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Potential limitations to the commercial fisheries and research surveys, caused by other users of the Polish Marine Areas

by

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Aim of the presentation:

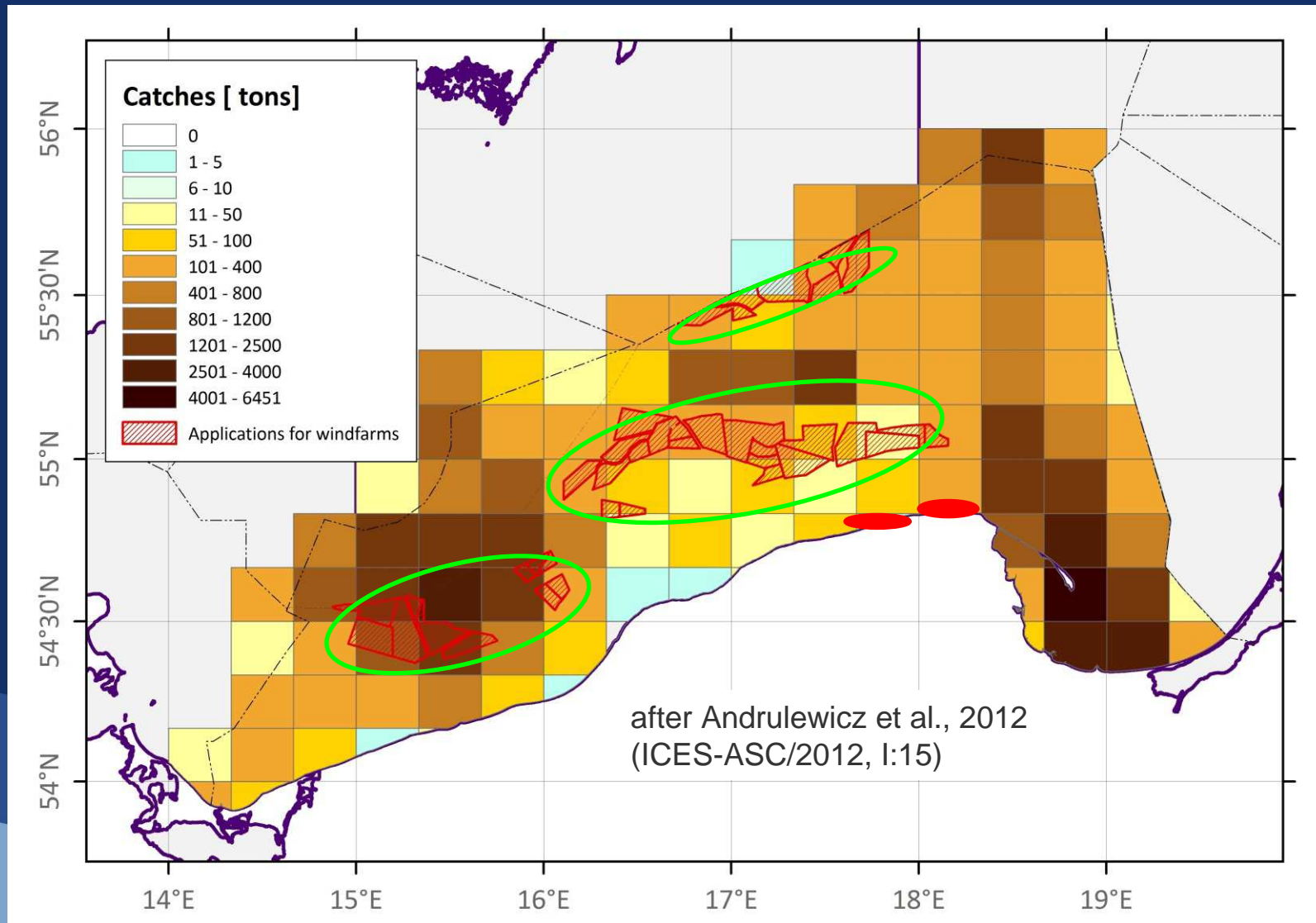
an attempt to analyse sources and effects of the potential conflicts between traditional and new users of the Baltic Sea space – on an example of the Polish marine waters.



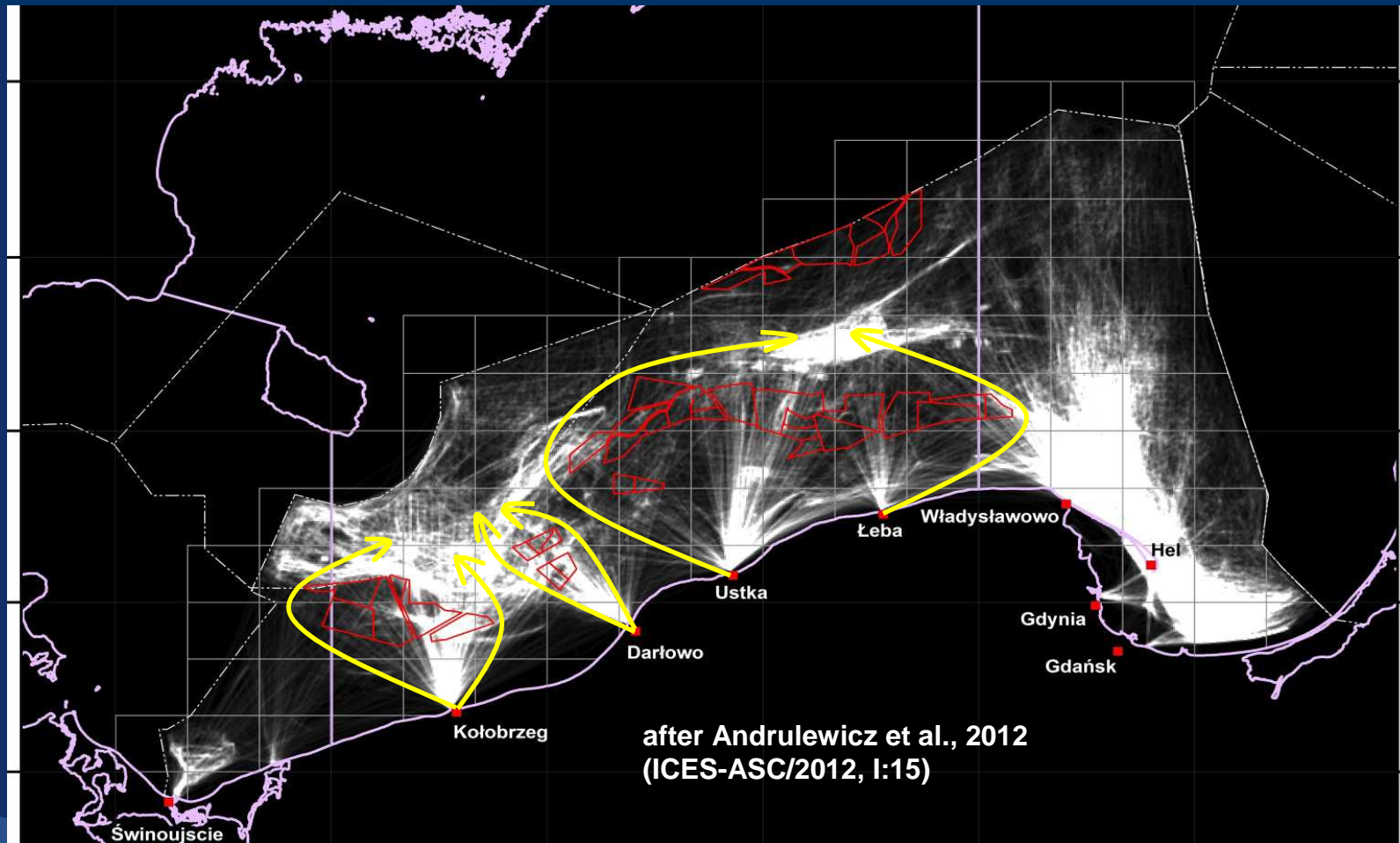
Presentation is partly based on the ICES CM 2012/I:15 „Fishery versus new concepts of the use of sea space – an example of the Polish Marine Areas” by E. Andrulowicz, W. Pelczarski, E. Kuzebski and L. Szymanek (NMFRI – Gdynia); under UE Project No. 226675 „KnowSeas”



The Polish commercial fish catches distribution in 2011, and the allocation of planned marine wind power farms (green circles) and very initially proposed nuclear power plants (red circles).



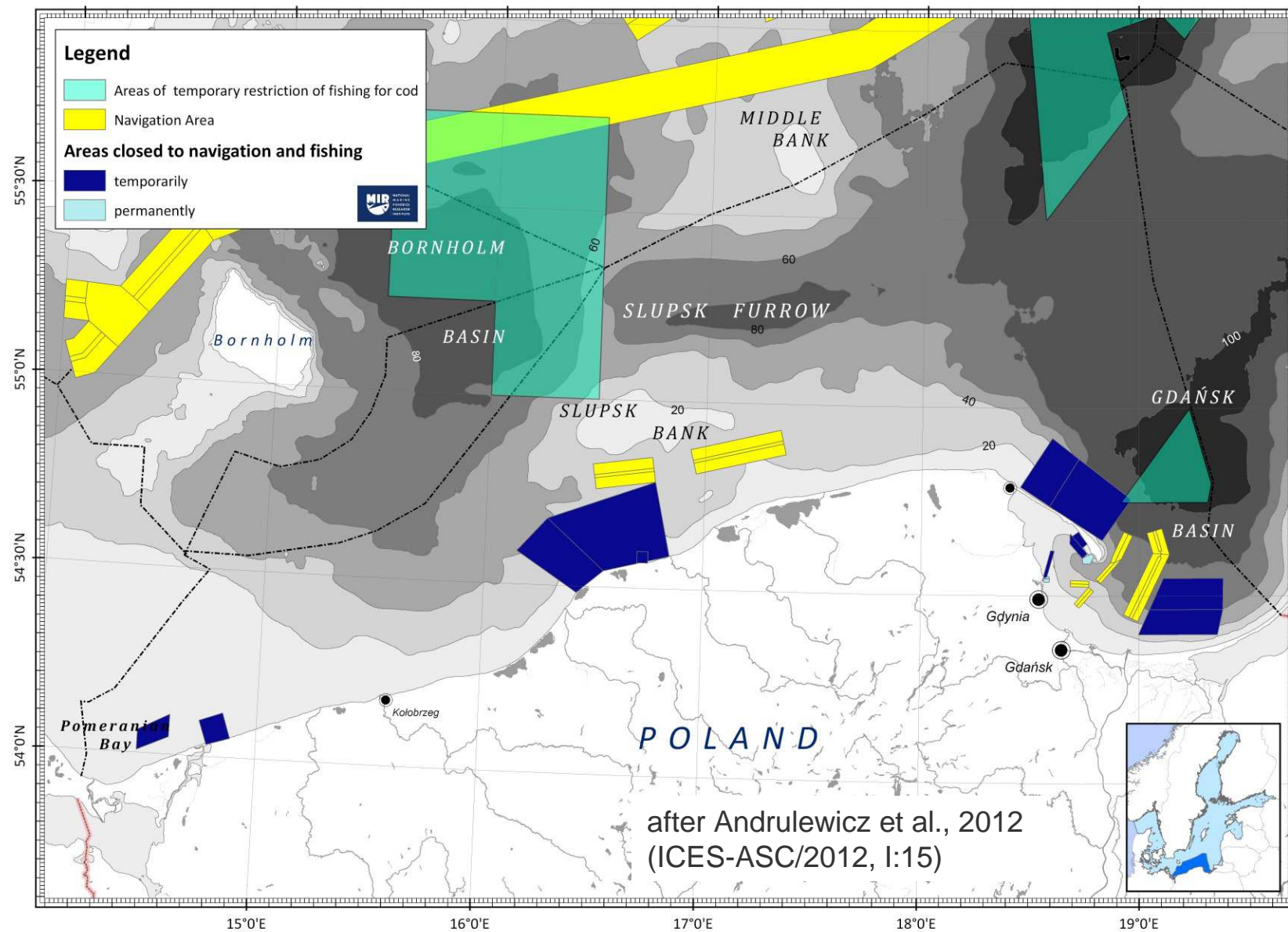
The Polish commercial fleet activities in 2011 and proposed location of the marine wind power farms (red shapes). Input data by courtesy of the Vessels Monitoring System in Gdynia.



Consequences:

- each MWF will be surrounded by 1 NM separation (buffer) zone,
- planned MWFs will block routes of 70% of vessels with the length over 12-m (white tracks) to traditional, productive fishing grounds,
- average distance between the most popular ports and fishing grounds will increase by e.g.: 130% from the Ustka-port, 100% from the Łeba-port and 36% from the Kołobrzeg-port,
- additional fuel costs resulted from the longer distance to fishing grounds can be estimated at 200 000 EUR annually.

The administrative sources of complications in fish catches – the restricted areas with very limited access to navigation and fishing.



The Baltic commercial fishery in Poland is regulated (=limited) by several the national and international (UE) administrative fishing rules and decrees concern specific conditions for implementation during fishing operations at sea, by e.g.:

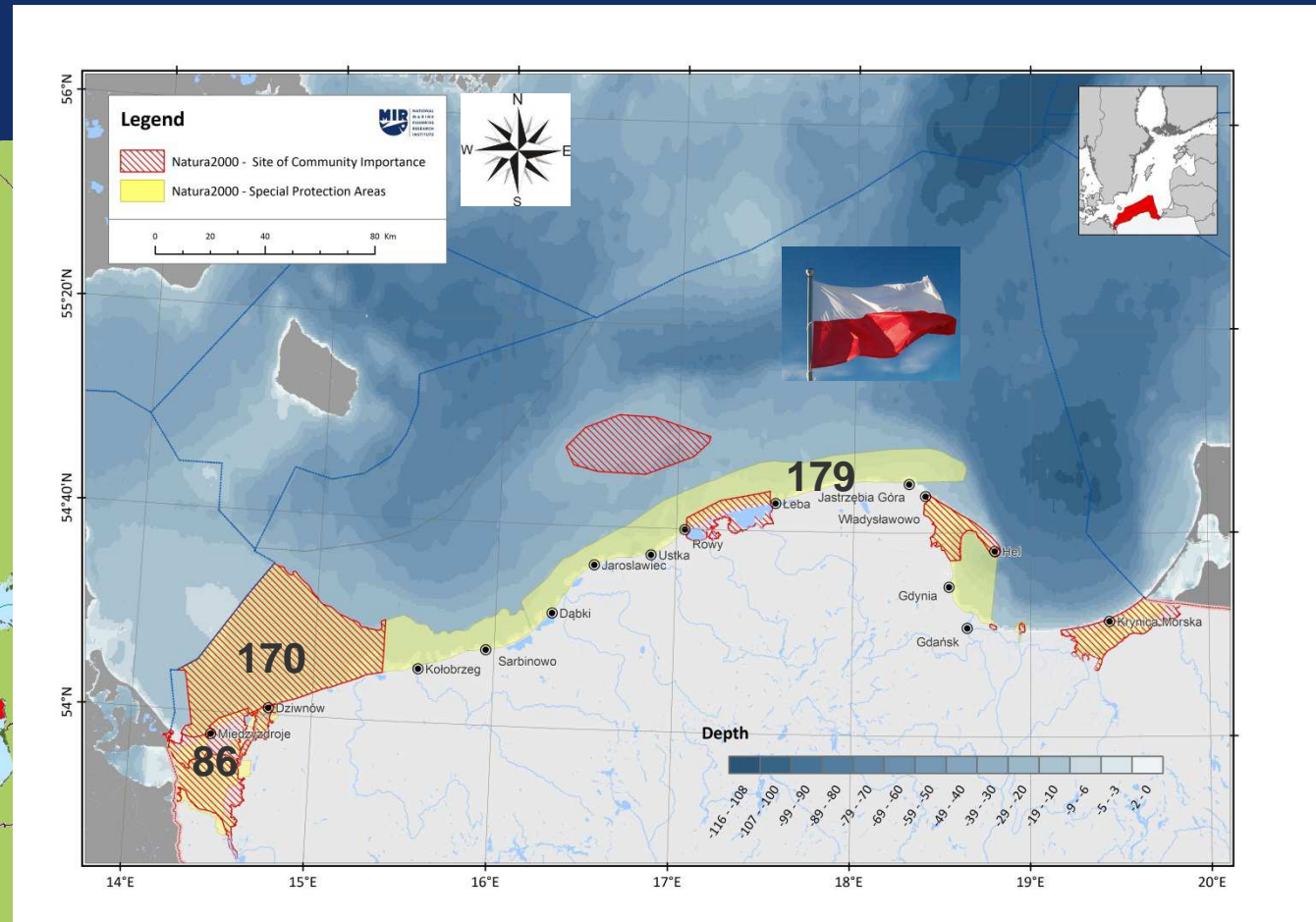
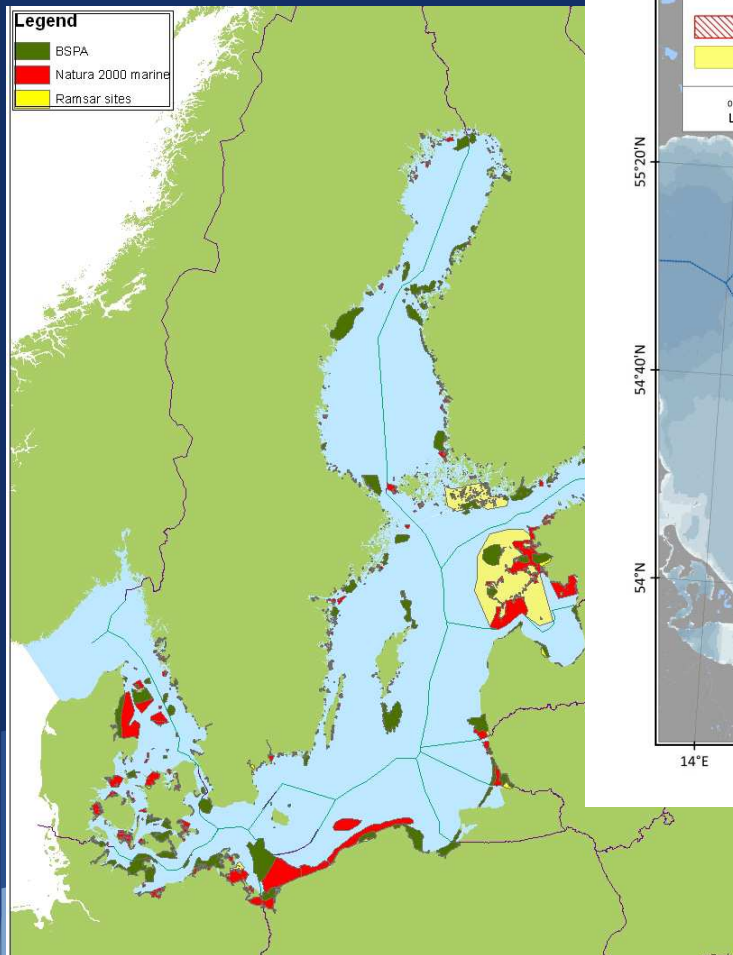
- A) Regulation on the minimum commercial size of given fish species, closing seasons and areas for particular species.
- B) TAC – *total available catch* per species in given year.
- C) National yearly catch quota per species, and by individual vessels – in a case of cod.
- D) The Polish technological (*fish processing*) and fish market (incl. veterinary) standards.



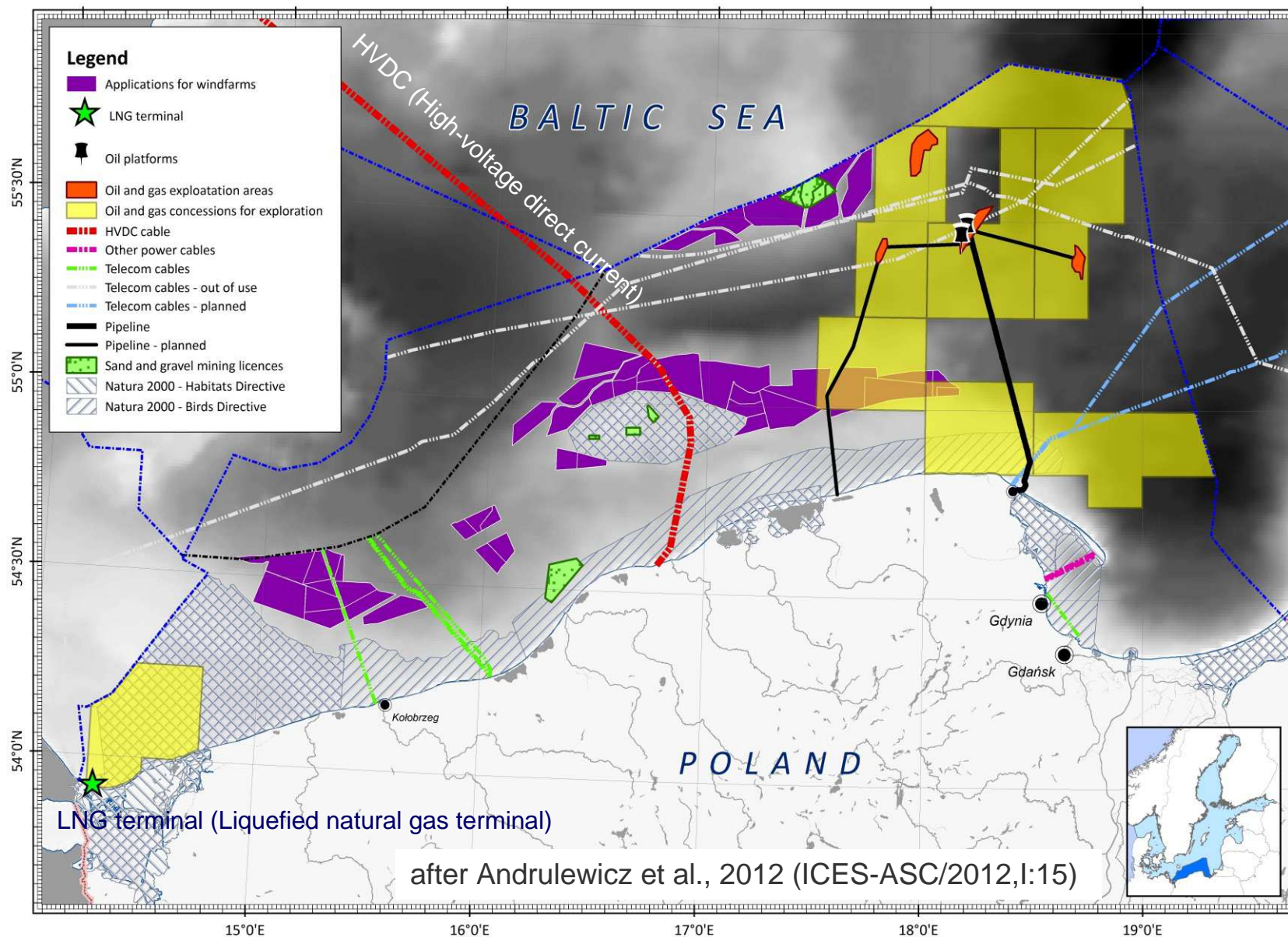
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The administrative and „pro-ecological” sources of potential complication in fish catches realisation – the Baltic Sea Protected Areas and Natura-2000 sites with limited access to fishing-grounds.



Present and planned the seabed space use in the Polish EEZ - the exploration and exploitation of mineral resources (oil, gas, sand, gravel) and the external connection infrastructure (cables, pipelines) - as the causes of significant complications in fish bottom catches realisation.



Marine fish angling activities in Poland and planned technical installations of MWF (green circles)

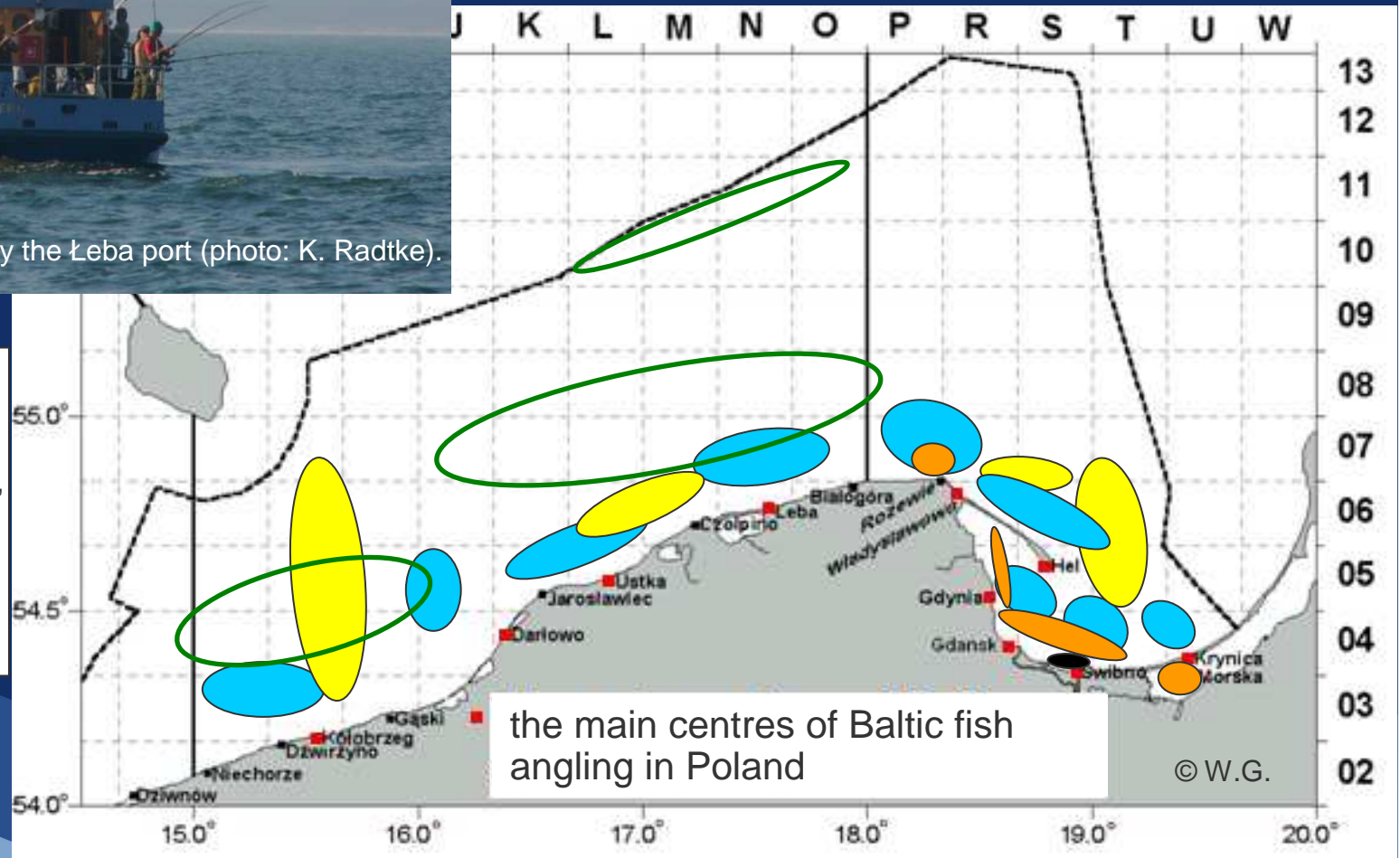


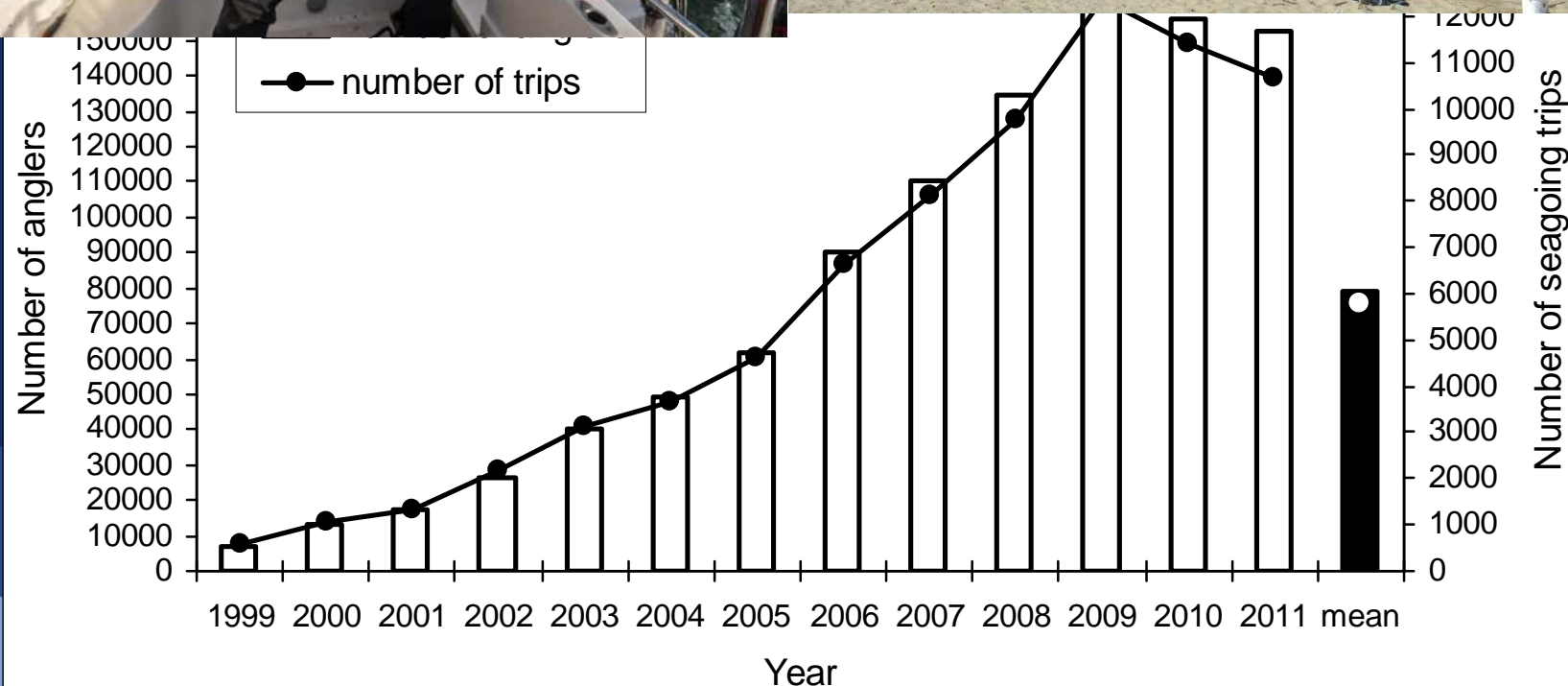
Baltic cod angling nearby the Łeba port (photo: K. Radtke).

area of angling:

-  cod
-  sea trout, garfish, pikeperch
-  salmon
-  herring

input data by courtesy of K. Radtke and M. Ramutkowski – NMFRI (Gdynia)





In 2010, 156.4 thousands of anglers fished 1000 tons of cod = 10% of the Polish annual catch quota (input data by courtesy of K. Radtke – NMFRI Gdynia).

The marine-tourism in the Polish EEZ

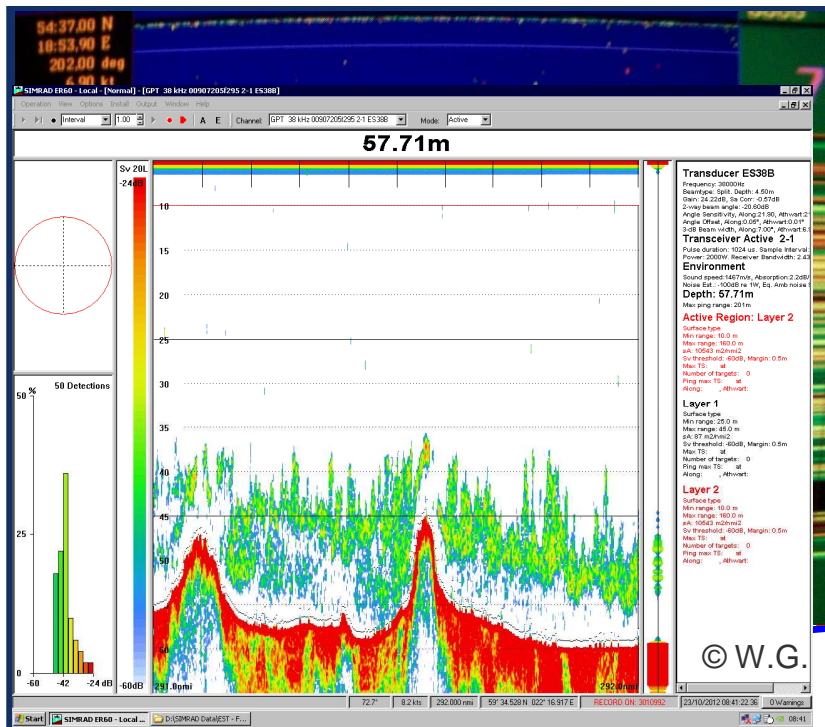
Pilgrims on vessels in the Puck Bay – St. Peter and St. Paul Holiday (photo: E. Andruliewicz)



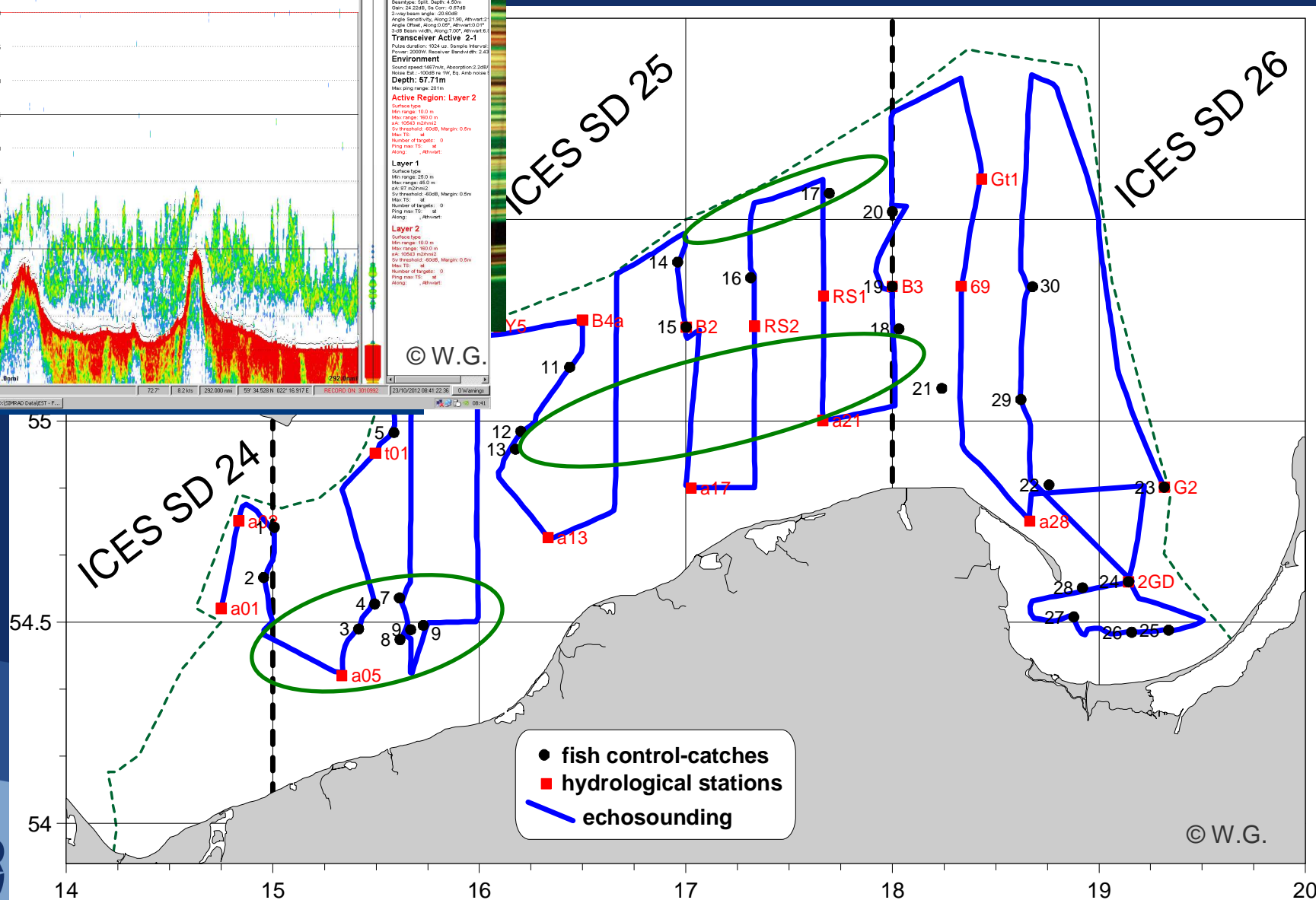
The marine-tourism in the Polish EEZ realized in selected days of year and at limited location only is a minor source of complication in fish catches realization.



"Herring march" in the Puck Bay (photo: E. Andruliewicz)



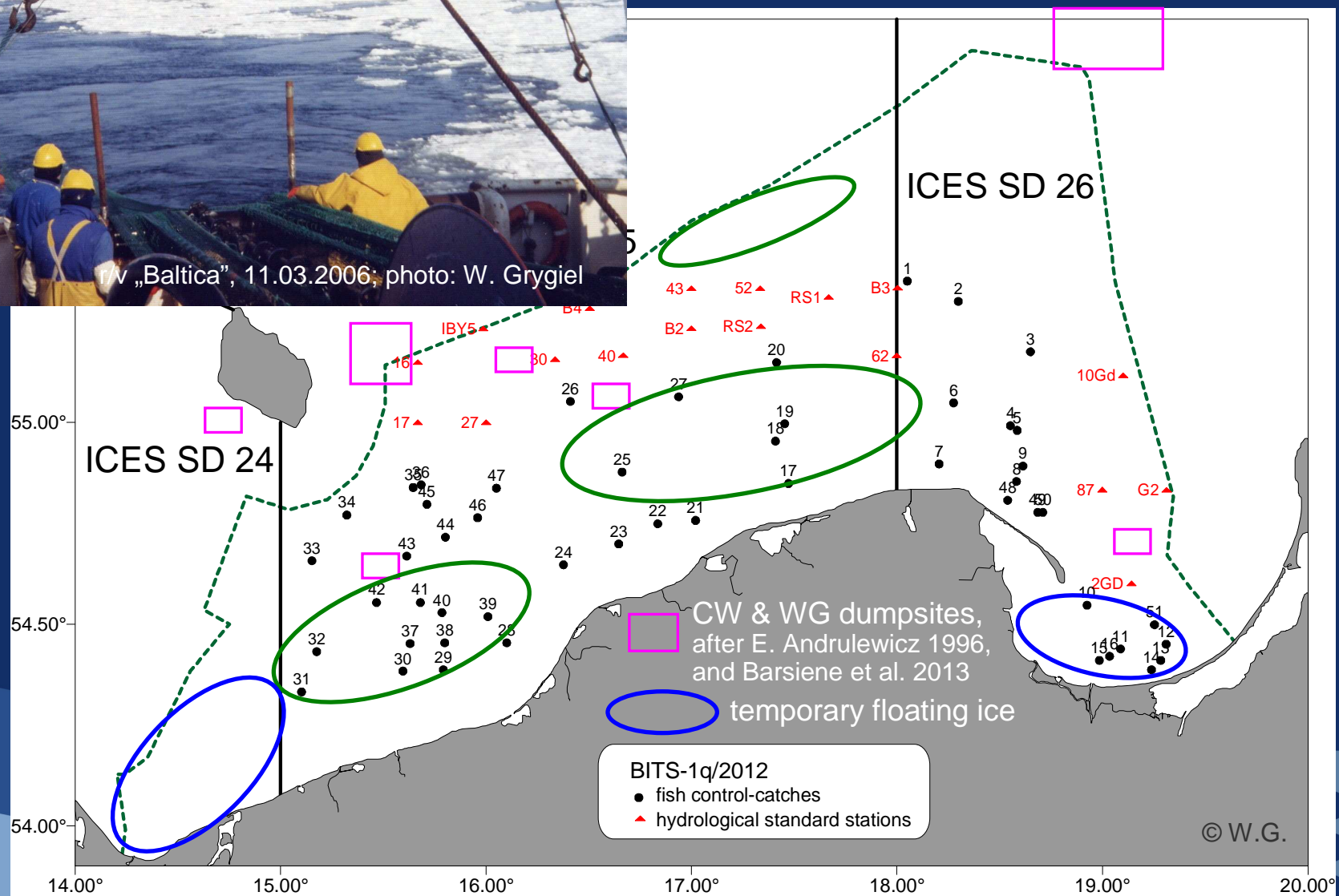
stic transects allocation during the BIAS type of survey
planned marine wind power farms (green circles).





r/v „Baltica”, 11.03.2006; photo: W. Grygiel

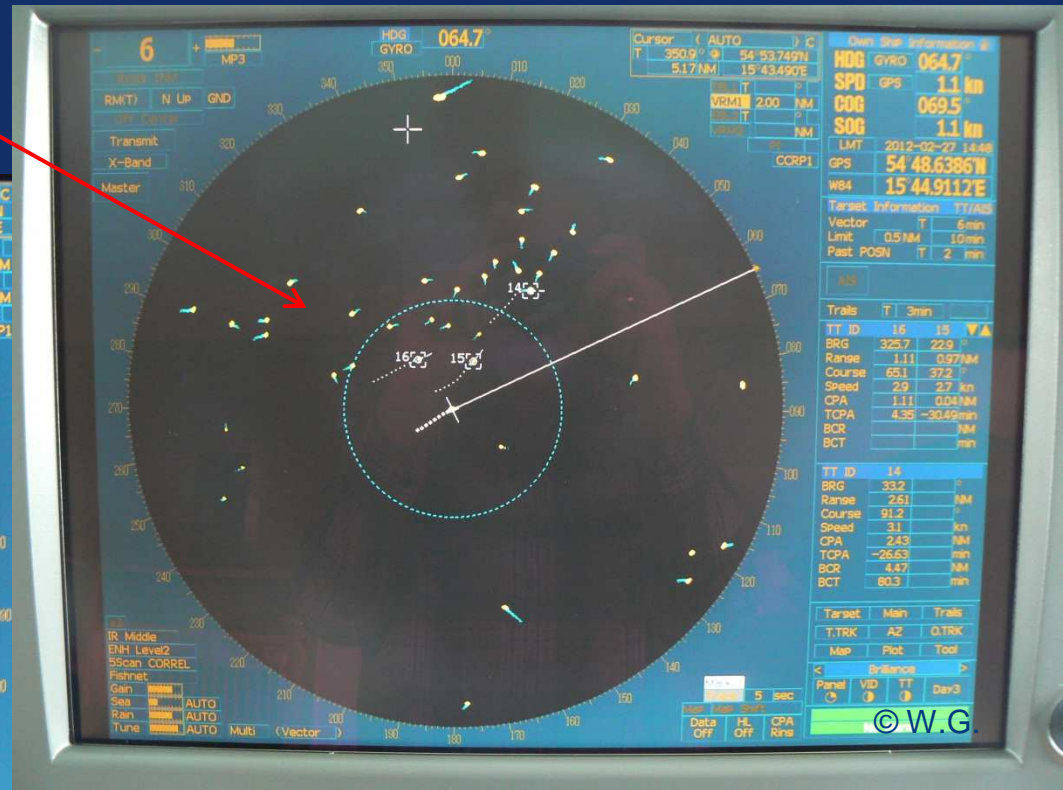
hydrological stations allocation during the BITS
on of planned marine wind power farms (green



Areas *a priori* accessible for the fixed locations of research catches, which needs a sea space, can be temporary and locally occupied by the numerous fishing vessels and the passive fishing gears (e.g. gill-nets).



The example of commercial fishing fleet distribution in the southern part of the Gulf of Gdansk, during the BITS-4q/2012 survey realisation.



The example of commercial fishing fleet distribution in the south-eastern part of the Bornholm Deep, during the BITS-1q/2012 realisation.

Conclusions:

A) It is probable that in the forthcoming years the commercial fisheries within the Polish Marine Areas will be subjected to various new limitations of its activities, resulting from the implementation of numerous large-scale technical constructions (e.g. for electrical energy production incl. the external connection infrastructure) and the extraction of mineral resources.

B) Recreational sea angling, marine tourism and a new concept of the extended protection of living resources and habitats will also contribute to the limitations on the commercial fisheries and research surveys programme accomplishment.

C) The realization of the BITS and BIAS research surveys has also been recently limited by:

C.1) the anthropogenic origin causes:

- the navy intensive military trainings of the war-ships and soldiers exercises on beaches,
- the commercial fleet and fish anglers' numerous boats spatial distribution,
- the under-water acoustical noises,
- the chemical munitions dumpsites,

C.2) the natural origin causes (temporary and locally):

- the areas occupied by too dense fish shoals,
- the ice cover up area,
- very high variability of the bottom depth, still not very well recognized in the whole Baltic.

Special thanks to:

Mr. Emil Kuzebski (NMFRI in Gdynia) for the input data to graphs on the slides Nos. 2 and 3,
Mr. Krzysztof Radtke (NMFRI in Gdynia) for the input data regarding Baltic cod angling in Poland,
Mr. Marcin Ramutkowski (NMFRI in Gdynia) for the input data regarding salmon marine angling in Poland.



Thank you for your attention!