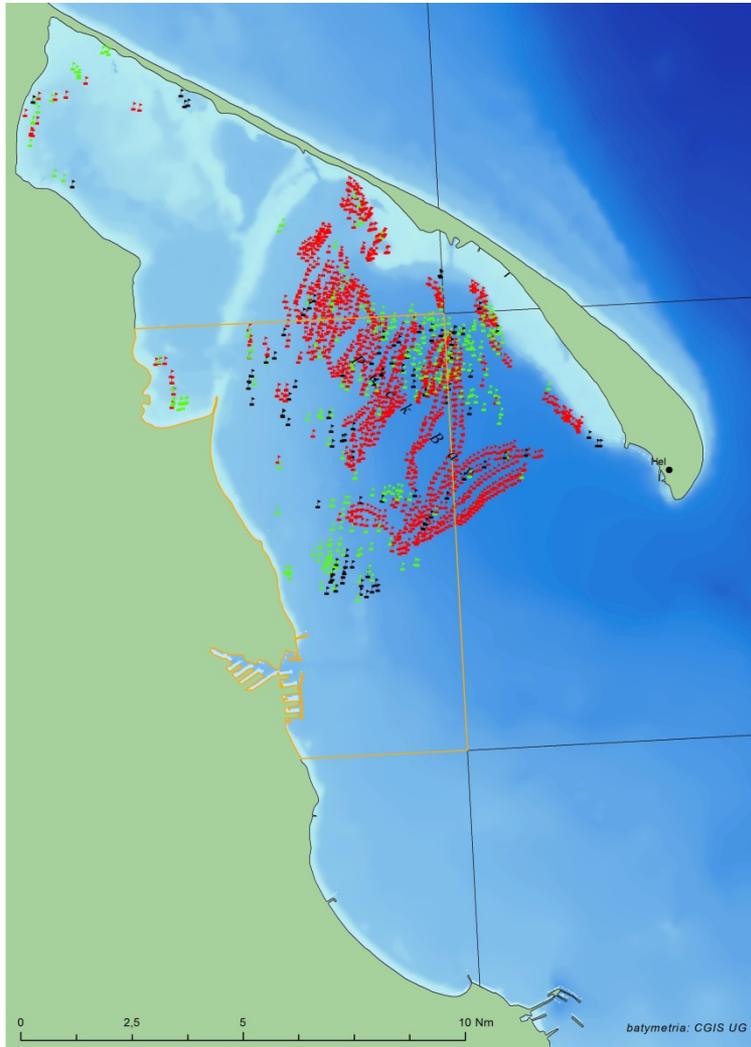
<u>Year</u>	<u>Number of boats in Puck Bay</u>
2004	140
2005	121
2006	104
2007	93
2008	97
2009	95
2010	89
2011	100
2012	125
2013	108
2014	145
2015	134
2016	111
2017	112

Number of fishing gears used in Puck Bay			
	GNS, GND, GTR	LLS, LLD	Trap nets FPO
2004	493218	1324530	37746
2005	429082	1168108	40028
2006	338206	630325	54052
2007	270961	1155300	34197
2008	232897	650300	36741
2009	278 884	661 300	36438
2010	320907	677650	23110
2011	267925	363766	12284
2012	319215	563300	6362
2013	376091	531046	16477
2014	449408	527812	23797
2015	348546	765850	33984
2016	199031	708400	39281
2017	161 202	417 550	56044

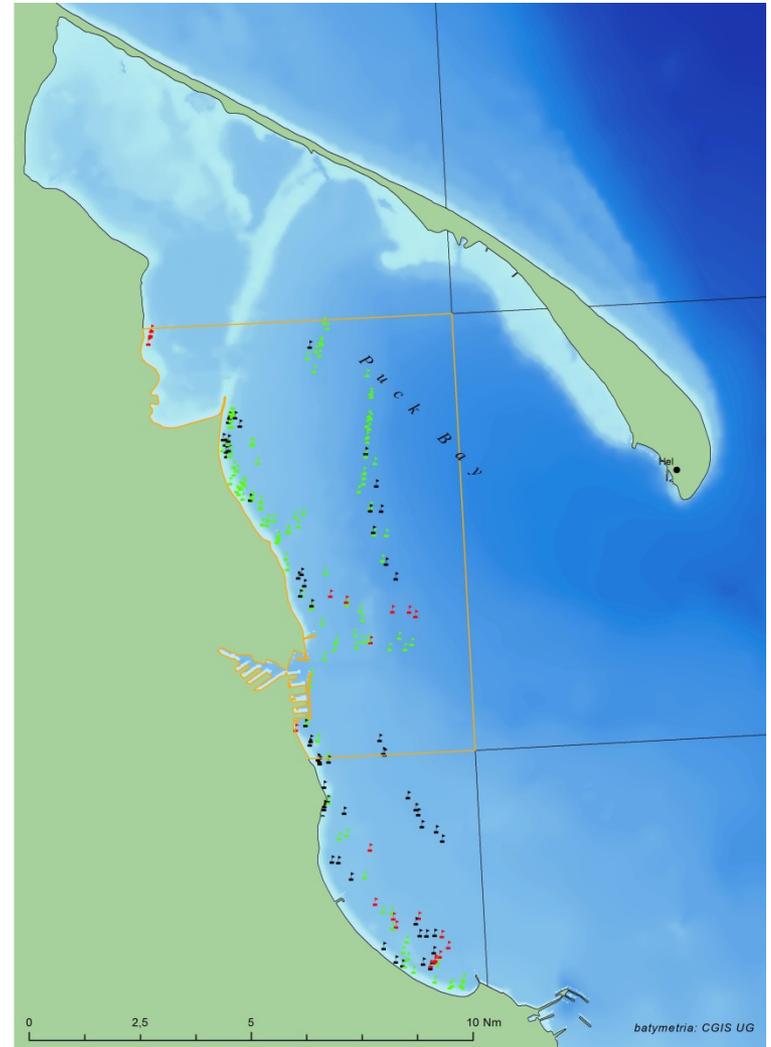
data after Centre of Fishery Monitoring

Changes in fishing effort by number and distribution of marker buoys

October 2009 – 1251 markers (674 in R5)



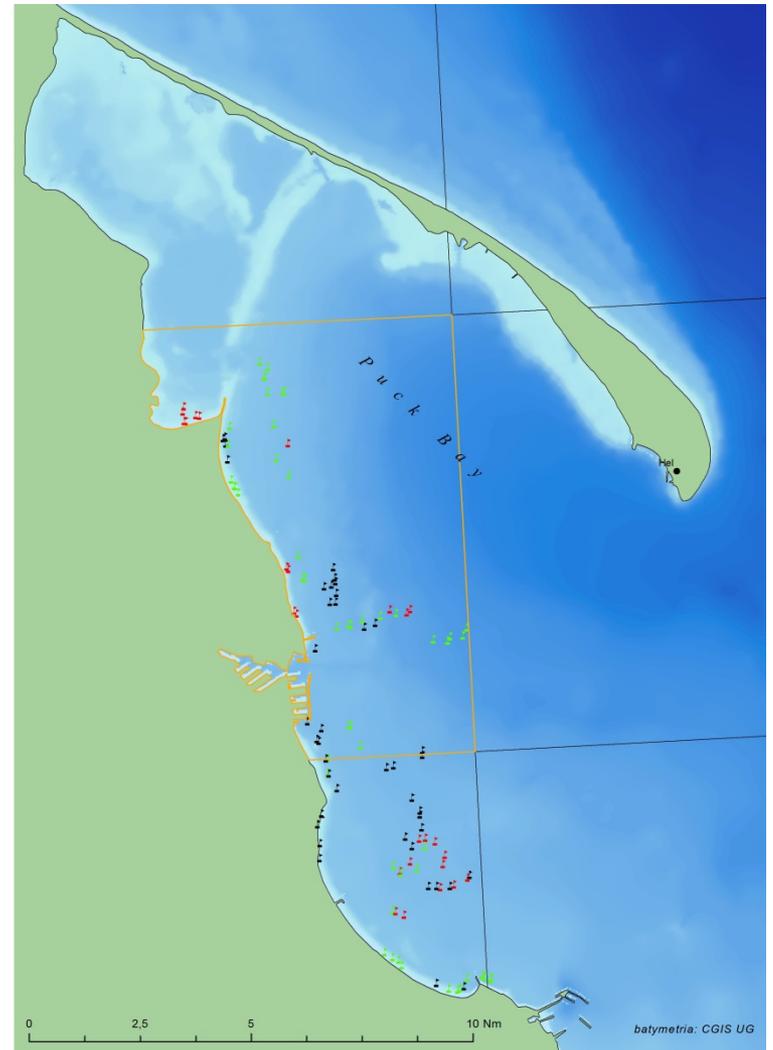
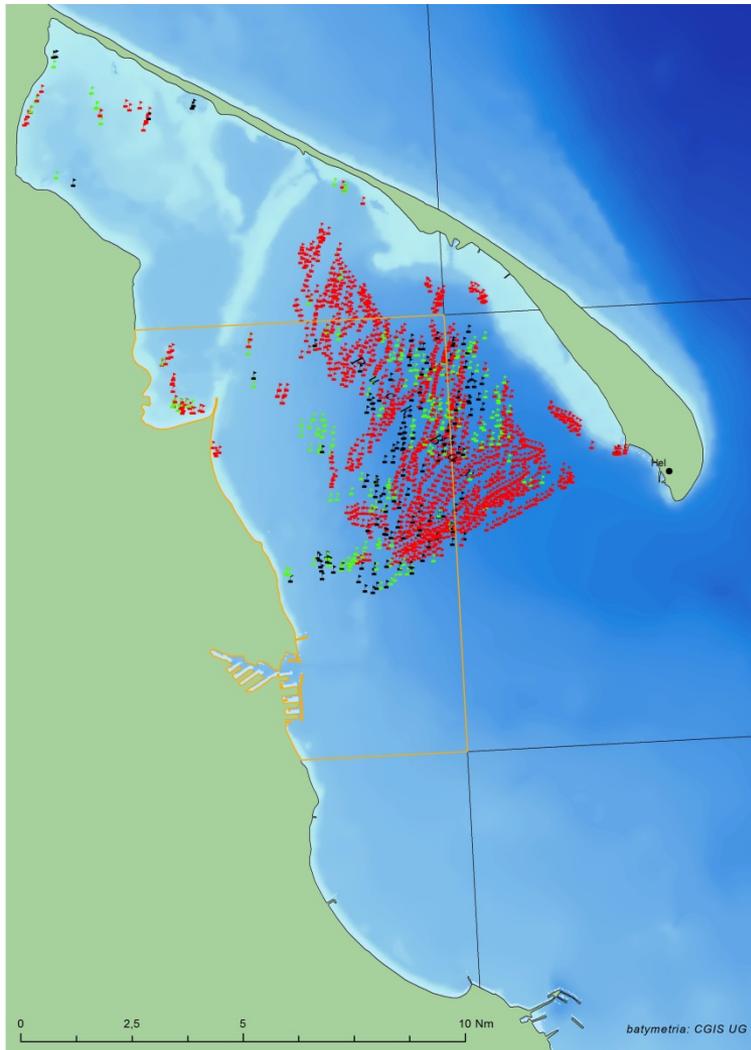
October 2017 -195 markers (138 in R5)



Changes in fishing effort in Puck Bay - number and distribution of nets

November 2009 – 1321 markers (728 in R5)

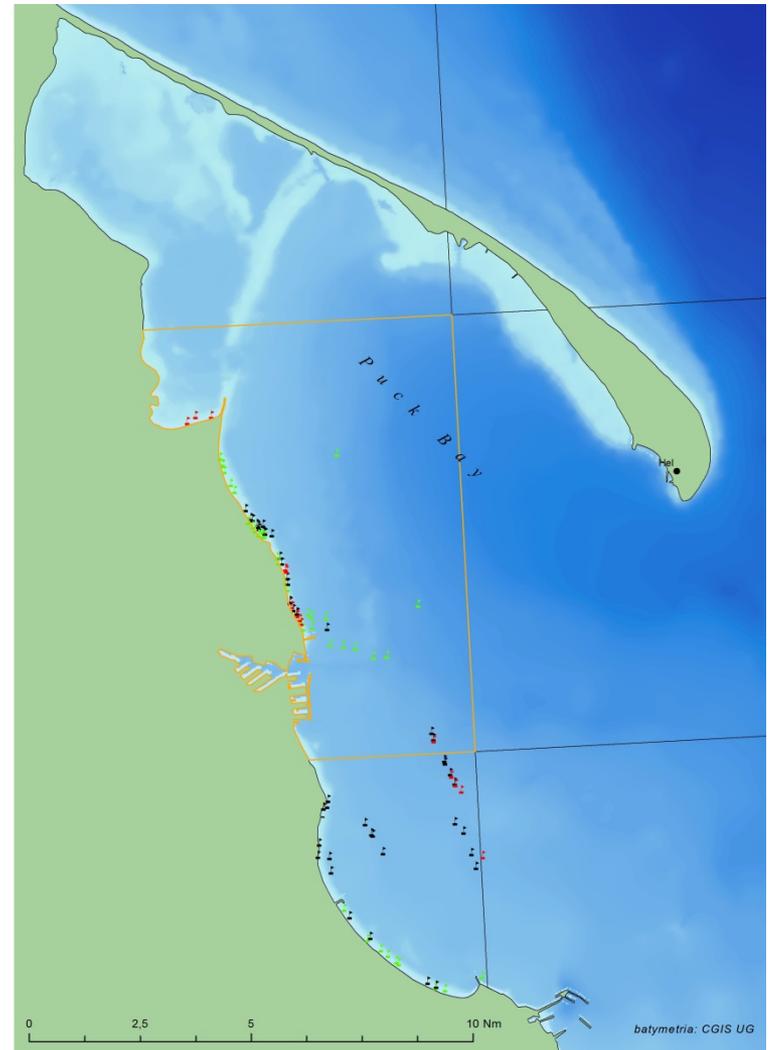
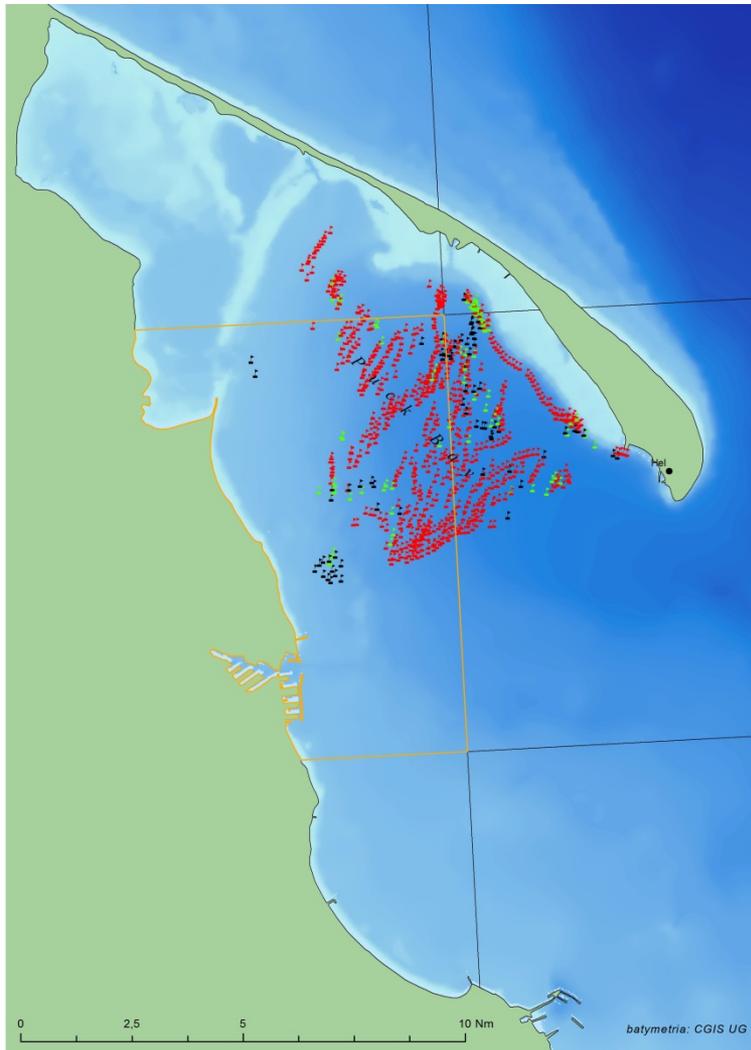
November 2017 -120 markers (69 in R5)



Changes in fishing effort in Puck Bay - number and distribution of nets

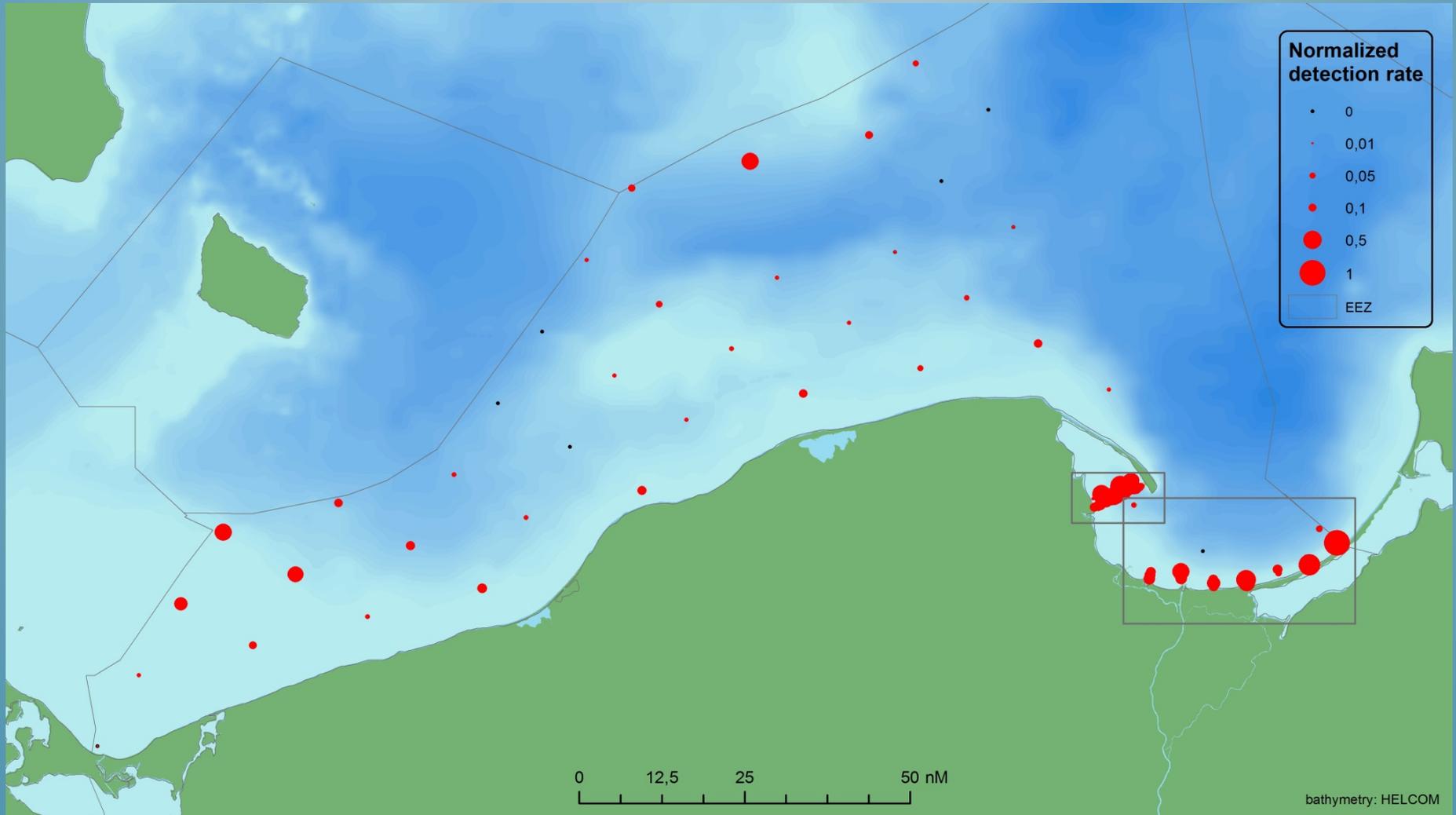
December 2009 – 718 markers (352 in R5)

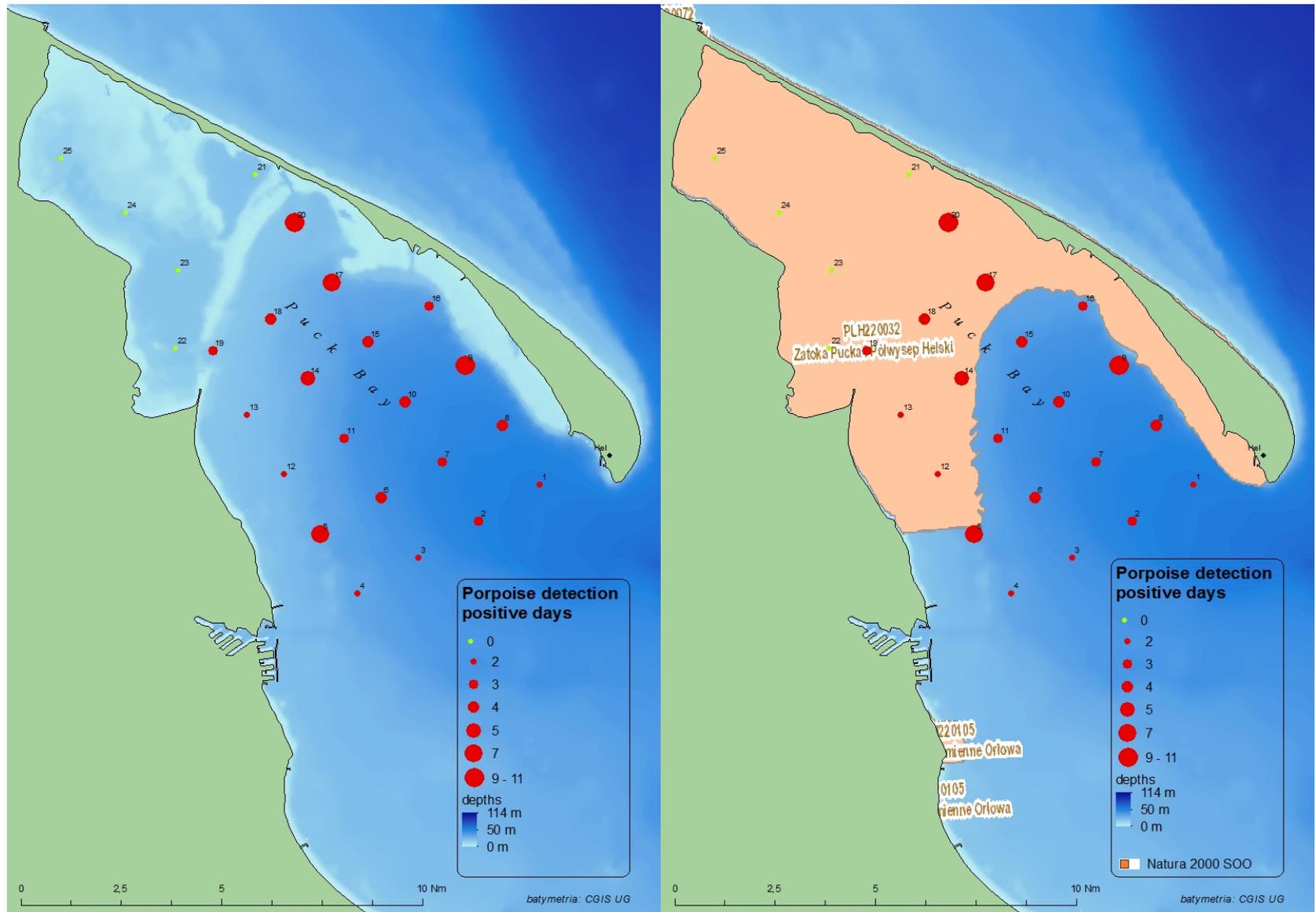
December 2017 - 99 markers (63 in R5)



Results of SAM projects Puck Bay (2009 - 2011), SAMBAH (2011 2013), and in southern part of Gulf of Gdańsk (2013 - 2014).

PPM calculated for a time of deployment in each location.





Detections of harbour porpoises (PPD) in Puck Bay
10 2017 – 06 2018

COUNCIL REGULATION (EC) No 2187/2005 of 21 December 2005 for the conservation of fishery resources through technical measures in the Baltic Sea, the Belts and the Sound, amending Regulation (EC) No 1434/98 and repealing Regulation (EC) No 88/98

Article 9 Restrictions on driftnets (no definition of driftnets, no reference to other regulations)

1. From 1 January 2008 it shall be prohibited to keep on board, or use for fishing, driftnets.

COUNCIL REGULATION (EC) No 809/2007 of 28 June 2007 amending Regulations (EC) No 894/97, (EC) No 812/2004 and (EC) No 2187/2005 as concerns drift nets

Article 1, 2 & 3 (respectively)

“Drift net” means: any gillnet held on the sea surface or at a certain distance below it by floating devices, drifting with the current, either independently or with the boat to which it may be attached. It may be equipped with devices aiming to stabilise the net or to limit its drift.’

COM (2014) 265: Proposal for a REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL laying down a prohibition on driftnet fisheries, amending Council Regulations (EC) No 850/98, (EC) No 812/2004,(EC) No 2187/2005 and (EC) No 1967/2006 and repealing Council Regulation (EC) No 894/97

Article 2. Definition

2. (...) 'driftnet' means a net made up of one or more walls of netting, hung jointly in parallel on the headline(s), held on the water surface or at a certain distance below it by floating devices and drifting with the current, either independently or with the boat to which it may be attached. It may be equipped with devices aiming to stabilise the net or to limit its drift such as a sea-anchor or an anchor on the bottom attached at one single end of the net.

Procedure reference 2014/0138(COD)

Mandatory consultation of other institutions _European Economic and Social Committee

(adopted the proposal on 10.09.2014)

European Parliament - Legislative observatory (not adopted, amendments proposed)

COUNCIL REGULATION (EC) No 850/98 of 30 March 1998 for the conservation of fishery resources through technical measures for the protection of juveniles of marine organisms (amended recently in 2013, however the definition below has not been changed)

Article 3 For the purpose of the regulation:

(g) **bottom set gill nets** or entangling nets shall mean any fixed gear made up of a single piece of net, **fixed**, or capable of being fixed, **by any means to the bottom of the sea;**

An underwater photograph showing a large whale, possibly a humpback whale, completely entangled in a dense, dark fishing net. The whale's body is visible through the mesh, and its head is partially obscured. The water is a murky green color. The net is tangled in a complex, circular pattern around the whale. The text "Any bycatch is TOO HIGH !" is overlaid in the center of the image in a yellow, serif font.

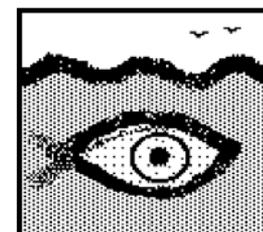
Any bycatch is TOO HIGH !



Thank you !



Prof. Krzysztof E. Skóra
1950 - 2016



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