

from 2017-2018 have been solved in the meantime. An explicit outcome of Eurofleets+ is to enable the creation of complete CSRs based on the cruise and full event details any PI enters into EARS. This removes the burden of manually creating the CSR by the cruise Chief Scientist, and finding out the sampling details of other PIs partaking in the cruise. This, and other improvements, will be released in EARS v3 by the end 2020. CSR creation for instance relies on using international standards from the start and providing a summarising view on the events. The R/V Belgica will function as a test environment for the Eurofleets+ software developments. A newer version of the EARS v2 software will be installed on the ship in December 2019. The goal of our contribution to BICEpS 2019 is to encourage attendants to use the software (both EARS v2 and especially EARS v3 later on) on the R/V Belgica. A training is foreseen in the first quarter of 2020.

Work related to ICES via DIG – the Data and Information Group.

## (15) Towards a coherent and coordinated monitoring of marine mammals?

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For marine mammal populations, it is generally agreed that ideally a coherent and coordinated monitoring is in place across their area of distribution. Such an approach is especially required in the frame of our reporting obligations under the European Commission (EC) Marine Strategy Framework Directive (and consequently also under OSPAR: IA 2017, QSR 2023), possibly leading to conservation and management action. Especially countries such as Belgium, with small marine areas and small marine mammal populations, can hardly provide stand-alone assessments.

Member States of the European Union and Parties to OSPAR only recently initiated efforts to streamline indicators, targets and monitoring methods. Data on marine mammals collected within the North Sea, and jointly assessed, include those on population abundance, distribution and bycatch. Apart from (inherent) methodological and reporting difficulties, an additional complication to the data collection and assessment is the fact that many similar initiatives are being taken, or obligations exist, in several fora, including those of EC Environment, EC Mare, ASCOBANS, OSPAR and ICES Working groups (WG MME and WG BYC). This not only means a dilution of effort (eg. replicate data calls), but also the possibility of deviating conclusions being made and a lack of responsibility.

We will present, specifically for Belgium, an overview of the data requirements on marine mammals and of the fora that use such data for assessments.

Work related to ICES via WGMME (Working Group on Marine Mammal Ecology) and WG BYC (Working Group on Bycatch of Protected Species).

## (16) Genetic tools for Ecosystem health Assessment in the North Sea Region (GEANS)

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To conserve and manage seafloor ecosystem health, proper management measures need to be taken, which depend on fast and accurate monitoring. Appropriate measures should be based on joint, standardized monitoring, using cost-effective, early-warning and accurate methods. Traditional benthic assessments are often time-consuming, labor-intensive and expensive: seafloor samples are taken, sediment washed out, animals fixed in formalin and then sorted, identified and counted using microscopes, requiring trained experts and taking up to a couple of days per sample. Quality assurance is often not guaranteed due to different analyst expertise, surely when comparing results from different institutes or countries. The use of DNA-based tools can circumvent many of these shortcomings. DNA-based monitoring promises faster and cheaper methods to assess environmental health, as animals are not processed individually and allow simultaneous analysis of tens to hundreds of samples. In addition, DNA-based methods can be standardized across institutes and countries through standard operating procedures (SOPs), being less subject to expert judgement.

Currently, several institutions experiment with genetic approaches, but a concerted, harmonized, routine implementation in biological monitoring and management is lacking. Within the GEANS (Interreg-North Sea region) project, 7 countries from around the North Sea collaborate for the moment, with an overall aim:

1. To develop joint time- and cost-reducing genetic monitoring tools that feed into existing indicators to assess ecosystem health