

### (3) Some thoughts from a SCICOM representative

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Attending ICES Scientific Committee (SCICOM) meetings always makes me start reflecting on the diversity of ICES; this from a content point of view but not surprisingly even more so from a participant point of view. With more than 5000 scientists from over 700 marine institutes in 20 member countries and beyond allocated to 200+ expert groups and committees, ICES unites a huge diversity in expertise, expectations and viewpoints. You can hence imagine it is quite a challenge to overview ICES' complexity and grasp it with both hands, but that is exactly what SCICOM tries to achieve. Questions like how to best integrate all that into a logic Science Plan without losing focus on the ICES Mission, how to best organise an Annual Science Conference that is appealing to the whole community, how to stimulate interest and particularly participation in what we are doing, how to balance the top-down advice-oriented and the unrestrained bottom-up workload of expert groups, how to balance fisheries and wider ecosystem-level work, how to position the Community in the international science, management and policy landscape,... are all fundamental to SCICOM's work. Worth some further consideration, I would say, and that is exactly what I want to share with you...

### (4) Working Group on Methods for Estimating Discard Survival (WGMEDS): How discard survival research is shaping European policy?

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With the phasing in of the Landing Obligation law between 2015 and 2019, and its exemption rule of "high survival", a need was established for stakeholders to scientifically demonstrate whether any species that is commercially caught-and-discarded stands a chance to survive this process. To guide practitioners in the field with collecting data, an ICES workshop (now working group, WGMEDS) was set up upon request by the European Commission. Since 2015, exemptions are being put forward by member states, judged and put into legislation within discard plans and delegated acts. How does this matter for European fisheries management?

Work related to ICES via WGMEDS (Working Group on Methods for Estimating Discard Survival)

### (5) Working Group on Fisheries Benthic Impact and Trade-offs (WGFBIT): Trading off benthic impacts and fisheries through integrative modelling

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For striving towards a more sustainable fishery, one of the major challenges, i.e. flatfish-directed beam trawling, is to comply to the requirements to achieve Good Environmental Status (GES) of the seafloor (D6, seafloor integrity), as defined in the Marine Strategy Framework Directive (MSFD D6 on Seafloor integrity). Potential fisheries measures to achieve GES of the seafloor may include gear-based technical measures (e.g. alternative catch stimulation, less-bottom contacting gear components), habitat quota regulation or spatial management measures. The assessment of the effectiveness of management scenarios requires both a quantitative assessment framework to assess the benthic impact of bottom-contacting fishing gears as well as an approach to evaluate the impact on the fisheries.

A quantitative framework to assess benthic impact by bottom-contacting fishing gears was developed in the EU BENTHIS project and further developed in the ICES Workshops WKBENTH, WKTRADE and WKSTAKE and working group FBIT (2018 onwards). Three main components are taken into account: fishing pressure (footprint) and benthic habitat sensitivity. Fishing pressure is assessed on a fine-scale spatial grid (0.05 by 0.05 degrees). Pressure is estimated from the fishing effort (swept area ratio) in combination with abrasion (characterised by penetration depth). Penetration depth directly relates to

benthic mortality which is combined with community recovery potential (based on longevity or population dynamics). The resulting benthic impact is characterised by a change in the relative benthic state. The assessment framework is developed for four generic gear groups, including beam trawls.

The quantitative framework of the FBIT tool is developed from a biological perspective. The trade-off between the protection of benthic communities with fisheries, however, necessitates the effect of these management measures on the fisheries itself. The trade-off is currently based on the assumption that most fishing effort is located in the most profitable areas. The 'value of an area to fisheries' is therefore based on swept area ratio as a approximate indicator. The ICES workshop WKTRADE2 has suggested a series of social and particular economic factors to improve this estimate, as well as a series of predictive (bio-economic) modelling approaches (dynamic or static) that take the displacement of fishing activities into account following fishing measures and how these may affect both benthic communities as well as the fisheries itself through feedback loops in the long term. These scientific approaches may be complemented with stakeholder engagement processes. The assessment of the socio-economic value of areas to fisheries is currently developing.

Work related to ICES via **WGFBIT**, co-chaired by **Gert Van Hoey** (ILVO, B), **Tobias Van Kooten** (WMR, NL) and **Ole Eigaard** (DTU, DK) **WKTRADE2**, co-chaired by **Jochen Depestele** (ILVO, B) and **François Bastardie** (DTU, DK)

## (6) Working Group for the Celtic Seas Ecoregion (WGCSE): Drafting advice for 40 demersal stocks across the Celtic Seas Ecoregion.

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The submitted abstract is related to the ICES Working Group for the Celtic Seas Ecoregion (WGCSE). Belgian fisheries data are submitted by ILVO to the WGCSE and other assessment working groups (WGNSSK, WGBIE, HAWG, WGEF). The WGCSE is yearly attended by ILVO where we conduct the assessment of 2 sole stocks. Moreover, for the period 2019-2021, **Sofie Nimmegeers (ILVO) is co-chair for WGCSE**. In this abstract, the advice drafting process is clarified.

The Common Fisheries Policy (CFP) is the EU policy for managing EU fishing fleets and for conserving fish stocks. This management relies on data collected and supplied by EU countries under the Data Collection Framework (DCF). For Belgium, the ILVO Fisheries Biology unit is responsible for collecting these data, which include age and length composition of the catch sampled by observers at sea onboard commercial vessels, data on fish landings and fishing effort, etc.

ILVO provides the Belgian data to several ICES expert groups (i.a. WGCSE) where they are used in stock assessments. Besides experts from Belgium, also France, Ireland, the Russian Federation and the UK have scientific representatives in the WGCSE. These ICES scientists compile the national data to investigate the size and condition of the fish stocks and their exploitation patterns. This allows them to forecast catches and evaluate the stock status against reference points to formulate advice following the maximum sustainable yield (MSY) principle. For stocks with a limited amount of data, precautionary advice on future fishing opportunities is provided.

The WGCSE is tasked to update fisheries data and assessments, and to draft advice for 40 demersal stocks across ICES subareas 6 and 7. Among these stocks there are gadoid species (cod, haddock, whiting, saithe and pollack), flatfish (sole, plaice and megrim), Norway lobster, sea bass and anglerfish.

Of the 40 stocks assessed, 13 had an unknown status and approximately 60% met the MSY targets (fishing mortality and spawning stock biomass) in 2019.

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