

WKBEDPRES2 – Evaluation and operational application of human activities causing physical disturbance and loss to seabed habitats (D6C1–C4)

2019/2/FRSG50 **WKBEDPRES2** – Evaluation and operational application of human activities causing physical disturbance and loss to seabed habitats (D6C1-C4). The Workshop to evaluate and test operational application of human activities causing physical disturbance and loss to seabed habitats (D6C1-C4) (WKBEDPRES2), chaired by Phillip Boulcott, Scotland will meet in Copenhagen, Denmark, 30 Sept – 2 Oct. Given the findings of WKBEDPRES1 and WKBEDLOSS and the data collected, the workshop is tasked to:

- a) Prepare guidance on the appropriate spatial and temporal scales for assessing physical disturbance and loss, and how this relates to benthic impact. This should include guidance on the benefits of knowing the variation and trends in the data during a six-year assessment periods (e.g. for environmental status or management purposes), and on the most appropriate spatial resolution for the data (e.g. in relation to spatial variation in the broad habitat types)
- b) Prepare guidance on the possibilities and limitations of how collected pressure layers can be used to determine benthic impact. This should include guidance on how to interpret surface and subsurface abrasion from different human activities and on different seabed habitat types.
- c) Demonstrate operational use of collected pressure layers to assessing spatial extent and distribution and to determine benthic impact, by:
 - i. producing an assessment of spatial extent and distribution of physical disturbance and loss by broad benthic habitat types for at least one ecoregion (assessment of D6C1-C4)
 - ii. suggest ways to combine different human activities that cause physical loss/ disturbance to determine benthic impact and/or to report on the spatial extent and distribution of physical disturbance/loss
 - iii. recommend any key improvements needed in the proposed methods and/or associated data needed.
- d) Prepare generic EU-wide technical guidance on how to assess and report on both disturbance (based on WKBEDPRES1) and loss (based on WKBEDLOSS) using the demonstration product.
- e) Assess the applicability of AIS and VMS data derived products (produced by WGSFD) to increase spatial and temporal coverage of fishing pressure layers. This should include technical guidance of how AIS and VMS data derived products can be used (together) for assessing physical disturbance from different fishing activities.

In preparation for the workshop, the Chair Phillip Boulcott (Scotland), together with ACOM approved invited attendees (tbc) will facilitate coordination and consolidation of work on TOR a-d from respective working groups (WGSFD, WGEXT, WGFBIT). This group will also help ensure that the workshop report is finalized.

WKBEDPRES2 will report to the attention of ACOM by 18 October 2019.

Supporting information

Priority	High, in response to a special request from DGENV on the Common Implementation (CIS) of the MSFD. The advice will feed into ongoing efforts to provide guidance on the operational implementation of the MSFD.
Scientific justification	This workshop focuses on the requirement of D6C1-C4 to assess the spatial extent and distribution of human activities causing physical loss and disturbance on the seabed (including the intertidal area) for each subdivision and per MSFD broad

habitat type within each subdivision. Physical disturbance and loss by all relevant human activities should be considered, following the work in WKBEDPRES1 and WKBEDLOSS. Central to this is to identify methods that express the intensity of the pressure in a way appropriate to: 1) derive the cumulative of all disturbance pressures, and 2) assess adverse effects under D6C3, D6C4 and D6C5, both for the single pressure and the cumulative of all pressures.

Given the findings of WKBEDPRES1 and WKBEDLOSS and the resultant data collected, WKBEDPRES2 will evaluate the work done and demonstrate its operational application. The following supporting material is provided to guide the interpretation of TORs a-d:

a) Provide guidance on the benefits of knowing the variation and trends in the data during a six-year assessment period (e.g. for environmental status or management purposes), and on the most appropriate spatial resolution for the data (e.g. in relation to spatial variation in the broad habitat types).

b) Provide guidance on the relevance of distinguishing surface and subsurface abrasion for different human activities (including dredging, depositing of materials, extraction of minerals, fish and shellfish harvesting), given that the demonstration advice for fishing impact (ICES advice sr.2017.13) only used surface abrasion to assess benthic impact.

c) Demonstrate the application of the methods based on the WGFBIT assessment approach to give the distribution and extent of physical disturbance and loss for each MSFD (sub)region (i.e. assessment of D6C1-C4). Provide estimates of the total extent of physical disturbance and loss, in km² and as a proportion (%), per subdivision/subregion and per MSFD broad habitat type. Distinguish the proportion of the total extent of the pressure which is attributable to each activity, including the different fishing métiers separately. Provide an indication of the data precision, accuracy and likely data gaps for the areas used in the demonstration.

d) An assessment of applicability to D6C2 of the work done by WGSFD in the comparison of AIS and VMS data. WGSFD were tasked to compare the use of VMS and AIS data, listing associated data required to determine fishing effort and type, such as fishers' logbooks, in the context of use for MSFD D6 assessments. This should include a side-by-side comparison against a number of parameters, including source of the data (who holds the raw data), availability (e.g. legal requirements, including vessels to be covered), accessibility (including any costs, restrictions such as due to data sensitivity, ease of access), use (e.g. restrictions on its release), spatial coverage in European waters, temporal coverage (historic, and within year), resolution (spatial granularity), accuracy, technical requirements for processing (to define when vessels are physically disturbing the seabed), resources needed (e.g. technical expertise, time per unit area). The comparison should include maps showing the distribution of bottom-fishing activity from the two data sources for the same time period, indicating where the distribution overlaps and where not, with an associated quantification of this (e.g. number/proportion of grid cells per subdivision for AIS only, VMS only and both) and explanations for any differences. Note: this work will be carried out in close collaboration with EMODnet and JRC Bluehub

Resource requirements	ICES data centre, secretariat and advice process.
Participants	Workshop with researchers and RSCs investigators If requests to attend exceed the meeting space available ICES reserves the right to refuse participants. Choices will be based on the experts' relevant qualifications for the Workshop. Participants join the workshop at national expense.
Secretariat facilities	Data Centre, Secretariat support and meeting room
Financial	Covered by DGENV special request.
Linkages to advisory committees	Direct link to ACOM.
Linkages to other committees or groups	Links to WGSFD, WGFBIT, WGEXT, WGMHM, and SCICOM.
Linkages to other organizations	Links to OSPAR, HELCOM, Barcelona Convention, Bucharest Convention