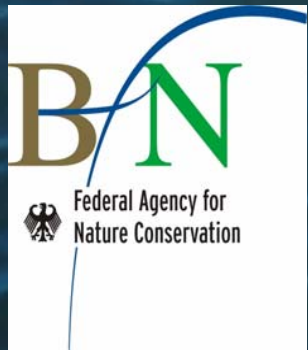


# The Jastarnia Plan – achievements and further implementation needs

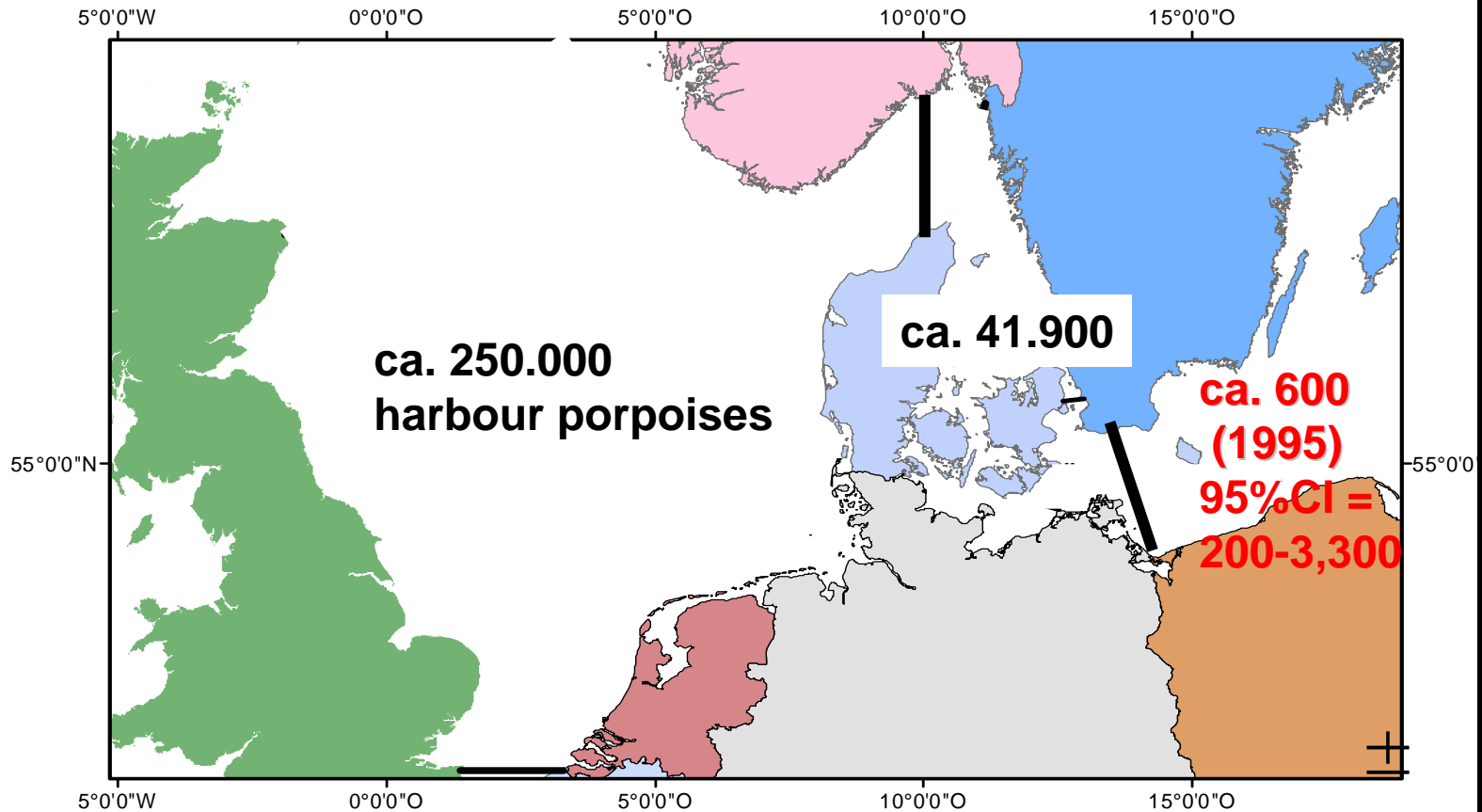


**Stefan Bräger**  
German Oceanographic Museum

# The Harbour Porpoise (*Phocoena phocoena*)

- has a circumpolar distribution with several distinct genetic populations,
- is the last remaining reproducing cetacean species in many European waters (e.g. in the German Bight, Baltic Sea),
- is protected in the EU under the Habitats Directive and in the Baltic and North Seas under ASCOBANS.

# Results of SCANS-1 survey of July 1994



# ASCOBANS

29 March 1994

Agreement on the Conservation  
of Small Cetaceans of the  
Baltic and North Seas  
(as of 1 November 2005)

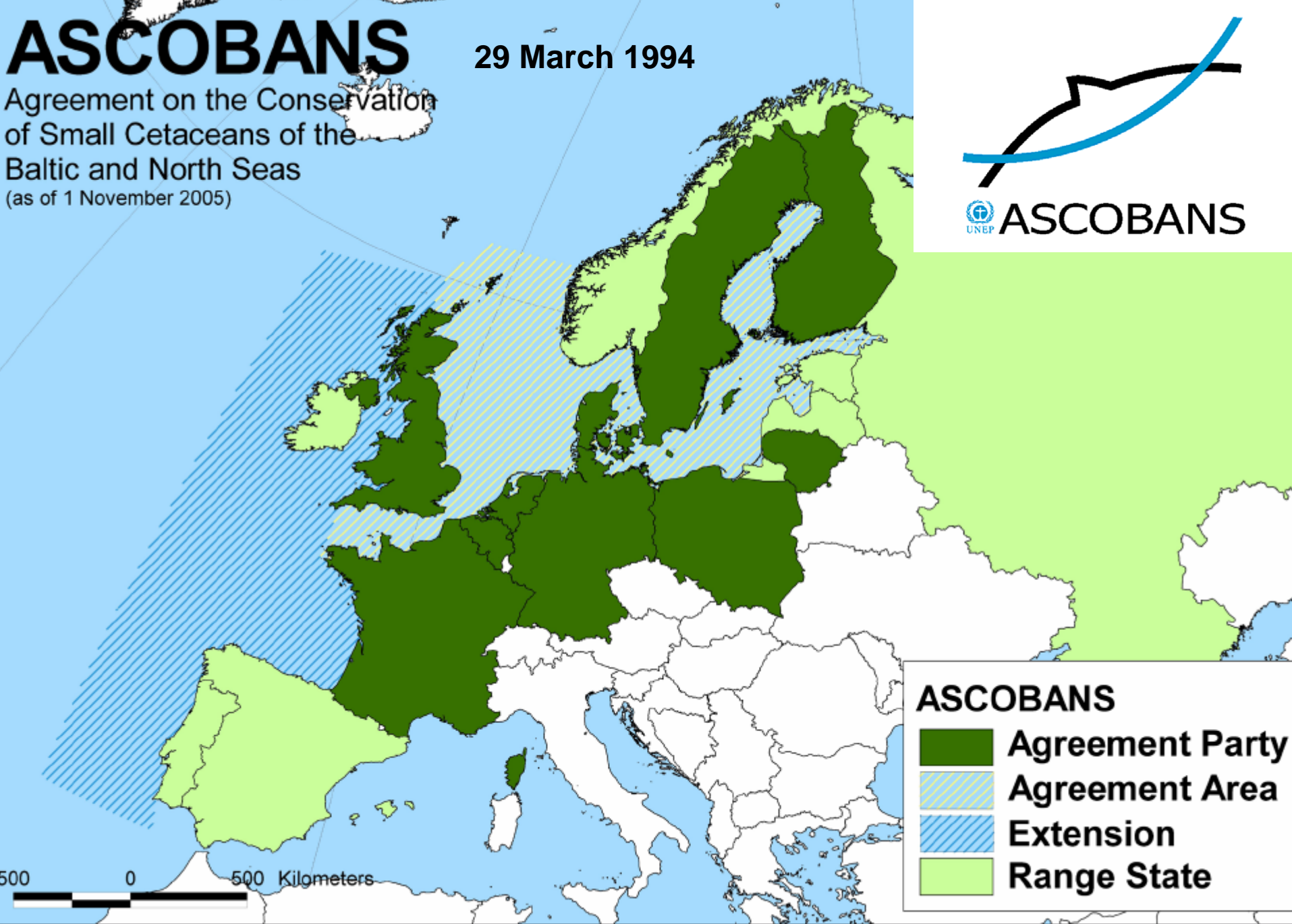


Abb. 1: ASCOBANS-Vertrags- und Arealstaaten (Stand: November 2005)

# The *Baltic* Harbour Porpoise

- is the largest regularly occurring predator in the Baltic Sea (in the absence of sharks)
- is genetically and morphometrically distinct from other porpoise populations (although the Baltic Sea is only a few thousand years old)
- is or was -at least partially- seasonally migratory (as seen in the drive-hunt in Lille Belt/DK)
- is in immediate danger of becoming extinct !

# The ASCOBANS Recovery Plan for Baltic Harbour Porpoises („Jastarnia Plan“) was adopted by the Meeting of Parties 2003

- „has an interim goal of restoring the population ... to at least 80% of its carrying-capacity level“
- „the objectives of this recovery plan are to:
  - (1) implement precautionary management measures immediately to reduce the bycatch rate to two or fewer porpoises per year in the portion of the Baltic that was surveyed in 1995,
  - (2) improve knowledge in key subject areas as quickly as possible“



# Status of the Population:

„...without bycatch mitigation, porpoises will remain scarce...“

„...there is sufficient evidence to conclude that porpoises are now much less common in the Baltic than they were in the past, and that much of the decline occurred from the middle to late 20th century...“

„There is also sufficient evidence to conclude that bycatch in fishing gear has played an important role not only in reducing the abundance of porpoises, but also in preventing their recovery in the Baltic “

„...the available evidence (abundance estimates, bycatch levels, stock identity) clearly points to a population that is in serious danger; and as a matter of urgency, every effort should be made to reduce the porpoise bycatch towards zero as quickly as possible“

# **Jastarnia Plan: Recovery Recommendations**

## **A. Bycatch Reduction**

- i. Reduce fishing effort**
- ii. Change fishing methods**
- iii. Compile standardised data on fishing effort**
- iv. Implement a pinger programme**

## **B. Research and Monitoring**

- stock affinities**
- new techniques for assessing trends in abundance**
- effects of various types of sound and disturbance**

## **C. Marine Protected Areas**

## **D. Public Awareness**

## **E. ASCOBANS Cooperation with Other Bodies**

## Appendix 3: Important Steps for the Implementation of the Jastarnia Plan

„1. Establish an Advisory Group to oversee the process of identifying high-risk areas for bycatch mitigation. This group will have responsibility for further development of the Terms of Reference for needed studies, choosing consultants (or other individuals) to carry out the studies, and generally to carry forward the relevant recommendations in the Recovery Plan.“

→ National delegates of the  
Baltic Parties to ASCOBANS met  
three times in the *Jastarnia Group*:  
March 2005 in Bonn  
February 2006 in Stralsund  
February 2007 in Copenhagen

# Progress in the conservation of the Baltic harbour porpoise I

## Bycatch reduction

Identification of areas of reported high bycatch

Sweden, Poland

Reduction of fishing effort in the bottom-set gillnet fishery

Poland  
(decommissioning)

Implementation of the use of alternative fishing gear

Sweden

Implementation of a pinger programme

Denmark

Initiate a review of all experiments to date with alternative gear and fishing practices

Germany

Develop and implement a strategy for getting fishermen to support bycatch mitigation measures

RSPCA + ASCOBANS  
Secretariat (video)

Develop and implement a strategy for getting fishermen to support bycatch mitigation measures

Denmark, Sweden

# Progress in the conservation of the Baltic harbour porpoise II

## Research and Monitoring

International database on opportunistic sightings, strandings and bycatch

Germany

Joint Baltic project on genetics – maximum number of samples, best methods

Sweden + Denmark +  
ASCOBANS Secretariat

Monitoring programmes in fisheries

Sweden

Study key habitats

Denmark, Poland,  
Germany

Standardized campaign for reporting across Baltic

Germany

Model pinger function in Baltic conditions

Sweden

Analysis of stock affinities of harbour porpoises in the "transition zone" of the southwestern Baltic

Denmark, Sweden,  
Germany

Develop and apply new techniques for assessing trends in abundance

Sweden, Finland,  
Estonia, Poland,  
Denmark, Germany

Investigate the effects of various types of sound disturbance on harbour porpoises

Germany

# Progress in the conservation of the Baltic harbour porpoise III

Create a network of marine  
protected areas

HELCOM,  
Germany (EEZ)

Public awareness: Standardized  
Baltic campaign for reporting  
harbour porpoise occurrence  
and bycatch

Finland, Germany

International Baltic Harbour  
Porpoise Day (annually in May)

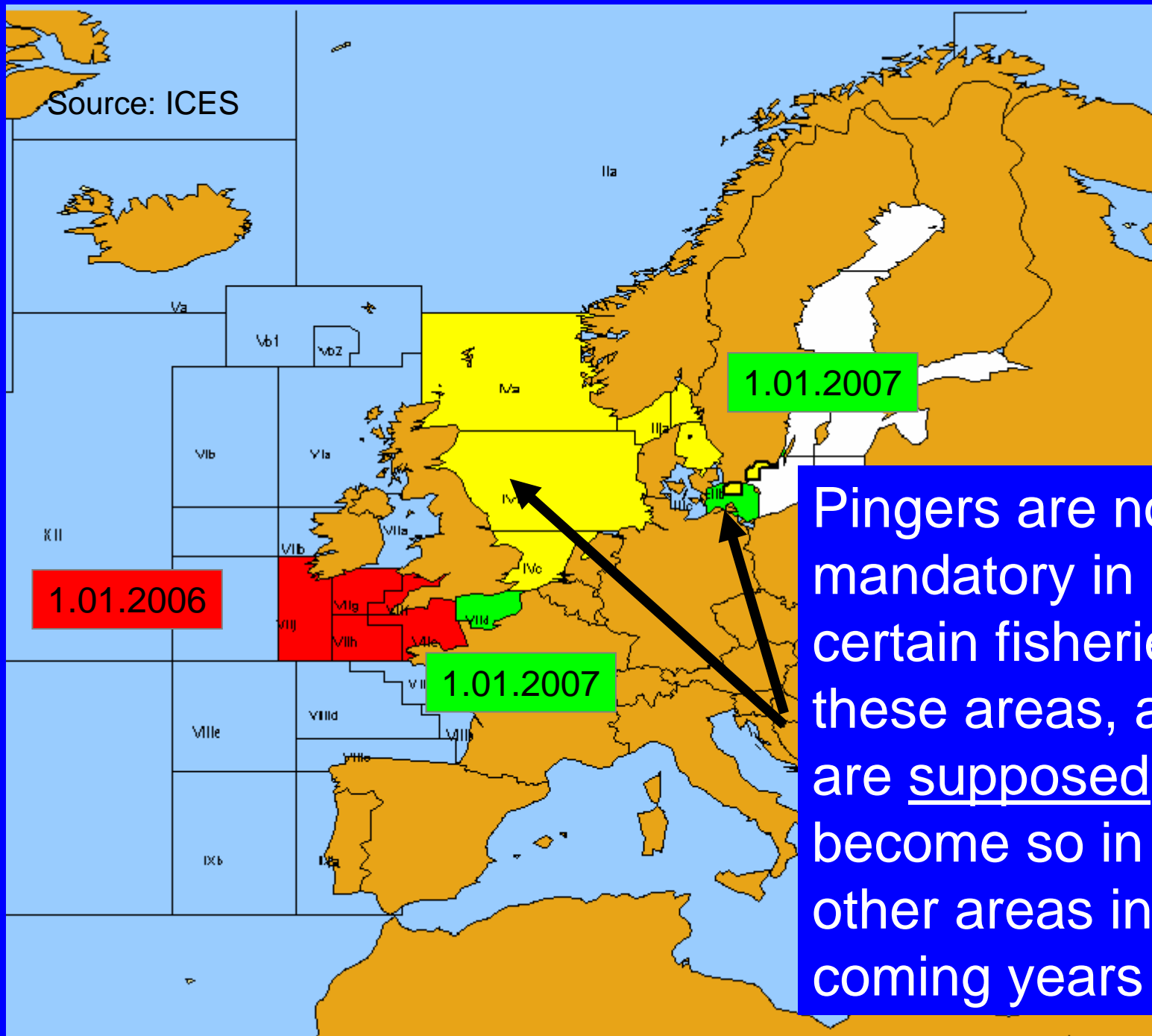
everywhere

# **E.U. Council Regulation 812/2004 of 26.4.2004**

laying down measures concerning incidental catches of cetaceans in fisheries and amending Regulation (EC) No 88/98

- **Use of active acoustic deterrent devices (pingers)**
- **At-sea observer schemes**
- **Gradual phase-out of driftnets in the Baltic Sea**

Source: ICES



Pingers are now mandatory in certain fisheries in these areas, and are supposed to become so in the other areas in the coming years

# EU Council Regulation 812/2004 of 26.4.2004 (cont.)

## At-sea Observer schemes:

- Member states are now required to implement dedicated small cetacean bycatch observer programmes for certain fisheries involving vessels  $\geq 15$  m
- Observers need to be “properly qualified and trained”
- For smaller vessels, “appropriate” bycatch studies are required



# Council Regulation 812/2004 in the Baltic Sea

**Pingers** (since January 2007): only in ICES area 24 and only on vessels  $\geq 12$  m



**Observers** (since January 2006): only on 5% of the fleet (min. 3 vessels) and only on vessels  $\geq 15$  m



# Future implementation needs of the Jastarnia Plan:

- **Bycatch mitigation: Substitute set-netting in MPAs (e.g. SACs) with less harmful fishing gear,**
- **Introduce (more) onboard marine mammal observers,**
- **Substitute pingers with more effective measures, such as change of fishing gear,**
- **Provide MPAs with substantive management plans calling for effective conservation measures,**
- **Research into habitat and prey preferences as well as seasonal movements**

„Develop and apply new techniques for assessing trends in abundance”:

# Towards a new monitoring concept

<i>Population status:</i>	<b>Favourable</b>	<b>Unfavourable-Inadequate</b>	<b>Unfavourable- Bad</b>
<b>Anthropogenic mortality</b>	< 1% of estimated population size	1.0-1.7% of estimated population size	> 1.7 % of estimated population size
<b>Porpoise distribution</b>	in >90% of historic area	in >60% of historic area	in <60% of historic area
<b>Health status of by-caught animals</b>	low prevalence of parasites and/or of pathological abnormalities (values to be developed)	medium prevalence of parasites and/or of pathological abnormalities (values to be developed)	high prevalence of parasites and/or of pathological abnormalities (values to be developed)
<b>Toxin loading</b>	low contamination of body tissues (values to be developed)	medium contamination of body tissues (values to be developed)	high contamination of body tissues (values to be developed)
<b>Habitat quality (relative to potential)</b>	no oxygen depletion (as proxy for eutrophication); naturally structured substrates of the sea floor	occasional oxygen depletion (as proxy for eutrophication); reduced complexity in the substrates of the sea floor	frequent oxygen depletion (as proxy for eutrophication); eliminated structure and complexity in the substrates of the sea floor
<b>Available prey abundance</b>	high (values to be developed)	medium (values to be developed)	depleted (values to be developed)
<b>Porpoise density</b>	high or increasing (values to be developed)	medium (values to be developed)	low or decreasing (values to be developed)
<b>Group structure</b>	seasonally frequent large groups	seasonally frequent medium-size groups	almost only small groups and single individuals
<b>Proportion of calves in reproductive season and area</b>	high (values to be developed)	medium (values to be developed)	low (values to be developed)

# Possible future monitoring objectives for Baltic harbour porpoises and other cetaceans

<i>Quantitative Monitoring</i>	<i>Biological Aspects</i>	<i>Aspects of Population Health</i>
1. Presence	5. Seasonality (inc. prey choice)	10. Age structure
2. Distribution	6. Movements (inc. site faithfulness)	11. Health status
3. Density	7. Habitat use	12. Reproductive status
4. Trend (changes in absolute abundance)	8. Proportion of calves	13. Toxin loads
	9. Recruitment	14. Genetical population structure
<i>Current monitoring: Aerial + shipborne surveying only</i>	<i>Basic parameters: Ecological factors + population dynamics</i>	<i>Medical parameters: Necropsies of bycatch or biopsies</i>

# To what might our conservation efforts for a few hundred Baltic harbour porpoises be compared to in the future?

- To the conservation of 200-500 ind. (1989) of **Vaquita** (Gulf of California harbour porpoise) in Mexico:  
MPA ineffective → population **continues to decline**
- To the conservation of 111 **Maui's dolphins** (North Island subspecies of the Hector's dolphin) in New Zealand:  
Coastal MPA with 4 nm closed to set-netting since 2004 →  
New „Threat Management Plan“ (under consideration) might call for 6 - 18 nm nearshore without set-netting nationwide
- Or to the **recently extinct Baiji** (Chinese river dolphin; perhaps still 100 ind. in 1994) ?