

The **International Bottom Trawl Survey Working Group (IBTSWG)**, co-chaired by Kai Wieland*, Denmark, and Corina Chaves*, Portugal, will meet in Sète, France, from 4–8 April 2016 to work on ToRs and generate deliverables as listed in the Table below:

	MEETING DATES	VENUE	REPORTING DETAILS	COMMENTS (CHANGE IN CHAIR, ETC)
Year 2016	4–8 April	Sète, France	Interim report by 5 June 2016 to SSGIEOM	
Year 2017			Interim report	
Year 2018			Final report	

ToR descriptors

ToR	Description	Background	Science plan topics addressed	Duration	Expected deliverables
a	Coordination and reporting of North Sea and Northeastern Atlantic surveys, including appropriate field sampling in accordance to the EU Data Collection Framework	Intersessional planning of Q1- and Q3- surveys; communication of coordinator with cruise leaders; combing the results of individual nations into an overall survey summary.	30	Recurrent annual update	1) Survey summary including collected data and description of alterations to the plan, to relevant assessment-WGs (WGHMM, WGCSE, WGNEW, WGNSSK, HAWG, WGDEEP, WGEF, WGEEL, WGCEPH, WGHANSA) and SCICOM. 2) Indices for the relevant species to assessment WGs (see above) 3) Planning of the upcoming surveys for the survey coordinators and cruise leaders.
b	Review IBTS SISP manuals and consider additional updates and improvements in survey design and standardization	Intersessional activity, ongoing in order to improve survey quality	31	Permanently ongoing	Updated version of survey manual, whenever substantial changes are made (intersessionally)
c	Address DATRAS-related topics in cooperation with DUAP: data quality checks and the progress in re-uploading corrected datasets, quality checks of indices calculated, and prioritizing further developments in DATRAS.	Issues with data handling, data requests or challenges with re-uploading of historical or corrected data to DATRAS have been identified and solutions are being developed	30	Multi-annual activity, supported by WKDATR workshop in January of 2013 to solve issues with highest priorities;	Prioritized list of issues and suggestion for solutions and for quality checking routines, as well as definition of possible new DATRAS products, submitted to DATRAS group at ICES (Compare Action List in 2013 report).

					Once data quality control routines are established, annual check of recent survey data.
d	Produce a swept-area-based index (instead of haul time-based index) to be explored in collaboration with the WGISDAA	Swept-area is suggested as an alternative to haul time, because it would remove possible bias resulting from different riggings or gear specifications. In order to evaluate the effect changing to new indices, IBTSWG intends to liaise with relevant stock coordinators or assessment groups at ICES.	28	1 year	Manuscript for paper or CRR, analysing the potential advantages of moving to swept-area-based standardization. To be presented to assessment groups for evaluation by 2016.
e	Analyse and report on the effect of variable sweep length, groundgears and GOV riggings between the participating countries	Some aspects of the gear applied in the surveys are not required to be standardized. The effect of these variations are to be evaluated. Partly, different standards for sweep lengths have been applied in Q1 vs. Q3 surveys, and different groundgears and riggings are applied. (For this ToR, the IBTS WG seeks support from gear technology experts and welcomes their contribution, in particular for advice on a potential change of the survey gear.)	28	2 years	Working document(s) by 2016, Manuscript or CRR by 2017
f	Evaluate the present scheme of collection of age and other biological data	Analysis of spatial distribution of sampling of age and other biological data, options to increase efficiency and minimum required sample sizes		2 years	Working document(s) by 2016, Manuscript by 2017
g	Evaluate the current survey design and explore modifications or alternative survey designs, identifying any potential benefits and drawbacks with respect to spatial distribution and frequency of sampling.	Specific issues to be addressed include: Effect of tow duration; Suitability of species-specific index areas; Stratification and optimal spatial distribution of effort.		3 years	Paper on tow duration experiment in NS-IBTS 3Q 2015 by 2016, Manuscript for paper or CRR by 2018.
h	Data overviews	ICES is building an overview of the different data products and how the information flows from survey to advice, and input is needed from the survey groups in this process.	25, 27	Sept 2016	Quality assure the data product overviews
i	Give input to WKSUREP on data reporting guidelines.	The information flow between data users and the data providers needs to be strengthened	31	Sept 2016	Comment on WKSUREP draft data reporting guidelines.

Summary of the Work plan

Year 1 (2016)	Evaluate the effect of changing to swept-area-based indices for additional examples/ stocks, particularly linked to WGISDAA and benchmark process (ToR d). Evaluate the results of the tow duration experiment from the NS-IBTS 3Q 2015 survey.
Year 2	Continue analyses of different GOV configurations (ToR e).
Year 3	Complete the evaluation of the current survey design and explore modifications or alternative survey designs (ToR g), Update survey manuals if necessary (ToRs e, f and g)
Recurrent annual activity	Updates for ToRs a, b and c.

Supporting information

Priority	Essential, The general need for monitoring fish abundance using surveys is evident in relation to fish stock assessments, and it has increasing importance in relation to MSFD GES descriptors biodiversity, foodwebs, and bottom integrity. Besides the relation of fish abundance with descriptor 3 Exploited stocks.
Scientific justification	<p>ToR a) This is a core function of the IBTSWG, an important forum for coordination and evaluation of standardized bottom trawl surveys in the Eastern Atlantic Area, to ensure good survey coverage in relation to stocks and areas. inter-calibration work. and high quality of data. The group also provides a brief overview the result of the individual surveys undertaken during the previous year and in the first quarter of the ongoing year. IBTSWG will continue to review feedback and implement modifications, including coordination and implementing new requirements of the EU DCF.</p> <p>ToR b) To ensure quality and traceability of sampling protocols, changes in the design and procedures used in the surveys coordinated by the IBTSWG have to be implemented and documented in detail in the IBTS manuals, which have to be made available via the ICES webpage.</p> <p>ToR c) DATRAS has become the core database containing the data obtained in the national IBTSurveys, the The development of DATRAS needs to be evaluated annually, and the group is also the forum to discuss with ICES Data Centre and agree on the priority of desired further developments.</p> <p>ToR d) The change from an index based on haul duration as effort unit to a swept-area-based index will be explored to improve robustness of the indices (considered as adequate for multiannual ToR)</p> <p>ToR e) Further efforts to standardize gears due to the concerns on availability of materials used, and “technological creep” (considered also multiannual).</p> <p>ToR f) Actually, a large number of age samples are taken. Many of the samples originate in clusters and do therefore not provide the most appropriate information. An alteration of the current sampling scheme could improve the quality of the resulting ALK’s being more efficient in respect of utilizing available resources.</p> <p>ToR g) The number of days at sea are limited and in several cases in particular poor weather conditions have caused an unbalanced sampling of the survey area. National interests to extend sampling may result in conflicts with the available time for fishing in the core areas. If survey design issues such as tow duration can be changed without affecting the quality of the data provided for stock assessments new task could be included in the survey, the survey could better follow changes in the distribution of target species and a general higher degree of flexibility and efficiency e.g. for ensuring an appropriate area coverage despite of poor weather or technical problems can be achieved.</p>
Resource requirements	A five day IBTS meeting. Prepared documents from members following ToR Leaders identified above. Eight days Chair’s time to edit. It is estimated that each ToR will require at least 8 hours preparation.
Participants	The Group is normally attended by some 20–25 members and guests. All members will participate on the discussion of all ToRs, but ToRs leaders have been identified and appointed to intersessionally prepare the work and lead it in the meeting.
Secretariat facilities	Sharepoint plus normal secretariat support.
Financial	No financial implications.
Linkages to advisory	ACOM. IBTS indices are used in the assessment of multiple stocks.

committees	
Linkages to other committees or groups	There are relations with other bottom trawl surveys (WGBEAM, WGBIFS) that also use DATRAS as the international repository for its data (WGDIM, DUAP). There are also a linkages with Assessment WGs using IBTS indices. Also relevant to the Working Group on Ecosystem Effects of Fishing Activities (WGECO) and the Working Group on Improving use of Survey Data for Assessment and Advice (WGISDAA).
Linkages to other organizations	IOC, GOOS.
