

REPORT OF THE 11TH MEETING OF THE ASCOBANS NORTH SEA GROUP

Online Meeting

14-15 February 2023



**Agreement on the Conservation of Small Cetaceans
of the Baltic, North East Atlantic, Irish and North Seas**

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REPORT OF THE 11TH MEETING OF THE ASCOBANS NORTH SEA GROUP

1. Opening of the Meeting

1.1. Welcome and announcements

ASCOBANS Coordinator, Jenny Renell (Secretariat), welcomed everyone to the eleventh meeting of the North Sea Group¹ (NSG11) and ran through some housekeeping items, including the [Online Meeting Protocol](#). The Chair, Peter Evans (Sea Watch Foundation), also welcomed everyone and called NSG11 to order. He did a tour-de-table, asking everyone to introduce themselves and welcomed the new representative for Germany, Berit Gewert.

1.2. Adoption of the Agenda

The Chair introduced the [provisional agenda](#) and [provisional annotated agenda and schedule](#). Fabian Ritter (Whale and Dolphin Conservation) proposed discussing the use of the term “stock” and Susanne Viker (Sweden) asked to make a request for samples and photographs on behalf of the Swedish Museum of Natural History and SLU Aqua, Sweden, under Agenda Item 9 (AOB). With these additions, the agenda was adopted.

2. Implementation Review: Bycatch

2.1. Implementation of existing regulations on bycatch of cetaceans (Action 2)

The Chair introduced this agenda item and did a tour-de-table.

Lotte Kindt-Larsen (Denmark) updated that there had been several workshops held and that vessel inspections were being made and fines levied for failure to comply with legislation. Fishermen were protesting as the fines were levied on the large vessel only even when other smaller vessels were close by which were not fined. She then referenced David Lusseau’s (Denmark) presentation under Agenda Item 2.4 and said there were discussions underway about how to address pinger use.

Patricia Brtnik (Germany) reported that fishery management measures for the Natura 2000 sites in the German EEZ of the North Sea were finally in place after 10 years, and being implemented, with regulations banning gillnets in most areas for specific seasons.

Jip Vrooman (the Netherlands) highlighted that new Natura 2000 and marine protected area (MPA) site management plans were in development and the harbour porpoise had been added as a target species for a few areas so would be included in the new plans. As with Germany, fisheries measures were now in place in offshore areas and would finally be implemented after 10 years including implementation of EU Birds Directive measures which would also benefit the harbour porpoise. The Netherlands was awaiting a response from the European Commission (EC) on the infringement procedure that stated that the Netherlands had failed to set up a bycatch monitoring system. She concluded by referring to the CIBBRiNA project which had been resubmitted to EU LIFE for funding, with a decision expected mid-March.

Jan Haelters (Belgium) reported that in 2022 new legislation was adopted to better describe the type of net allowed on beaches in Belgium for recreational use due to misuse of nets in 2021.

¹ Steering Group of the ASCOBANS Conservation Plan for Harbour porpoises in the North Sea (i.e. [North Sea Plan](#)).

Sami Hassani (France) updated that, as in the Netherlands, France had undertaken an evaluation of risk to the habitats in MPAs and Natura 2000 sites, and were now evaluating risk to species, in particular protected species, and depending on the results. regulations would be developed in the new management plan for these sites.

Eunice Pinn (UK) provided an update as there were no representatives from the Joint Nature Conservation Committee (JNCC) present. Similarly to France, the UK was focusing on habitat. The Marine Management Organisation (MMO) was consulting on the banning of towed gear in 13 sites, expected to be introduced later in 2023, and towards the end of the year and the beginning of 2024, the MMO would start looking at mobile species including harbour porpoises so it was unlikely that anything would be introduced in those sites until 2025.

2.2. Establishment of bycatch observation programmes (Action 3)

The Chair introduced this agenda item, carrying out a tour-de-table with updates from Parties.

Ms Öhman presented updated figures on the Swedish projects reported at NSG10. There had been circa 97 observer days on the 2017-2019 pilot observer programme in the South Baltic, the Sound, and Kattegat and 37 on the 2020-2021 pilot Mobile Electronic Monitoring (MEM) project (58 in total if normal discards were included). Ms Öhman requested countries to share photographs of harbour porpoises for a Master's project started in 2022, developing an Artificial Intelligence (AI) detection model to be used in MEM monitoring, in particular, of bycaught porpoises from gillnet fisheries. Mr Lusseau supported Ms Öhman's request, and clarified it would only be necessary to share access to photographs on hard drives, for example, for development of training models. The Chair asked what kind of photographs were needed and Ms Öhman said even photographs of stranded animals would be useful if they were of fresh animals.

Ms Kindt-Larsen presented an update for Denmark. There had been CCTV monitoring on nine vessels since 2010, so Denmark had a large dataset which was now part of the EU Data Collection Framework (DCF) monitoring programme funded annually so could be rolled out further. Denmark was also working with Sweden on the AI project, and wanted to develop it as open software to make it accessible and improve monitoring. As the Swedish data were better, they were combining the Danish and Swedish data. Ms Murphy asked what percentage of the fleet was represented in terms of numbers of vessels. Ms Kindt-Larsen said they had good coverage in inner Danish waters.

There was no new information from Germany. Mr Haelters reported that Belgium did not have any monitoring on board vessels as there were only two small vessels.

Ms Vrooman reported that monitoring efforts were low as the remote electronic monitoring (REM) project had completed. The Dutch fleet was very small and bycatch levels low, but monitoring could still be improved for recreational fisheries. There were knowledge gaps, but it was hoped the CIBBRiNA project, if funded, would address some of these.

Mr Hassani reported that between April 2021 and March 2022, 84 operations were monitored, with more than 130 operations ultimately to be monitored in Iroise Sea MPA. He hoped that this would be implemented in other MPAs on the North coast of France and that REM would be deployed in the Bay of Biscay and the North Sea. The OBSMER programme was continuing to monitor vessels in the Channel.

Ms Pinn reported that monitoring was continuing in the UK, looking at possible use of REM. There had also been various developments with the Clean Catch app where fishermen could report bycatch.

Mr Ritter expressed his disappointment that implementation and observation was lacking in many countries and that, while there was progress being made in some countries such as Denmark, there was a need for a lot more data on fishing effort.

Mr Lusseau reported on the International Council for the Exploration of the Sea (ICES) Working Group on Bycatch of Protected Species (WGBYC) work being undertaken on a new approach for evaluating and assessing bycatch data across the full range of relevant taxa including seabirds, marine mammals, elasmobranchs and turtles in different kinds of fisheries, and what an observation programme should focus on, in terms of type of vessels and locations.

2.3. Regular evaluation of all fisheries with respect to extent of harbour porpoise bycatch (Action 4)

The Chair [presented](#) some background information to this Agenda Item. Three major nations were still fishing in the North Sea: Denmark, Norway and the UK. There had been a drop in the number of landings, essentially back to the level in the 1950's. However, there had been a move away from fishing for pelagic fish species towards bottom trawling, and beam trawling. In the past three years there had been a small decline in bottom trawling and small increase in beam trawling and a general decline in most gear types.

The principal causes of bycatch for harbour porpoise were static gillnets, trammel nets and Danish seine nets. The ICES Workshop on estimation of Mortality of Marine Mammals due to Bycatch (WKMOMA) 2021 estimates of annual bycatch rates were circa 6,000 in 2019 and 6,000 in 2020. This did not include Norway or some non-random sampling due to high values from REM in the Danish fleet. The Removals Limit Algorithm (RLA) threshold was 1,622 porpoises so these values were much above that, even with correction for the non-random sampling so there was evidence of substantial bycatch.

The Chair then presented a comparison of vessel monitoring system (VMS) Fishing Effort by Gear Type in the North Sea (ICES Fisheries Overviews (2020, 2022)). Fishing effort was less in the North-West North Sea in recent years and the East coast of England. Most bottom seine effort was in the Channel. Most static gear effort was to the West of Denmark, into Skagerrak and further north. One of the key problems was that fishing had moved to smaller fishing boats which were not being monitored and thus a component was not being addressed.

The Chair concluded by noting that, in the UK, assurance work was being carried out on all approved Inshore-VMS (I-VMS) devices, with the expectation that this would be completed during the first quarter of 2023. These devices were similar to the VMS tracking devices used by fishing vessels > 12 m. Using GPRS mobile phone signals, I-VMS devices provide positional information (such as latitude and longitude, course, speed and date and time of each positional report) which is sent to the UK MMO's VMS Hub. The aim was to improve management and sustainability of the environment, ensure proper fishing practices and prevent illegal fishing, but they could also assist with monitoring bycatch.

Ms Sveegaard asked what the reaction had been to installing I-VMS in the small vessels and the Chair thought there had been reluctance but not opposition. Many trials had taken place over the past few years in England & Wales, with some continuing, and legislation would not come into force until later in 2023. The units were also relatively cheap. Ms Pinn reported that the plan was to roll I-VMS out on inshore vessels also in Scotland but that the time frame had not yet been set. Fishermen did see them as positive particularly in relation to marine spatial planning and how windfarms would impact the industry. The Chair hoped other countries would be interested in doing something similar.

Ms Öhman updated on fisheries in West Sweden, that days at sea between 2002 and 2021 had decreased by circa 50% and net kms per day had also decreased by 53%, mainly due to a decrease in cod fisheries. Ms Kindt-Larsen reported on a project seeking to obtain combined estimates of Danish and Swedish gillnet effort in the Western Baltic. The number of fishing days had reduced since 2010 by circa 25%. It was mostly stable in the North Sea. The Danish effort was similar, but it was hard to separate out the combined table.

Ms Brtnik provided an update for Germany although most data was for the Baltic Sea, not the North Sea. Coverage was < 1% with no bycatch in 2021 and 2022. There was some self-reporting by fishermen but also a huge reduction in fishing vessels in general.

Mr Lusseau asked if there was any insight on what happened to the gillnetters who were no longer fishing. Ms Brtnik said most retire or resign but she has no specific data on this. Ms Owen wondered what was driving the reduction in effort; retirement or a scarcity in fish.

Ms Vrooman provided an update for the Netherlands. The number of gillnetters had decreased from circa 50 to six in 2021. Catches by the gillnets had also significantly decreased. The last pelagic report was in 2019, with no records of bycaught harbour porpoise. In 2022, harbour porpoise were seen swimming behind flyshoot nets and catching fish that slipped through the mesh.

Mr Haelters did not have any new information to report as there was only one vessel in Belgium and no recreational vessels using gillnets.

Mr Hassani reported that the OBSMER programme was ongoing in France. There had not been any report on bycatch or fishing effort since EC Regulation 811/2004 (establishing measures for the recovery of the northern hake stock) had been repealed. He had officially requested information from the Marine Fishery Directorate and hoped to get the data in the next few weeks for inclusion in the meeting report. Mr Ritter understood that EC Regulation 811/2004 was replaced by the EC Technical Measures² as a monitoring tool. Ms Murphy thought countries had to report every three years. WGBYC were putting annual data calls to countries so the information should be available that way.

Ms Pinn did not have anything to add for the UK. The Chair noted that the trend of a decline in gillnetting effort applied in the UK as elsewhere, although there was gillnetting in the Channel and use of other gear types. He said they had mapped UK fishing effort by gear type between 2017-2021 and it showed little change.

Porpoise bycatch assessment and porpoise mortality estimates in Danish and Swedish gillnets

Ms Kindt-Larsen gave a presentation on “Porpoise bycatch assessment and porpoise mortality estimates in Danish and Swedish gillnets” (Ms Kindt-Larsen, Gildas Glemarec, Capér W Berg, Sara Königson and David Lusseau).

Data had been collected from gillnet vessels from 2008 to 2020 and the study involved analysing how to improve bycatch estimates and through a generalised linear mixed model (GLMM) incorporating mesh sizes. They compared the Danish logbooks, which were incomplete, with the Swedish dataset which was better. They had been able to look at the two methods together: the BPUE scale-up and the model-based estimates and found similar outcomes using both methods, predicting circa 1,000 animals per year.

They had also considered two scenarios: no pingers; and 100% implementation of EC Technical Measures. In the inner Danish waters as the vessels were <12m, only one vessel was obliged to use pingers. The best case indicated > 2,000 animals and worst case < 3000. She stressed they were only using Swedish and Danish data and were missing data from Germany and elsewhere.

The Chair asked if they had attempted a whole North Sea estimate and Ms Kindt-Larsen said it was too large an area. Mr Lusseau suggested that an extension of the work would be to extrapolate to the estimated bycatch probability for the whole region, but this required a better understanding of fishing behaviour in the different countries in the North Sea. Ms Kindt-Larsen said they would need

²REGULATION (EU) 2019/1241 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 20 June 2019 on the conservation of fisheries resources and the protection of marine ecosystems through technical measures, amending Council Regulations (EC) No 1967/2006, (EC) No 1224/2009 and Regulations (EU) No 1380/2013, (EU) 2016/1139, (EU) 2018/973, (EU) 2019/472 and (EU) 2019/1022 of the European Parliament and of the Council, and repealing Council Regulations (EC) No 894/97, (EC) No 850/98, (EC) No 2549/2000, (EC) No 254/2002, (EC) No 812/2004 and (EC) No 2187/2005

data such as mesh sizes. The model posited that the bycaught animal was the sign that there are harbour porpoise there.

Ms Sveegaard pointed out that these findings highlighted the problem with the EC Technical Measures not addressing vessels <12m and there were now so few large vessels. She suggested it would be very interesting to combine this with porpoise distribution but said the study took a step forward and there was a need to wait for the SCANS-IV results to make a real analysis.

2.4. Review of current pingers, development of alternative pingers and gear modifications (Action 5)

The Chair did a tour-de-table requesting updates from countries on this topic.

Susanne Viker (Sweden) presented an update since NSG10 on the study on “Evaluating Future Ocean pingers and Banana pingers in a commercial fishery” which would be published in 2023. Two further pingers which had been developed by Future Ocean (Netguard and Netshield anti-depredation) had been tested under the study evaluating harbour porpoise presence around a modified pinger developed by Maritime Technology (PAL). A Master’s student was also studying visual acoustic modifications to decrease bycatch, with the thesis expected in 2023. There was ongoing work on developing alternative gears and Sweden was participating in the resubmission of the CIBBRiNA project as well as the Horizon project with a focus on bycatch and an AI modification to make video analysis much easier and faster.

Of the modified pingers, the PAL pinger had made no difference; the Netguard pinger demonstrated a lower presence of porpoises up to 300m and the Netshield anti-depredation pinger with higher sounds up to 600m. They had ordered some more pingers to test but did not yet have results. However, the Future Oceans pinger seemed most promising. They had to reduce the sound output as there was too high a use of battery which needed to be changed within between 10 and 14 days which was not feasible for commercial fisheries.

For Denmark, Ms Kindt-Larsen presented on pinger trials being carried out, in cooperation with Germany and Sweden, with fishermen in the North Sea responding to feedback from fishers. While there was a willingness to follow the pinger regulations, they wanted to increase the spacing of pingers as they had very long nets and so it was very expensive. The decision had been made to test Banana pingers. The findings were that with 200m spacing there was a reduction of circa 90% and with a 500m spacing (which the fishermen preferred) there was a reduction by 51%. There were still uncertainties, but the fishermen could see that the pingers were working but the 500m spacing was not enough, so they designed a new louder pinger together with Fishtek called the Red Banana pinger. The first tests had been problematic as bycatch rates increased which they believed was due to porpoise feeding on mackerel in the area which affected their results. With the pingers at 200m spacing, bycatch fell to 51% and at 500m spacing, bycatch was 36%. They were carrying on with these tests in the current season in the turbot fisheries to gain better knowledge. They were also testing pearl nets in fisheries and seeing how it affected fish catches. The preliminary results were that it was increasing catch.

Discussion focused on investigating whether harbour porpoise fed on mackerel as they had not been found in stomach contents. The need to understand what the juvenile mackerel were feeding on was also discussed. Ms Kindt-Larsen said they hoped to obtain funding to carry out analysis on porpoise stomach contents and welcomed progress with fishers who were cooperating and willing to share information, with many on the West Coast of Denmark now using pingers. The Chair shared that they had had similar associations with mackerel in the UK on occasions but also had no samples as yet so couldn’t exclude both feeding on smaller prey such as sprat. Ms Gilles referenced meta-barcoding being done on stomach contents in Germany now, and noted that evaluation of only hard parts in the stomachs could be biased because otoliths might be dissolved. Ms Kindt-Larsen felt that the stomachs would be of high quality as they were from bycaught animals but there was no certainty that the following year there would be overlap between the porpoise and mackerel as the fishers said that this only happens every five to seven years.

Ms Kindt-Larsen pointed out that when the pingers were spaced correctly, there was a 90% reduction in bycatch but when mackerel were present porpoises did not take notice of the pingers. Mr Ritter expressed concerns about increasing loudness in pingers and the effects on underwater noise levels and welfare, urging relevant studies to be made to monitor large-scale movements for possible population level effects. Ms Kindt-Larsen agreed but said that currently pingers were the only measure working. She referenced relevant work she was doing with Mr Lusseau.

Ms Brtnik [updated for Germany](#) that the two projects which had started in 2021 on alternative gears in pingers were continuing: the STELLA II project; and the PAL project. They did not have any results yet, except to say the first field season for the PAL project was successful and she hoped that her colleagues from the Oceanographic Museum could provide an update to NSG12.

For the Netherlands, Ms Vrooman updated that the CIBBRiNA project had been resubmitted for EU LIFE funding with a decision expected by mid-March 2023.

Mr Haelters did not have any activities to update as Belgium only had very small gillnet fisheries. He pointed out, however, that there had been fewer strandings of harbour porpoises and fewer animals diagnosed as bycaught. On the other hand, in 2021 and 2022 there had been a high number of seals strandings, with probably more than half of them having been bycaught and so he urged considering this bycatch alongside any porpoise bycatch.

Mr Hassani noted that most efforts in France were focused on the problem of bycatch of common dolphins in the Bay of Biscay but a project on improving the acoustic visibility of nets by inserting rope lines into nets was being trialled in Brittany by three voluntary fishermen, and could be replicated with harbour porpoise. There was a net manufacturer prepared to modify the nets in this way.

Ms Pinn reported that the Clean Catch project was ongoing in the UK but, as with many projects, was on hold as there had been quite a big change-over in personnel. Work continued in South-West England on pingers and alternatives, including a reflector project, although the use of lights on nets had been removed from the project because the fishermen found too many issues with getting the lights on to the nets and taking them off again. The Chair noted there had not been very much progress with the Clean Catch project.

Emergent Interactions in the Management of Multiple Threats to the Conservation of Harbour Porpoise

Mr Lusseau [presented](#) on a recently published paper³. Animals were facing exposure to a wide variety of human activities, including fishing, which were creating hazards in their landscape and facing potential nonlinearities in how interactions between those hazards and the cumulative effects might have for their conservation status. Some mitigation techniques, such as pingers, were intended to reduce the pressure on the population but at the same time introduced a new pressure. It was not known how to best balance pinger prevalence to minimise both bycatch rate and the population consequences of acoustic disturbance. The study uses an agent-based model to determine how pinger prevalence in nets can be adjusted to minimise bycatch rate and noise disturbance propagating to affect population growth for harbour porpoises and shows that counter-intuitively, bycatch rate can increase at lower pinger prevalence.

He explained the model, including introducing time area closures, and simulations increasing or reducing pinger prevalence. They found that displacing fishing effort, via time-area closure, could be an effective mitigation strategy. He highlighted how it was possible to identify a “critical slowdown” point for a population in assessing how the population could remain resilient. The study also showed that estimating the reproductive potential of the species should be incorporated in bycatch monitoring programmes. There was now a need to better understand how physiological condition affects

³ <https://pubmed.ncbi.nlm.nih.gov/36152860/>

reproductive decisions and behavioural responses to noise in cetaceans to better appraise and estimate the cumulative impacts of bycatch and its mitigation.

The Chair asked how to balance the potential mortality effect of entering a net with the negative effect of the pinger of disturbance. Mr Lusseau said he was working to acquire funding to develop more generic models to understand the complexities in fishing.

Mr Ritter asked whether the best way to use pingers and area closures would be a combination of both to be as effective in terms of bycatch reduction while addressing population effects. Mr Lusseau responded that it was context dependent and one way to accommodate a good coverage but leaving some space for porpoises was to have standard closures.

Ms Owen asked how they had chosen the areas for time closures. Mr Lusseau recalled that for the 2017 study, which this was based on, they had identified the areas with the highest bycatch rate. Fishing effort would not then be removed but rather redistributed and so they carried out a simulation to understand how nets would realistically again redistribute. Ms Kindt-Larsen confirmed this and noted that Mr Lusseau had built upon the 2017 study. She emphasised the potential of the model to run multiple scenarios.

Ms Pinn was interested to hear how Parties dealt with vessels where pingers were not required under the EU regulations, such as for example in the Netherlands where there was a voluntary agreement and in Norway which had a mandatory requirement for use of pingers, but she wasn't sure whatever everyone else does.

2.5. Finalize a management procedure approach for determining maximum allowable bycatch limits (Action 6)

The Chair introduced this item, noting that OSPAR had made good progress on this issue as reported at NSG10.

Ms Gilles reported that the OSPAR bycatch indicator had been published and was available on the [website](#) and, for the first time, bycatch had been assessed in European waters within a regional assessment against the threshold.

Mr Ritter wondered how the bycatch numbers reported during NSG11 related to the newly published bycatch indicator. Ms Gilles explained that the estimates on bycatch rates were provided by the ICES Workshop on estimation of Mortality of Marine Mammals (WKMOMA) to indicate whether the threshold has been reached or not for the various management units (MUs). She encouraged members to visit the site.

3. Implementation Review: Research

3.1. Monitoring trends in distribution and abundance of harbour porpoises in the region (Action 7)

The Chair carried out a tour-de-table requesting countries to provide updates on this agenda item. All countries except Belgium had participated in SCANS-IV.

For Sweden, Ms Owen reported that there was currently no national acoustic monitoring in the Skagerrak Sea (North Sea population). The national monitoring programme would be evaluated in 2023 including recommendations for future changes which might incorporate PAM in the Skagerrak Sea.

Ms Sveegaard reported that Denmark was carrying out national monitoring with an aerial survey every year. In 2023 they had also monitored a smaller Natura 2000 site and were using PAM, but the results were not ready. From 2021 results in relation to the North Sea, it was possible to see a

lot of variation. For Skagerrak, since 2017, there was a decreasing trend, but also with some variation. There was currently a great deal of planning for new wind farm areas and Aarhus University was carrying out a study in two different sites - Energy Island and another in the North Sea. Both PAM and aerial surveys would be used. Historically there were national survey areas and surveys in Natura 2000 sites but there was not much information for the central part of the North Sea and the Danish North Sea, only information from the SCANS surveys which were not fine scale. These new studies were therefore welcome, but it would be a few years before any report was available.

Ms Gilles provided an update from Germany. Each year two surveys were carried out (in spring and summer) by the Institute for Terrestrial and Aquatic Wildlife Research (ITAW), funded by the Federal Agency for Nature Conservation (BfN). In 2022, SCANS-IV meant there was no individual monitoring. In spring 2021, a survey had been carried out in the Sylt Outer Reef area which in the years before, was mainly only surveyed in summer. Due to bad weather, it was not possible to complete a further survey but the results from the spring survey showed it was still a high usage area although the density had decreased slightly. The monitoring would continue through a project on habitat choice and population dynamics of harbour porpoise in the ecosystem of the German North and Baltic Sea which ran from May 2022 to September 2026 with five work packages (WP) including: WP1 – habitat selection of harbour porpoise in the North and Baltic Seas with a focus on possible causes of decline, WP2 – influence of anthropogenic disturbance factors on the population dynamics of harbour porpoise; and WP3 – visual surveys of marine mammals in the German North and Baltic Sea – doing quality assurance and evaluation of digital aerial surveys.

Mr Ritter was concerned about spatial planning for the massive increase of offshore wind farms (OWF) in the North Sea and wondered if there were plans to monitor the development of these construction sites. Ms Gilles explained there was an interdisciplinary research project (called CoastalFutures) that explicitly looks into developing scenarios to evaluate the impacts of this increase in OWF on different ecosystem components, including marine mammals.

Ms Vrooman reported that national annual aerial surveys were completed in 2022 in the Netherlands (aimed at birds). Wageningen Marine Research also carried out national surveys every third year covering the entire North Sea (with the next in 2023) and the combination of these surveys allowed for an abundance estimate. She would report on a pilot tagging study to be started in 2023 under Agenda Item 4.

Mr Haelters reported that aerial surveys were carried out in Belgium in March and October 2022. In March the estimate was an average of 3.3 animals per km² and in October, 0.8 animals per km² density, with for the first time more seals observed in a survey than dolphins. There were the lowest number of stranded porpoises since 2004. There was a plan for an offshore windfarm with an environmental impact assessment being carried out for an island that to be constructed offshore or four offshore high-voltage installations. There was PAM of the windfarm and around an offshore mussel farm.

Ms Murphy asked whether there were similar abundance trends for northern France and southern Dutch waters and Ms Vrooman said there had been a decline in harbour porpoise between roughly 2005 and 2012, but that the population has been increasing since then. The most recent abundance estimates had not yet been finalised.

Mr Hassani reported that France carried out aerial surveys of megafauna every six years. In Western Brittany an MPA initiative started in May 2022 with seven stations, aiming to have one aerial survey per season alongside PAM to detect small and large cetaceans. The Chair noted there had been attempts to do surveys in the Channel, but they had run into problems with flying restrictions in UK waters due to attempts to aerially monitor the migrant issue.

The Chair reported that the UK had initiated the POSEIDON project (Planning Offshore Wind Strategic Environmental Impact Decisions) to establish a robust evidence base made accessible through new mapping tools to support the expansion of low impact offshore wind development alongside thriving marine nature. They had done a gap analysis to identify areas and seasons low

on survey effort, and DEFRA, the UK government and Natural England have been contracting aerial surveys to fill the gaps. For Scottish government, abundance estimates had been calculated from 11 digital aerial surveys undertaken offshore in 2020-21 by APEM Ltd for marine mammals and birds. He [shared the transect lines](#) for each surveyed month in the North-western North Sea. The results of the point estimates of harbour porpoise densities were mostly quite low. The APEM surveys yielded an overall abundance estimate of around 55,000 animals for the survey area for most of the year except April to June when it increased to circa 120,000 animals. Point estimates of densities over the region varied from 0 to 5 animals/km², with progressively higher densities occurring in the South of the survey area. An instantaneous availability of 0.123 was used (see Paxton et al., 2022).

The POSIEDON project also included examining cumulative effects which would incorporate bycatch and noise disturbance into the models being developed for a sensitivity analysis.

Ms Gilles was particularly interested in the availability bias obtained and the Chair shared the [link to the report](#). He noted the difficulty of separating out animals below the surface relating to the degree of turbidity, which left room for variability in aerial digital survey estimates and Ms Gilles agreed it was similar in Germany and a huge potential for bias that needs more research.

SCANS IV

Ms Gilles presented an update on the fourth Small Cetaceans in European Atlantic waters and the North Sea survey (SCANS-IV) by explaining she would not be sharing abundance estimate figures as yet as they were being finalised.

SCANS-IV was the fourth of the SCANS surveys (1994, 2005/2007, 2016) which take place on a (now) six-yearly cycle to parallel the reporting for the MSFD and Habitats Directives. The main objectives were to: obtain abundance estimates and trend assessment of the regularly occurring cetacean species through population-wide surveys; provide outputs for Member State and other country reporting, assessment and indicator applications; provide outputs for impact assessments; and develop a governance framework for future SCANS surveys to ensure long-term sustainable implementation.

SCANS 1994 covered shelf and offshore waters of the European Atlantic. SCANS-II (2005) extended this, and CODA 2007 had an offshore component so the two go together. SCANS-III (2016) had off- and inshore components.

In SCANS-IV, there were eight planes for aerial surveys (using existing survey teams where possible) and one shipboard survey covering mainly offshore waters in the Bay of Biscay. They had designed 44 blocks across the survey area (1.75M km²). The project had been funded by agencies and scientific project partners from Denmark, France, Germany, Netherlands, Portugal, Spain, Sweden and the UK.

The coverage was the best achieved so far in any SCANS survey, and ran from the end of June through mid-August 2022 (with a second attempt made in North-West Scotland due to previous bad weather and military restrictions; also the aerial survey in Spanish coastal areas was extended to October due to contract issues). They had achieved 75,000km of effort with very good coverage and few gaps. Harbour porpoise distribution was highest in the North Sea and Celtic Sea, with less sightings further south than the Channel, and a hotspot in the southern North Sea, including mother/calf pairs. A total of seventeen cetacean species were sighted as well as pinnipeds, turtles, sharks, sunfish, and tuna, whilst anthropogenic activities were recorded as well as circa 800 flocks of dead birds (this information had been with seabird colleagues).

Ms Gilles concluded by outlining next steps, saying that they were in the data validation stage and would produce a draft of the first abundance estimates in the first quarter of 2023, then conduct trend analyses and model-based estimates of abundance and drivers of distribution, before finalisation of the governance framework, final reports and dissemination of the results.

The Chair opened the floor for comments. Mr Ritter asked if they had registered marine debris and Ms Gilles confirmed they had, as for SCANS-III. The Chair noted the high bycatch rates in earlier years and yet no change observed to the population size suggesting that either the bycatch rate was overestimated or the population estimates had been underestimated, and perhaps the approach to RLA was overly conservative. Ms Gilles thought it was a mixture as there were large confidence intervals and there was need for more understanding of habitat usage and the model-based abundance estimates. There were now the tools to produce more precise estimates. Ms Owen stressed that the RLA method was geared around the ASCOBANS conservation objective for populations to reach 80% of carrying capacity, not just for the population to avoid a decline, or remain stable if already below 80% of carrying capacity.

3.2. Review of the stock structure of harbour porpoises in the region (Action 8)

The Chair invited countries to provide an update since the work presented at the IMR/NAMMCO Workshop and the work done by Michael Fontaine and Ben Chehida⁴. There were no updates. However, the Chair flagged that the harbour porpoise population in the Wadden Sea area appeared to be more sedentary than previously thought and that it remained difficult to determine if there were demographically distinct populations in the North Sea.

Mr Ritter wondered if there were indications that there was a finer-scale population structure that could be related to areas as wide as the North Sea. The Chair noted that some animals were known to be site-faithful but there was still no full understanding of stock structure.

3.3. Collection of incidental porpoise catch data through stranding networks (Action 9)

The Chair conducted a tour-de-table asking countries to report on collection of incidental porpoise catch data through stranding networks.

Ms Owen reported that in Sweden the information on strandings and animal health was gathered by the Swedish Veterinarian Association and the Swedish Museum of Natural History. In 2022, 41 porpoises were examined by necropsy, 22 were stranded; 19 bycaught (submitted by fishermen March-May and July-October); 22 were females and 19 males; 13 were sexually mature animals (including five pregnant females) and 12 were immature and there were 16 calves. They determined cause of death and health status where possible, documented nutritional condition and reproductive status and collaborated with researchers at Lund University and Gothenburg University to investigate diet. In previous years, bycatch was the most common diagnosis for stranded porpoises; in 2022, a smaller proportion of stranded animals were diagnosed as bycaught and often other significant health findings were found including pneumonia and skin lesions. These necropsied animals helped them follow general health trends in the population.

The first fatal case of highly pathogenic avian influenza virus (H5N1) was found in a stranded harbour porpoise in Sweden. This coincided with a large influenza outbreak in seabirds and reflected the high viral infection pressure in the marine environment. Three porpoises died from *Erysipelthrix rhusiopathiae* bacterial pneumonia. This apparent increase in cases might reflect a more pathogenic strain of bacteria, lowered host immune status, or both. Skin infections are commonly seen, and further characterisation was on-going. The Chair pointed out that H5N1 had also been found in seals and elsewhere including the Wadden Sea.

Ms Sveegaard reported that Denmark did not have an overall strandings scheme but was still collecting as many stranded animals as possible and had funding to perform necropsies on 25 porpoises and 25 seal species each year.

⁴ Chehida, Y. B., R. Loughnane, J. Thumloup, K. Kaschner, C. Garilao, P. E. Rosel, and M. C. Fontaine. 2021. No leading-edge effect in North Atlantic harbor porpoises: Evolutionary and conservation implications. *Evol Appl* 14:1588-1611.

Ms Gilles reported that Germany had two coastlines: in the North Sea and in the Baltic Sea. In the North Sea, the strandings numbers had stayed below 100 but there was an increase in the Baltic Sea (Schleswig Holstein). Lower Saxony did not have a strandings scheme (there have been meetings and talks but nothing definite yet) but they reported 50 strandings. In the North Sea, animals had seldom been bycaught by fishermen and the distribution indicated a high number of neonates and adults. The Chair asked whether there was likely to be a formal stranding network in Lower Saxony and Ms Öhman updated that there had been a stranding workshop in October 2022 in the Wadden Sea region for harbour porpoise and seals, and there should be more data coming available from Lower Saxony in the future.

Ms Vrooman presented an update on the Netherlands dedicated stranding network, with strandings being registered at <https://www.walvisstrandingen.nl>. There had been circa 416 reported strandings of harbour porpoise in 2022 (including highly degraded cadavers/bones) and circa 54 post-mortem investigations. A new website was to be released focusing on strandings (www.stranding.nl) as part of www.observations.org, replacing the previous website.

Ms Renell (Secretariat) updated that a strandings workshop (requested by the AC) was approved for the upcoming European Cetacean Society (ECS) conference in April 2023 to help identify key drivers and benefits for developing a strandings database, identify stakeholder requirements, specifications, and issues relating to development of a database, technical considerations, and operational maintenance requirements.

Mr Haelters reported that there was a low number of harbour porpoise strandings in 2022 in Belgium, with preliminary results of the necropsies indicating that one animal was bycaught, and six animals died due to grey seal predation/attempts. There were also four live stranded animals, one was pregnant, and it survived for around four weeks in a rehabilitation centre in the Netherlands but subsequently died. They also had a stranding of only the 3rd bottlenose dolphin in 25 years with lesions from what appeared to be a propeller strike. There was also a sighting of a beaked whale close inshore. Ms Vrooman noted there had been beaked whales sighted close to the shore in the Netherlands, and the Chair said the same occurred in the UK too. Mr Ritter pointed out this was strange behaviour for a beaked whale to be approachable by boats and people.

Mr Hassani reported that, in France, the national stranding network collected information on bycatch through external examination and internal examination and had recently brought in vets for the necropsies. For 2021, 182 harbour porpoises were recorded along the North Sea coast of France, 50% with signs of bycatch.

The Chair reported that in the UK there was a Cetacean Strandings Investigation Programme based at the Institute of Zoology in London. In Scotland, strandings investigations were run by Glasgow University, and a proportion of strandings were necropsied. He did not have the results of 2022 strandings analysis and they have not been published yet.

3.4. Investigation of the health nutritional status and diet of harbour porpoises (Action 10)

The Chair did a tour-de-table for updates.

Ms Owen referred to her report under Agenda Item 3.3, noting that samples had been collected for use in a stable isotope study but there were no results as yet.

Ms Sveegaard highlighted several relevant publications. She highlighted that one finding was that harbour porpoise had a thicker fat layer in the inner Danish Waters compared to the North Sea which might be because the waters were colder. They were also working on a project analysing harbour porpoises for PCBs, knowing that PCBs were a problem for seals and may have contributed to the Baltic Sea population decline.

Ms Gilles provided an update on a project on diet analysis in the German North Sea which would be completed by the end of 2023 with analysis of several hundred samples across the different mammal

species for hard-part analysis, meta-barcoding and stable isotope analysis. They had received an interesting dataset from fish based upon stable isotopes in the Wadden Sea area and all these would be used to parameterise a foodweb model in Ecopath with Ecosim (EwE) to construct an update of the foodweb in the southern North Sea. The health indicator was an indication on PCBs and other chemicals, and it was the first time that OSPAR would publish this as a [pilot assessment](#) in the QSR 2023, bringing together all the sources and providing an overview of what is available and the gaps in the different stranding networks to have a fully operational indicator in the next assessment round.

Ms Vrooman reported on continuing studies in the Netherlands into Per- and polyfluoroalkyl substances (PFAS), PCBs, Polybrominated diphenyl ethers (PBDE) and hexachlorobenzene (HCB) contaminants in fish samples, for insights into the contaminant loads for harbour porpoise diet. Milk and male reproductive organs were measured for contaminants. There was a study showing that mother porpoises transmit high levels of contaminants to their young and Lonneke IJsseldijk had published a review of anthropogenic activities as cause of death of stranded harbour porpoises, analysing 612 stranded harbour porpoises (infectious disease was the highest cause of death, followed by bycatch). Ms IJsseldijk had also published a study on the relationship between body condition, prey and reproductive success in harbour porpoise, concluding that lower body condition and limited prey access reduced the reproductive success of harbour porpoise.

Mr Haelters reported no new information for Belgium. They did collect stomach contents but there was no analysis ongoing for the moment. Mr Hassani reported that the stranding networks in France collected samples and stomach contents, and Pelagis had these available for study.

The Chair reported that the UK continued analysis for health status and PCB levels. Papers had been published, one looking at potential effects of PCBs on male fertility and another on developing an MSFD trends indicator with PCBs. There was also a trend of an increased proportion of harbour porpoise dying of starvation, but he had not seen any update on this yet.

Mr Ritter flagged the increasing discussion about the ecosystem functions of cetaceans, suggesting one way to explore this would be to look at the composition of faeces in stranded animals. He knew of one research project by the Dutch Stichting Dolfijn and asked if anyone knew of similar projects. There were no comments.

3.5. Investigation of the effects of anthropogenic sounds on harbour porpoises (Action 11)

The Chair [presented](#) an overview from the ICES Impulsive Noise Register focused on the North Sea. In 2012-2019, the main sound sources were: airgun arrays and sonars, and acoustic deterrent devices (ADDs) (military exercises likely not included) with little data from 2020 and 2021, perhaps because of COVID. There had been little registered for pile driving in 2012-2022 but he felt there should be more showing up than there was. There were explosions registered in 2012-2019, particularly in the southern North Sea, with again little in 2020 and 2021. He wondered whether these results were accurate or whether countries had yet to submit information to ICES. He also shared a slide indicating pulse block days in the OSPAR Region (combining all the sound sources to show how many days had a certain amount of impulsive noise).

The Chair then did a tour-de-table of countries.

For Sweden, Ms Owen updated on the results of a study in the Skagerrak and Kattegat regions relating to continuous noise. The TANGO project (NRM/FOI/AU) involved 12 months of recording harbour porpoise presence before and after the re-routing of a major shipping lane in 2020 through important porpoise habitat. They compared underwater noise, vessel traffic (using AIS) and harbour porpoise presence and behaviour (using CPODs). The hypothesis was that harbour porpoise would be seen less and forage less in areas where noise and traffic were higher. However, against predictions, no change in the long-term presence of foraging behaviour of harbour porpoise was detected, despite a significant recorded change in underwater noise and vessel traffic, suggesting that within the observed level of change in shipping and noise, harbour porpoises continue to use preferred habitat. It is unclear whether this is due to a lack of impact or a lack of choice by the harbour

porpoises with no other suitable alternative habitat. The potential population-level impact of long-term heightened noise levels and ship passes in preferred habitat or stress level and fitness remained unknown.

Nathalie Houtman (WWF Netherlands) commented that from the noise literature, behaviour is often context-dependent so might be affected by high food availability. Ms Owen responded that the aim was to look at the yearly pattern and that there was a possibility there may have been more prey in the second year compared to the first year.

Ms Sveegaard also commented on the TANGO project which was a collaboration between Sweden and Denmark. A colleague had examined the details of the vessels and noted that harbour porpoise would take some time before they would return when a big ship went through so there was an effect, but it could not be extended to a population level. She updated that the Danish Energy Agency had published new “Guidelines for underwater noise. Installation of impact or vibratory driven piles,” (Energistyrelsen May 2022: News). It was now a requirement to include an auditory weighting and threshold for behaviour. She also referred to several studies, some supporting this document, and others published in relation to noise.

The Chair noted the difference in how countries approached the regulation of noise and proposed that ASCOBANS could play a role in making these more consistent. Ms Sveegaard suggested the ASCOBANS Offshore Renewable Energy WG could play this role. Discussion focused on the gaps in the register and how to encourage countries to contribute on time and keep a record of who had reported. Ms Viker highlighted there were many applications for windfarms in Sweden which would be a problem in the future and the Chair explained that in the UK they were trying to speed up the environmental impact assessment process to meet the energy emergency.

Ms Brtnik provided [an update on Germany](#) highlighting a project on underwater noise effects (September 2021 to August 2024) which was a cooperation with ITAW/Aarhus University funded by BfN. It involved: investigations of thresholds of individual behavioural reactions of harbour porpoises, harbour seals and grey seals to vessel noise and other significant noise events; investigation into additional energetic demands in porpoises due to vessel noise; development of recommendations for noise mitigation measures for harbour porpoises and harbour seals for the North and the Baltic Seas; and evaluation of noise mitigation measures for anthropogenic noise sources based on current knowledge.

Ms Vrooman [updated](#) on a study into harbour porpoise behaviour during and after piling at the Borssele wind farm in the Netherlands, including re-analysis of Gemini wind farm data studies into (cumulative) effects of wind farms on their ecology, including effects of sounds on marine mammals, to advise the government. She also referenced a [study on hearing loss](#) of a wild harbour porpoise.

Mr Haelters gave an update on discussions with the military on the removal of UXOs and the use of ELFAS and MFAS, and on offshore windfarm construction in Belgium. There was no piling currently, but it could start from 2026 onwards with concerns that the current limits might be too strict to construct the new windfarms and that double bubble curtains might not suffice to address the noise limits.

The Chair provided an update for the UK where there was much focus on noise disturbance, but noted that presentations had been given on this in NSG9 and NSG10. There had been work done on the impacts of noise from seismic activity in the Moray Firth which were about to be published. With the new push for offshore wind including floating wind turbines, there was a return to trying to incorporate PCoD models (Population Consequences of Disturbance) into this online tool being developed by the Centre for Ecology and Hydrology (CEH), to try and identify what the population consequences might be of anthropogenic impacts, including noise, in certain geographical areas under the POSEIDON project.

Ms Murphy suggested it would be useful to develop a table with details of pingers and the regulations for wind farms from each Party. Mr Ritter seconded this and flagged there had not been a focus on

alternative methods like floating foundations, drilling, and gravity foundations. The Chair noted that the UK was looking into entering deeper waters and using floating platforms. The Secretariat noted that the Joint Noise WG of CMS, ASCOBANS and ACCOBAMS had been reviewing the best available technology guidelines but she was not sure if they had assembled a table on regulatory procedures.

Ms Murphy asked if countries were making any headway on developing the 'go to' areas for the rapid deployment of wind and solar energy for the EC. Ms Carlén reported that WWF and Coalition Clean Baltic (CCB) were developing a flow-chart for people to use when looking at what areas might be suitable in the Baltic. The Chair said the POSEIDON project in the UK was also looking into go-to areas for wind farm development. Ms Brtnik pointed to a [BfN workshop/conference](#) discussing different mitigation and technical measures testing areas suitable for wind farms. Ms Viker confirmed Sweden was also looking into areas that were suitable and those not so suitable.

3.6. Collection and archiving of data on anthropogenic activities and development of a GIS (Action 12)

The Chair asked countries to provide any update since NSG10. Ms Vrooman reported for the Netherlands that the JOMOPANS project on monitoring ambient noise including soundscape maps had been completed and the [final report published](#). The Chair noted that ambient noise was being measured in various places, but he had not seen an analysis. Nathalie Houtman (WWF) informed that the model was validated by buoys located throughout the North Sea and suggested this could be reported on at NSG12.

4. Other activities contributing to the conservation of the harbour porpoise in the North Sea

The Netherlands

Ms Vrooman [presented](#) updates from the Netherlands on evaluation of the Conservation Plan for the harbour porpoise in the Netherlands, a new research programme and a pilot project on potential tagging of harbour porpoises in the Dutch North Sea.

The Conservation Plan for the harbour porpoise in the Netherlands was published in 2020 and was currently being evaluated. 67% of the recommendations were ongoing, 7% completed, 22% not yet started, and 4% no longer relevant.

Several institutes in the Netherlands are involved in a new research programme called MONS (monitoring and research for nature reinforcement and species protection) addressing the question "how does anthropogenic use fit within the carrying capacity of the North Sea?" The project includes among other things, 11 desk studies including analysis of existing PAM data, review of effects of (impulsive and continuous) noise, analyses of strandings data, effectiveness of ADDs v Ramp UP; seven effects studies including research into bycatch, behaviour in closed areas for fisheries/wind farms, behavioural changes, and effects of shipping and wind farms and behaviour in relation to vessel speed; setting up a PAM-network in the Dutch North Sea; and three data/modelling studies, including spatial analyses, habitat models and modelling effects of anthropogenic activities.

As recommended in the Conservation Plan, a pilot study is underway exploring the potential tagging of harbour porpoises in the Dutch North Sea. The main question being addressed is "how do harbour porpoises use the southern North Sea, and to what extent is this influenced by anthropogenic pressures?" The research priorities from a policy perspective are large-scale movements, habitat preferences and habitat use, response to human activities and feeding ecology to which tagging could potentially provide some answers given the results of similar tagging studies in Denmark and Greenland.

A phased approach is currently being taken, in close collaboration with Danish experts and veterinarians. The objectives for the study are: (further) exploration of the feasibility of tagging

harbour porpoise in the Netherlands; developing a method for and gaining experience with catching, tagging and releasing harbour porpoise in their natural environment; obtaining initial insight into large-scale movements and variation in time spent at specific locations and preferred habitats of tagged harbour porpoise, as well as seasonal variation and, depending on success, laying the foundation for a large-scale tagging programme with the aim of answering the research questions as prioritized by the commissioners.

The Chair asked how the known welfare issues with the need to capture animals to tag them were being addressed and how many animals were to be tagged given the danger of mortality. Ms Vrooman explained that this was why a phased approach was being taken to address these questions. Ms Sveegaard pointed out that even a few individuals tagged in the region would provide interesting data.

Ms Houtman asked who would decide whether the project would proceed during the phased-approach and Ms Vrooman explained it would be the commissioners. Ms Houtman welcomed that NGOs had been involved in the stakeholder feedback group and hoped this would continue in the future.

Ms Öhman asked whether there was an intention to monitor for bird flu in harbour porpoise and the UK, Sweden, and the Netherlands all confirmed there was.

Assessment of pollutant burdens and associated risks to small cetaceans for developing a framework for a contaminant indicator under the MSFD

Ms Murphy provided an update on a Marine Institute EMFF-funded study “Assessment of pollutant burdens and associated risks to small cetaceans for developing a framework for a contaminants indicator under the MSFD” (Sinéad Murphy, Olga Lyashevskaya, Cólín Minto, Orla Gosnell, Aylis Emerit and Rosie Williams). The scope had been broadened out to marine mammals during the project, and covered Irish waters. The work had been based on both UK and Irish data as there was no historical Irish data, with the intention of aiding development of an indicator for Ireland.

The first paper from the project had been published at the beginning of 2023, “Evaluation of a marine mammal status and trends contaminants indicator for European waters” (Rosie S Williams et al Science of the Total Environment 866 (2023) 161301), and they were currently evaluating status and trends contaminants indicators.

The work started in ICES WGMME, seeking to create a common indicator looking at “blubber PCB toxicity thresholds” (ICES WGMME (2014)), proposing that the indicator would be used as the species assessment unit. Much of this was referred to in Jepson et al. (2016), looking at trends in PCBs in different species including harbour porpoises using, for example, a banding approach. However, during the research they had reviewed the threshold literature and moved away from the banding as what would be high exposure for one species would be very different for another, e.g. due to body mass. Instead they used a thresholds approach which the Jepson paper focused on: Kannan’s sub-lethal effects threshold; and Baltic Seals profound reproductive impairment threshold. For porpoises they included an additional threshold which had been developed as “evidence of reproductive failure” (Murphy et al., 2015). Rosie Williams as part of her PhD at the Institute of Zoology continued this work (Williams et al., 2020) using the harbour porpoise as a sentinel species, examining a long-term monitoring dataset since 1990 analysed by the UK CSIP and Cefas, and relating this to Assessment Units for harbour porpoise.

They were also reviewing all the indicators that OSPAR produced for the intermediate assessment in terms of contaminants, particularly the status and trends of PCBs in fish, hoping the work would assist that being done by OMMEG. They had used modelling work on the harbour porpoise AUs and the OSPAR contaminant Assessment Areas to compare results. They applied the three thresholds for juvenile harbour porpoises due to known offloading due to pregnancy and lactation of lipophilic pollutants in mature females, and accumulation in mature males thus will potentially not show a

decline within a 6-year assessment period (reporting period under the EU Marine Strategy Framework Directive (MSFD)).

There was a large sample size (387 juveniles) and so multiple linear regression models were used, with only juveniles included. Modelling work was carried out by Ms Williams and one of the covariants included was a basic index for weight : length ratio as ongoing work was showing that this was a good index to use for the trend analysis and to give an indication of nutritional status. Cause of death was not included as it shows a strong association with the metric of body condition. At this stage, they had combined the historical and contemporary data but because the historical data did not have weight data, they decided to proceed with the overall UK data for this analysis and not incorporate Irish data.

The higher mean values were for those units in areas with more southerly latitudes. Latitude came out as a significant predictor, as did body weight and year. They undertook two different modelling approaches: using all UK data and modelled separately for each AU. There was a significant decline apart from in the Celtic Sea AU when modelled separately. Statistical decline in the Greater North Sea AU, when using the UK together and modelled separately. Western Scotland showed a decline. Juveniles tended to have higher mean concentrations of the lower (less persistent) chlorinated congeners CB101 and CB118 (dioxin like). Adult males had the highest mean PCB concentrations in all AUs/Areas; adult females had the lowest mean PCB concentrations in all AU/Areas except for the Channel Assessment Area and the Western Scotland AU. The proportion of animals above thresholds had decreased over time: 29% of mature females had PCB concentrations above the 11 mg/kg threshold reported for reproductive failure in the species; the proportion was greatest in the Channel Assessment Area – 67% of mature females had PCBs above the 11 mg/kg threshold in both time periods. In the Celtic Sea AU, the proportion increased from 40 to 56% between time periods. Males had higher concentrations compared to mature males in the northern North Sea – which is also evidenced in the latest data.

Ms Murphy concluded by flagging the other work being done on a power analysis using data supplied by Cefas and UK CSIP. By estimation of the statistical power to detect a significant trend in the juvenile UK harbour porpoise dataset, they could determine the sample size required.

The Chair noted that there had been a major population shift from the northern to the southern North Sea between the 1990s and 2000s. Ms Murphy said that even after this redistribution, mature males in the south had a higher level of PCBs but she would need to look back to see if this was the case before the redistribution.

Mr Lusseau asked whether Ms Murphy had a sense of how much data were required to understand population status and she explained this would need a decent sample size for adult and juvenile males and females. Mr Lusseau lamented that the destruction of the Nord-Stream pipeline distributed 250,000 metric tons of heavily contaminated sediment for more than a week, and wondered what would be required to detect the impact on harbour porpoises, noting that from a pollutant perspective that would enter the food chain.

5. Overall progress in the implementation of the Conservation Plan (Action 1)

The Chair, Coordinator of the North Sea Plan, gave a [presentation](#) reflecting the progress under the North Sea Plan. Members were invited to comment and fill any gaps in the relevant parts of the [Progress Report 2021](#). He also referred to the Implementation Table and invited countries to look at the different priorities identified, and the criteria used. The group ran through the table action-by-action, and countries provided updates. The revised implementation table is available in Annex 2 to this report.

Mr Ritter thanked the Chair and welcomed the progress made under his guidance. The Chair noted that countries were recognising the need for mitigation measures rather than just incomplete monitoring and he had also observed broader attention to issues such as bycatch.

6. Liaison with other organisations

The Chair/Coordinator for the North Sea Plan introduced this item, highlighting several activities, including: co-chairing the ASCOBANS/ACCOBAMS Joint Bycatch WG which had met, and had regular discussions between the two Secretariats; preparation for the European Cetacean Society workshop on 16-17 April with a focus on harbour porpoises around the Iberian Peninsula and in the Baltic Sea; WGs on marine debris and MPAs; participation in the JG and WBBK meetings; regular contact with EC through DG Environment and DG MARE on bycatch and MPAs; regular interaction with ICES; co-chairing of WGMME and attendance of WGBYC meetings; participation in the CIBBRiNA project proposal and revision; meetings with the EC Research Centre on marine debris and European strandings schemes; meetings with the Regional Fisheries Coordination Group; and informal interactions with OSPAR and HELCOM and the EU Expert Group on bycatch. However, there had not been sufficient liaison with the Marine Stewardship Council.

7. Review of the Conservation Plan

The meeting was invited to provide feedback on the first [draft of the new Conservation Plan](#) which had been prepared by Ms Murphy and Ms Pinn following a call for expressions of interest to carry out the review. Ms Murphy [introduced](#) the draft, noting that the Conservation Plan area was for the Greater North Sea, and provided some background to the revised draft. She referred to a paper from the Joint IMR/NAMMCO International [Workshop on the Status of Harbour Porpoises in the North Atlantic](#), inviting members to review this status update and provide any changes.

The Common Dolphin Species Action Plan had been used as a basis for the revised Conservation Plan as it was the most recently developed, but she and Ms Pinn had also reviewed all the harbour porpoise plans and recent recommendations from the NSG. New to the document was a call for further work on critical habitats. Ms Murphy outlined the details of each Action and related tasks. An infographic was presented showing how the new Actions could be transposed into the existing plan.

Mr Lusseau welcomed the actions and structure and wondered whether there would be scope to review the ASCOBANS conservation objective within NSG. The Chair explained that the conservation objective would be reviewed in two workshops planned for 2023: first a smaller expert group including modellers; and second in a wider workshop to cover different perspectives.

Ms Carlén liked the actions/sub-task approach but wondered if this would be restrictive if a specific task did not fit. She noted that the Jastarnia Plan had been revised once (in 2016), and Ms Murphy suggested a further revision within a certain number of years. The Chair flagged the need to have the scope to deal with emergent issues and Mr Lusseau stressed the need to set priorities such as forthcoming energy activities. The most effective approach to prioritising and reviewing was discussed. The Chair asked Ms Pinn and Ms Murphy to look at the Implementation Table in light of the comments before it went to the AC.

The Chair invited the members to review the draft and consider how the Implementation Table might be revised to reflect the changes. Ms Renell outlined the timeline as: initial feedback from NSG on the online document (27 March 2023); delivery of a revised version including Annex 3 (29 May 2023); final comments/feedback from NSG and the Secretariat (26 June 2023); delivery of final version of revised Conservation Plan (31 July 2023); revised Conservation Plan made available to the Parties (27 August 2023) for adoption by the Parties at MOP10 in 2024.

8. Review of Recommendations from the North Sea Group

The Chair introduced the [draft recommendations from NSG10](#) and invited comments. The group reviewed the draft recommendations, made some small revisions and added new recommendations. The agreed recommendations are included in Annex 1 to this report.

It was agreed that issues raised relating to the current review of the Conservation Plan, such as whether there was a need to review the ASCOBANS conservation objectives, would be considered within the review and further discussed at NSG12 once the Conservation Plan was finalised.

Ms Renell referred to ASCOBANS AC27 [guidance regarding Recommendations from WGs](#) including, where appropriate, that the WG should mark whether the recommendations were long-term or short-term, add deadlines, incorporate prioritisation and assess whether existing ones had been implemented. It was decided the Secretariat would prepare a table in Google Docs to virtually discuss this.

9. Any other business

Ms Owen requested members to share samples for a funded post-doctoral study examining the historical population size and modelling future management scenarios on the impact of recovery of the Baltic Proper harbour porpoise using genetic methods. They were looking for samples from around 1960 or prior to that for animals that would potentially have been from the Baltic Proper population. Both the London Natural History Museum and Scottish Natural History Museum were recommended. Mr Lusseau asked whether they would accept samples such as teeth and bones, and Ms Owen explained the ideal sample was powder from the skull of the animals, although they were open to anything at this stage.

Mr Ritter questioned the use of the term “stock” versus “population”. He had spoken about this at the AC and at NSG10. WDC were reflecting on value-laden language and its significance as an expression of the way people think about the rest of the world. He proposed that the term “stock” did not do justice to any population of free ranging animals and wild species including the harbour porpoise, and invited members to reflect about what other term might be more appropriate. The intention was to elaborate the idea and present it to ASCOBANS and the IWC. The Chair noted that the original Conservation Plan was informed by IWC that used the term “stock structure.” He, Ms Owen, Ms Murphy and Ms Brtnik all agreed with Mr Ritter’s concern and thought “population” or “management unit” were better.

10. Next Meeting of the North Sea Group

The Secretariat asked whether members wanted NSG12 to be a face-to-face meeting and to be scheduled at a similar time in 2024. The Secretariat could host in Bonn, but she asked for offers to host. Ms Owen, supported by Ms Brtnik, said the Jastarnia Group (JG) had decided to have an in-person meeting every other year and suggested having the JG and NSG meetings consecutively in the same place. The Chair said this had been the idea pre-COVID.

No offers to host were made at this time but it was agreed to have the meeting in-person and seek a possible date together with the JG.

11. Close of Meeting

After the customary expression of thanks to all those that had contributed to the success of the meeting, the Chair declared proceedings of the eleventh meeting of the North Sea Group closed on 15 February 2023 at 16:42 CET.

Annex 1:

**PRIORITY RECOMMENDATIONS
FROM THE 11TH MEETING OF THE NORTH SEA GROUP**

(Adopted intersessionally by the Advisory Committee)

NSG11 /Rec #	Recommendation	Long-/short-term + Deadline if possible	Priority (High / Medium / Low)
Evaluation on fisheries with respect to extent of porpoise bycatch			
1.	Parties and Non-Party Range States to focus monitoring and mitigation effort on suspected high-risk fisheries and areas, bearing in mind that the latest bycatch estimates for porpoises in the North Sea indicate the annual numbers bycaught likely exceed thresholds from RLA analysis. There still remains great uncertainty around all bycatch estimates in the region due to a stratified random sampling approach not yet having been implemented. (NSG10/Rec1*)	Ongoing, review annually	High
2.	Parties are encouraged to share training resources with each other to automate bycatch detection in electronic monitoring	End 2023	High
3.	Parties are encouraged to further develop and implement fishing effort monitoring such as inshore VMS for small vessel fisheries (less than 12 metres), following the example of the UK.	Ongoing, review annually	High
4.	Parties are encouraged to incorporate metrics such as soak time, net length, mesh size in fishing effort reporting	Long-term, end 2025	High
Finalise a management procedure approach for determining target limits of anthropogenic removals including bycatch in the region			
5.	Attention is needed to revise the current ASCOBANS conservation objectives to i) take account of the long-term objective to drive anthropogenic removals (i.e., including all pressures) towards zero (NSG10/Rec2*); ii) appraise their effectiveness, and to iii) to operationalize the objective with a timeframe and an agreed-upon risk of failing as in all management procedure approaches.	NSG12	High
6.	Parties, Non-Party Range States, and relevant national bodies to engage and take into regard stakeholder interests, in addition to the fishing industry, to reach common solutions to fulfil conservation aims. (NSG10/Rec3*)	Long-term, review annually	High
Development of alternative mitigation measures to reduce bycatch			
7.	Parties to support further investigations of approaches to mitigate harbour porpoise bycatch taking into account potential adverse impacts on other taxa such as birds and seals. (NSG10/Rec4)	Ongoing, review annually	High
8.	Parties to support the testing of bycatch mitigation actions at a fleet level and implement those that have proved to be effective and practical. (NSG10/Rec5)	Ongoing, review annually	High
9.	Parties to support more research on the behaviour of harbour porpoises in the wild around fishing gear, especially static nets, including their sensory capabilities and auditory health, for a better understanding of factors leading to bycatch. (NSG10/Rec6*)	Ongoing, review annually	High

NSG11 /Rec #	Recommendation	Long-/short-term + Deadline if possible	Priority (High / Medium / Low)
Monitoring trends in distribution and abundance			
10.	Parties are encouraged to collaborate on conducting surveys and analyses of regional trends in porpoise distribution and abundance at a North Sea-wide scale, and examine potential explanations for any observed changes. (NSG10/Rec7)	Long-term, review annually	High
11.	The North Sea Group to note any information on trends in abundance and distribution from the OSPAR QSR2023, and consider the implications of the findings. (NSG10/Rec.8*)	Short-term, NSG12	Medium
Investigation of the health, nutritional status and diet			
12.	Parties are encouraged to do collaborative research on the extent and seasonality of grey seal predation on harbour porpoises. (NSG10/Rec9*)	Ongoing, review annually	Medium (in some regions)
13.	Parties to facilitate rapid collaboration with stranding networks in the event of an unusual mortality event to identify potential causes of death. These should also include new potential sources such as bacterial infections, e.g. <i>Erysipelothrix rhusiopathiae</i> , and other pathogens such as avian influenza. (NSG10/Rec10*)	Ongoing, review annually	High
14.	Parties are strongly encouraged to further support North Sea-wide monitoring of life history parameters and nutritional status through the collection and analysis of stranded and bycaught animals in order to assess evidence of temporal changes in those parameters and explore links to anthropogenic drivers. (NSG10/Rec11*)	Ongoing, review annually	High
15.	Parties are encouraged to collect and analyse a sufficient number of stranded and/or bycaught harbour porpoises for assessing trends and status of persistent chemicals and other pollutants in the Greater North Sea.	Ongoing, review annually	High
Investigation of the effects of anthropogenic sounds on harbour porpoises			
16.	In the light of recent studies demonstrating acoustic trauma in porpoises due to explosions in the Baltic Sea, serious concern is expressed over similar activities occurring in the North Sea. Surviving animals might suffer from impaired hearing which, among other things, affect their ability to detect nets and find prey. The Secretariat is asked to bring these studies to the attention of all North Sea States and relevant bodies carrying out explosions. (NSG10/Rec12)	Short-term, NSG12	High
17.	Parties to make every effort to mitigate the effects on porpoises of activities involving explosions. (NSG10/Rec13)	Ongoing, review annually	High
18.	Collaborative studies are encouraged to quantify the impact of both impulsive and continuous noise on individual harbour porpoises. (NSG10/Rec14*)	Ongoing, review annually	High
19.	Parties and Non-Party Range States to encourage research to establish the population level impacts of noise levels and exposure duration. (NSG10/Rec15)	Ongoing, review annually	Medium
20.	Parties and Non-Party Range States to encourage international harmonisation of noise exposure criteria for regulatory purposes. (NSG10/Rec16*)	Ongoing, review annually	High
21.	The Secretariat to request the Joint Noise Working Group to compile the noise criteria used by individual Parties for regulatory purposes.	Short-term, NSG12	High

* Wording added/edited.

Annex 2: Revised Implementation Table

Actions from the North Sea Conservation Plan for HP		Priority		SE	DK	DE	NL	BE	FR	UK
1	Implementation of the CP: co-ordinator and Steering Committee	High		Coordinator currently in place						
2	Implementation of existing regulations on bycatch of cetaceans - e.g. EC 2019/1241 & Habitats Directive (HD)	High	Vessels requiring pingers	yes	17	yes	na	na	9	18
			No. of vessels using pingers	10+	17	?	na	na	9	18
			Enforcement policy	2	3	0	na	na	3	3
			Protected Species observer programme	2	2	0	1	1	2	2
3	Establishment of BYC observation programmes on vessel smaller than 12m long, professional and recreational fisheries	High	Regulating fisheries in N2K sites	2	2	1	1	1	2	2
			Professional	1	1	0	1	na	1	1
4	Regular evaluation of relevant fisheries, extent of HP BYC: Gillnet fisheries =>15m vessels, dedicated, % DaS observed Gillnet fisheries <15m vessels, dedicated, % DaS observed Cetacean scheme appended to DCF / DCR schemes DCF observations in NS, % DAS observed	High	Recreational	na	1	na	0	na	0	na
			Overall assessment	1	1	0	1	na	1	1
				na	1*	?	na	na	?	?
				5-10	?	0	1	na	?	?
				yes	yes	yes	yes	no	yes	yes
5	Bycatch Mitigation Measures	High	Deployment of working ADDs	1	2	1*	1*	na	1?	2
			Development of alternative ADDs	1	1	1	na	na	1	1?
			Modification of Fishing Gear	1	1	1	0	0	1	1
			Fisheries effort reduction/closures	2?	1	2	1	1	1	1
			Removal of Ghost Netting	1	1*	1*	1*	1**	0	1*
6	Review of management procedure approach for determining maximum allowable bycatch limits	High		Progress ICES WGBYC, OSPAR (MSFD), ASCOBANS						
7	Monitoring trends in distribution and abundance of HP in NS	High	Large scale	SCANS IV undertaken in 2022						
			Reg/survey	0	2	3	2	3	2	1
			Reg/modelling	0	2	3	2	3	2	1
8	Review of the stock structure of HP in NS	High		1	1	1	1	1	1	1
9	Collection of incidental porpoise data through stranding networks	Medium	Life History	3	2	2	2	2	2	3
			Contaminants	2	2	3	3	2	2	3
10	Investigation of the health, nutritional status and diet of HP in NS	High	Cause of death	3	2	2	3	3	3	3
			Health/Nutritional Status	3	2	2	3	3	3	3
			Diet	2?	3	3	3	3	2	1
11	Investigation of the effects of anthropogenic sounds on HP	High	Monitoring continuous noise	2	3	2	2	2	2	2
			Monitoring impulsive noise	2	2	2	2	2	1	2
			Mitigation of continuous noise	1	1	1	0	0	0	2
			Mitigation of impulsive noise	2	3	3	3	2	1	2
12	Collection and archiving of data on anthropogenic activities and development of a GIS	Medium		1	1	1	1	1	1	1

See draft Status Assessment Criteria for Progress in the Implementation of the Actions of the North Sea Plan in [ASCOBANS/AC28/Inf3.3b](https://www.ascobans.eu/ASCOBANS/AC28/Inf3.3b), p.64-69.

Annex 3: List of Participants

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