

Reporting on Conservation Plan for Harbour Porpoises in the North Sea - Netherlands

ASCOBANS North Sea Group – 14-15 February 2023

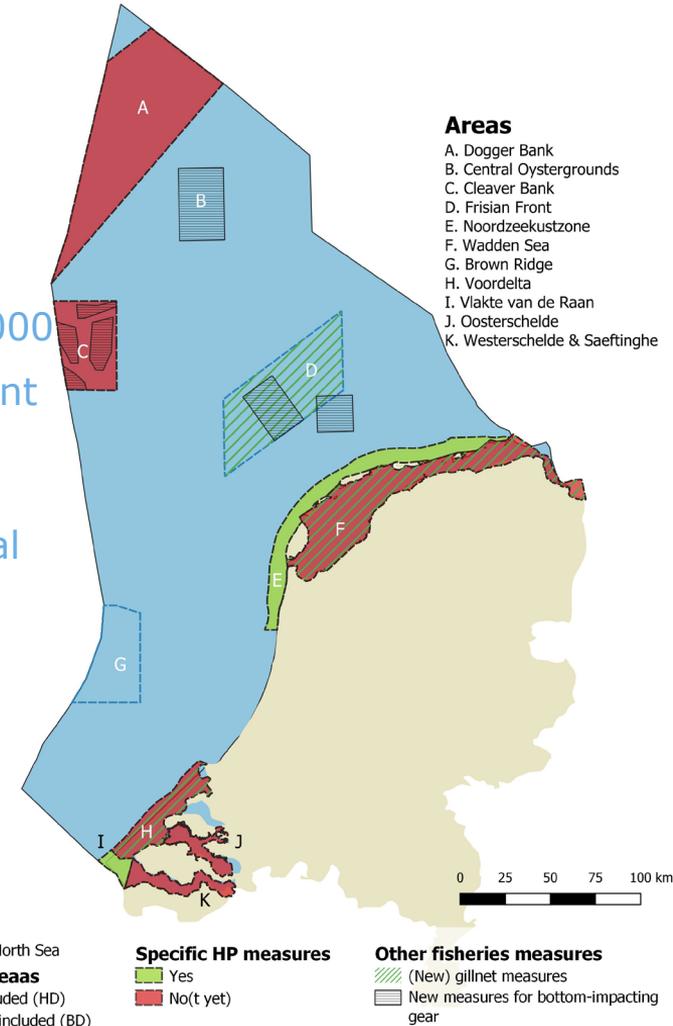
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2. Bycatch

2.1 Implementation of existing regulations on bycatch of cetaceans

- Harbour porpoise included as target species for four N2000 areas for which it originally was not included (Amendment Decree), November 2022 (areas F, H, J & K).
- Measures offshore N2000 areas (C, A & D) and additional fisheries measures (B & D) to be implemented 2023. Including limitation of gillnets in the Frisian Front (D).
- Additional MPA designated (G). Preliminary ideas include measures for gillnet fisheries.



2. Bycatch continued

2.1 Cont'd

- Management plans coastal N2000 areas extended with 6 years or until there is a new plan (underway, potentially including additional measures for HP). Old plans include some closed areas/maximum net length/mandatory pinger use in some fisheries/periods (depending on the N2000 area).
- Infringement procedure HD – EC judges that NL is failing to set up system to monitor bycatch. Response sent to the EC in April, response pending.
- CIBBRiNA² → has been resubmitted (EU LIFE), decision expected mid March. Old proposal received “seal of excellence” (but wasn’t granted...)



2. Bycatch continued

2.2 Establishment of bycatch observation programmes

- Current monitoring gillnet fisheries insufficient for statistically robust assessments. However, fleet has been significantly reduced, and bycatch levels are low.
- Recreational fisheries leave knowledge gap
- To be improved within CIBBRiNA, but also plans for improvement in case CIBBRiNA is not granted.

2. Bycatch continued

2.3 Regular evaluation of all fisheries with respect to extent of harbour porpoise bycatch

- Demersal and pelagic fisheries are sampled yearly with 10 and 12 observer trips
- Harbour porpoises associating with flyshoot vessel³ – should be 'on the radar'
- CIBBRiNA

2.4 Review of current pingers, development of alternative pingers and gear modifications

- Nothing to report
- CIBBRiNA

2. Bycatch continued

2.5 Finalize a management procedure approach for determining maximum allowable bycatch limits in the region

- Threshold defined within OSPAR for the greater North Sea
M6: bycatch indicator → 1622 animals per year⁴
- CIBBRiNA



OSPAR
QSR2023

3. Research

3.1. Monitoring trends in distribution and abundance of harbour porpoises in the region

- SCANS IV completed in 2022 (presentation Anita)
- 'MWTL' national aerial surveys completed in 2022 (every year, aimed at birds)
- National surveys every 3rd year (next in 2023)
- Tagging pilot study to be started in 2023

3.2. Review of the stock structure of harbour porpoises in the region

- Nothing to report



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3. Research continued

3.3. Collection of incidental porpoise catch data through stranding networks

- Stranding network active, strandings registered at <https://www.walvisstrandingen.nl/>. ~416 reported strandings of HP in 2022 (including highly degraded cadavers/bones).
- ~54 post-mortem investigations.
- New website to be released focused on strandings (stranding.nl), as a part of observation.org, replacing walvisstrandingen.nl. Link with ASCOBANS scoping workshop/international database work.



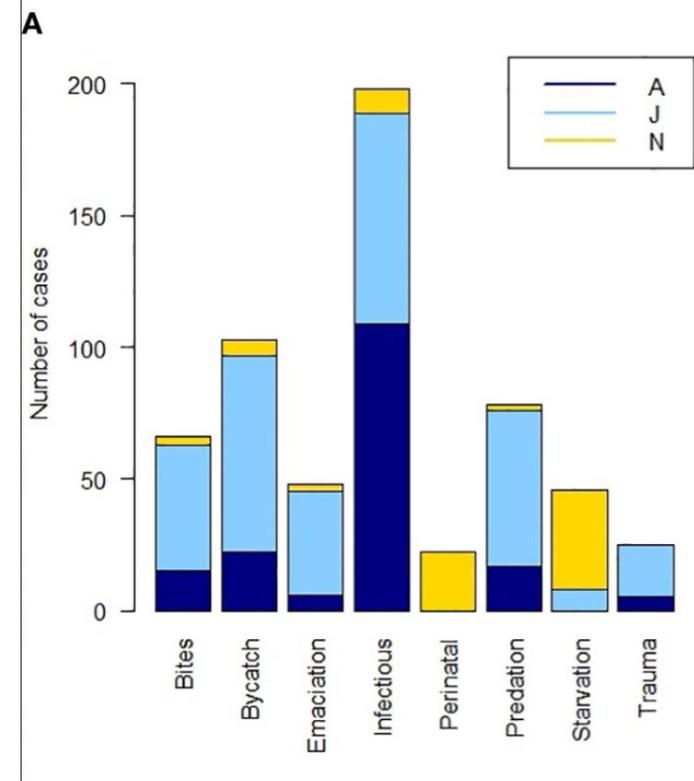
3. Research continued

3.4. Investigation of the health, nutritional status and diet of harbour porpoises

- (Further) studies into PFAS, PCB, PBDE and HCB in fish samples, for insights into the contaminant load of harbour porpoise diet. Milk and male reproductive organs measured for contaminants.
- Review of anthropogenic activities as cause of death of stranded harbour porpoises⁵.
- Study on relation between body condition, prey and reproductive success in harbour porpoise⁶.

⁵IJsseldijk et al. (2022)

⁶IJsseldijk et al. (2021)



Age class per cause of death category for 612 harbor porpoises that stranded between 2008 and 2019. Stacked absolute number of cases. Dark blue is adult (A), light blue is juvenile (J), and yellow is neonate (N). From IJsseldijk et al. (2022)

3. Research continued

3.5. Investigation of the effects of anthropogenic sounds on harbour porpoises

- Study into HP behaviour during and after piling at Borssele windfarm, including re-analysis of Gemini windfarm data⁷
- 'KEC' 4.0 → 'Framework for Assessing Ecological and Cumulative Effects' → studies into (cumulative) effects of wind farms on ecology, including effects of sounds on marine mammals.⁸
- Study on hearing loss of a wild harbour porpoise⁹

3.6. Collection and archiving of data on anthropogenic activities and development of a GIS

- JOMOPANS finished (monitoring ambient noise – including soundscape maps)¹⁰

⁷Jong et al. (2022)

⁸Heinis et al. (2022)

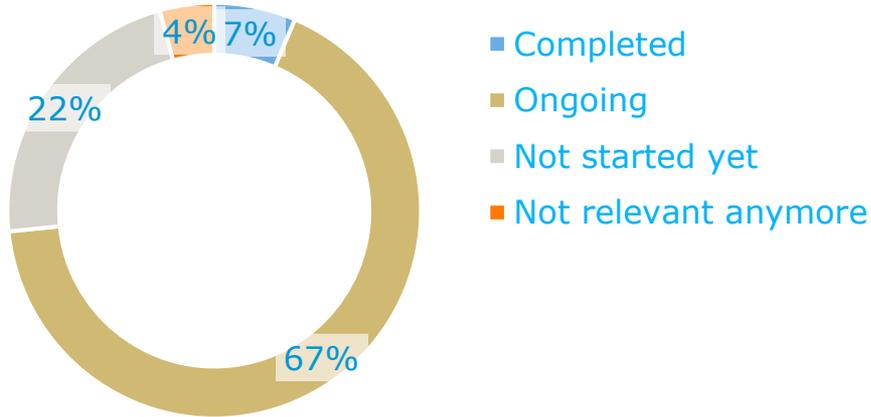
⁹Morell et al. (2021)

¹⁰Interreg NSR (2021)

Dutch updated Conservation plan for the Harbour porpoise

- Published in 2020
- Currently being evaluated¹:

Recommendations 2020



Updated Conservation Plan for the Harbour Porpoise *Phocoena phocoena* in the Netherlands

Maintaining a Favourable Conservation Status



MONS

- “Monitoring and research for nature reinforcement and species protection”^{11,12,13}
- Main question: how does anthropogenic use fit within the carrying capacity of the North Sea?
- Including:
 - 11 desk studies, including: analysis of existing PAM data, review of effects (impulsive and continuous) noise, analyses of strandings data, effectiveness ADD’s vs RampUp
 - 7 effect studies, including: research into bycatch, behaviour in closed areas (for fisheries)/wind farms, behavioural changes, effects of shipping in wind farms, exploding ordnance, behaviour in relation to vessel speed.
 - Setting up a PAM-network in the Dutch North Sea
 - 3 data/model studies, including: spatial analyses, habitat models and modelling effects of anthropogenic activities

References

- Zorgdrager, B.C., (2023). *Evaluating the Harbour Porpoise Conservation Plan*. In prep.
- Molenaar, P., & Vrooman, J. (2022). Feeding Association Between Harbour Porpoise (*Phocoena phocoena*) and Flyshoot Fishing. *Aquatic Mammals*, 48(6), 708-715.
- Jong, C. A. F., Lam, F. P. A., von Benda-Beckmann, A. M., Oud, T. S., Geelhoed, S. C. V., Vallina, T. C., Wilkes, T., Brinkkemper, J. A., & Snoek, R. C. (2022). *Analysis of the effects on harbour porpoises from the underwater sound during the construction of the Borssele and Gemini offshore wind farms*. (TNO report; No. TNO 2022 R12205). TNO. <https://edepot.wur.nl/583020>
- IJsseldijk, L. L., Leopold, M. F., Begeman, L., Kik, M. J. L., Wiersma, L., Morell, M., Bravo Rebolledo, E. L., Jauniaux, T., Heesterbeek, H., & Gröne, A. (2022). Pathological findings in stranded harbor porpoises (*Phocoena phocoena*) with special focus on anthropogenic causes. *Frontiers in Marine Science*, 9. <https://doi.org/10.3389/fmars.2022.997388>
- IJsseldijk, L. L., Hessing, S., Mairo, A., Ten Doeschate, M. T., Treep, J., van den Broek, J., ... & Leopold, M. F. (2021). Nutritional status and prey energy density govern reproductive success in a small cetacean. *Scientific reports*, 11(1), 19201. <https://doi.org/10.1038/s41598-021-98629-x>
- Heinis, F. H., de Jong, C. A. F., von Benda-Beckmann, A. M., (2022). Framework for Assessing Ecological and Cumulative Effects 2021 (KEC 4.0)-marine mammals. (TNO 2021 R12503-UK). TNO. <https://www.noordzeeloket.nl/publish/pages/198641/kec-4-0-cumulative-effects-underwater-noise.pdf>
- Interreg NSR (2021). 10 Years of North Sea Soundscape Monitoring Looking back on a four-year Interreg NSR project and looking forward to the six-year monitoring cycle. End Report from the Interreg NSR JOMOPANS project. https://northsearegion.eu/media/17501/interreg_jomopans_10-years-of-north-sea-soundscape-monitoring_final.pdf
- Asjes, J., Merkus, H., Bos, O.G., Steenbergen, J., Stuijtzand, S., van Splunder, I., van Kooten, T., Rivero, S., Vis, G.A.J., (2022). Jaarplan 2022 - Monitoring en Onderzoek Natuurversterking en Soortenbescherming (MONS). Overlegorgaan Fysieke Leefomgeving. <https://www.noordzeeloket.nl/publish/pages/203092/mons-jaarplan-2022.pdf>
- Asjes, J., Merkus, H., Bos, O.G., Steenbergen, J., Stuijtzand, S., van Splunder, I., van Kooten, T., Rivero, S., Vis, G.A.J., (2021). Rapport Monitoring en Onderzoek Natuurversterking en Soortenbescherming (MONS). Overlegorgaan Fysieke Leefomgeving. <https://www.noordzeeloket.nl/publish/pages/196778/mons-rapport-noordzeeoverleg-2021.pdf>
- Noordzeeoverleg (2023). Jaarplan MONS 2023. Overlegorgaan Fysieke Leefomgeving. <https://www.noordzeeoverleg.nl/documenten+nzo/handlerdownloadfiles.ashx?idnv=2404402>
- Morell, M., IJsseldijk, L. L., Berends, A. J., Gröne, A., Siebert, U., Raverty, S. A., ... & Kik, M. J. (2021). Evidence of hearing loss and unrelated toxoplasmosis in a free-ranging harbour porpoise (*Phocoena phocoena*). *Animals*, 11(11), 3058.
- Taylor, N., Authier, M., Banga, R., Genu, M., Gilles, A. 2022. *Marine Mammal By-catch*. In: OSPAR, 2023: The 2023 Quality Status Report for the Northeast Atlantic. OSPAR Commission, London. Available at: <https://oap.ospar.org/en/ospar-assessments/quality-status-reports/qsr-2023/indicator-assessments/marine-mammal-bycatch>