numbers are used as input for the assessments of both North Sea sole and plaice. Since 2018 also age information of sole and plaice is collected. Since 2018, marine litter is collected, categorized and weighted.

Besides biological information, also a series of abiotic parameters are collected in both surveys: temperature, salinity, wind speed, etc. Due to the wide range of data on a diversity of species and environmental parameters, the data can be used as input for the Marine Strategy Framework Directive (MSFD), OSPAR, the ecosystem approach or research about fish adaptation to climate change.

The key value of survey data lies in the fact that data are collected every year, same period of the year with the same protocol, same area. This very valuable long-time series does not only serve many ICES working groups but also acts as the backbone in diverse science projects (e.g. EMFF project IRIS2, Pulsvisserij Vlaamse Kust Deel 1, Marine Litter), MSc theses and PhDs.

Work related to ICES via SCICOM, ACOM, EOSG, WGBEAM, WGNSSK, WGISDAA, WGISUR, DATRAS, WGCRAN, PGDATA, WGBIOP, WKREO, WKBECOSS, WKPETSAMP, WKSHARK, WGEF, WGCSE, WGDG, WKICDAT, WGTIFD, WGBYC, WGMEDS, WGML.

(9) Some points to consider for exposed aquaculture: first experiences in Belgium

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Marine aquaculture presents an opportunity for increasing seafood production in the face of growing demand for marine protein and limited scope for expanding wild fishery harvest. With the convergence of environmental and aesthetic concerns, aquaculture, which was already competing for space with other more established and accepted uses, is having an increasingly difficult time expanding in nearshore waters. Farming in offshore marine waters has been identified as one potential option for increasing seafood production and has been a focus of international attention for more than a decade. Investment in robust technologies and investigation in system designs for high energy environments has started but is still in its infancy. Despite the technical challenges for farming in the hostile open ocean environment, there is sufficient rational for pursuing the development of offshore farming.

When mapping the existing human uses, the ocean is a crowed place. Therefore, it is worthwhile to explore possibilities for co-location of facilities, like in this case wind turbines and shellfish farms. Although not obvious, one benefit to be gained is the reduction of the overall footprint of human uses in the ocean. Meeting challenges of multi-use facilities in the open ocean definitely requires innovation. The concept is intriguing however and is consistent with the goals of the Belgian Marine Spatial Plan (2020-2026).

The project “Edulis” (FIVA/EFMZV 16/UP2/05/Aqua) was the first pilot in the world to explore the possibilities to grow blue mussels inside the concession of windfarms in the Belgian part of the North Sea. It was coordinated by Ghent University and involved partners from the private and public sector. Besides the technical challenges, possible synergies were looked at between the production of sustainable seafood and renewable energy as well as the economic reality to grow seafood under exposed conditions in windfarms.

Work related to ICES via WGOOA (newly created Working Group on Open Ocean Aquaculture)

(10) Hakaton: An interactive fish stock assessment tool

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Built as a web application, the interactive fish stock assessment displays a map and allows the user to choose the fish species and the timeline. Once these are chosen, the advice for that time will display with a traffic light system, by displaying an area as green, orange, or red. If there are many years of data available, the data series can be displayed as an animation. If the user clicks on a certain stock, the data that the advice is based on appears. The tool is based on ICES