Working Group on Commercial Catches (WGCATCH)

2016/2/SSGIEOM23 A **Working Group on Commercial Catches (WGCATCH)**, chaired by Estanis Mugerza (Spain) and Liz Clarke* (UK), and will work on ToRs and generate deliverables as listed in the Table below.

	MEETING DATES	VENUE	REPORTING DETAILS	COMMENTS (CHANGE IN CHAIR, ETC.)
Year 2020	09-13 November	Online meeting	Interim report by 15 January to EOSG	Estanis Mugerza (Spain) is new co-chair for 2020-2022; Kirsten Birch Håkansson (Denmark) ends 3-yr term as chair; new co-chair will be appointed
Year 2021	8-12 November	Online meeting	Interim report by 15 January to DSTSG	Liz Clarke (UK) is new co-chair for 2021-2023.
Year 2022	To be determinedfined	To be determined	Final report by 31 January to DSTSG	Estanis Mugerza (Spain) ends 3-yr term as co-chair; new co-chair will be appointed

ToR descriptors

ToR	Description	Background	Science Plan codes	Duration	Expected Deliverables

a	Review and update guidelines and best-practices for implementation of statistically sound catch sampling and estimation thereof.	Many ICES member states are moving towards more probablistic catch sampling designs. For consistent data use in time series it is necessary to document these changes and to update guidelines and procedures, particulalry in regard to practical sampling issues that make a strict probablistic approach unfeasable as demonstrated by case studies.The update will revise the survey designs classes for catch-sampling programs (WKPICS) in the light of the RDBES and couple it with basic design-based estimation. With ICES moving to a transparent framework for estimating catch parameters, and thereby putting more focus on estimation, good guidelines are needed to support this transition. There is also an increasing need to design commercial sampling programmes in multi-purpose context, to answer the multiple end-users	3.1, 3.2, 3.3, 3.5, 3.6	3 years	• Based on real case studies produce a Cooperative Research Report (CRR) with updated guidelines for on-shore and off-shore sampling of commercial cathces (2022).
					 • Develop 3 workshops on estimation
					   ○ Ratio estimatiors, WKRATIO (2021)
					   ○ Post-stratification, WKPOST (2021)
					   ○ Estimation of rare species or events, WKRARE (2022)
					 • Based on WKRATIO produce a Cooperative Research Report (CRR) with best practice guidelines for choosing and using ration estimators (2022)

		needs. WGCATCH will continue to propose and endorse WK with the aim of a future optimization at national/stock/regional levels. WKRARE will be planned together with WGBYC. There are increasing examples of the use of other data sources (e.g. grading machines, EM technology) that could be used in estimation. Therefore, there is need to develop guidelines on how QA data and how to combine different data sources. This needs to be developed in cooporation with WGTIFD.			
b	Review developments in sampling and estimation practices of catch, effort, length and age distributions and other biological parameters of small scale fisheries	WGCATCH continues to review developments for collection of transversal variables (landings, discards and PETS by species, fishing effort) and biological data, length and age distributions, other biological parameters) in small-scale fisheries (SSF) to ensure that the collection of fishing data from SSF across ICES member countries are sufficient, harmonised and comparable and to improve their effectiveness. During its term the WG will focus mainly on five? aspects: 1) evaluate the implementation of guidelines for transversal variables and continue the development of quality indicators and quality checking methodologies ; 2) document sampling effort and develop guidelines for biological data (ength and age distribution, other biological parameters) sampling on SSF; 3) knowledge-sharing on how to improve data collection for SSF (e.g. add a social dimension to understand how to improve data collection, assess the usefullness of sampling approaches, use of new technologies), 4) analysis of the catch fraction of the SSF to evaluate the impact in the populations of different target species and 5) continue to work on the proper integration of SSF data with their specificities into the RDBES database	3.1, 3.2, 3.3, 3.5, 3.6	3 years	• Update and refine risk assessment for transversal data quality methodology developed in 2018/2019 (comparison with Large Scale Fleets and scientific estimates) – 2020 • Document sampling effort of biological data on SSF – 2020 • Develop guidelines for SSF biological data sampling. 2021-2022 • Peer-review publication on SSF-2020 • Continue to develop best practices guidelines on sampling and census data for SSF transversal variables- and evaluate its implementation 2020-2022

| c | Review developments in sampling and estimation of incidental by-catch of Protected, Endangered and Threatened Species (PETS) and other rare species and ensure that database structures support the implementation of the appropriate estimation proceedures. | The sampling and estimation of incidental catches of PETS and other rare species in commercial fisheries has been a long-term ICES concern. WGBYC and WGCATCH are two ICES EGs involved in data compilation and estimation of such rare events and impacts and have been collaborating closely to ensure that by-catch is properly sampled and estimated in national sampling programmes. To improve collaboration between the two groups, WGBYC members participated in the last WGCATCH meeting to reviewed best practices for sampling protocols for incidental by-catches. The [roadmap for ICES bycatch advice](#) describes the science needs, and a path for ICES to strengthen its advice on incidental bycatch. WGCATCH has a important role in the roadmap by developing sampling protocols for estimating PET bycatch risk and by improving data availability and quality (e.g. through monitoring). Further work still to be developed particularly in relation to estimation procedures for rare species and ensure the incidental bycatches are included in the RDBES. | 3.1, 3.2, 3.3, 3.5, 3.6 | 3 years | • Continue to support RDBES development to ensure by-c atch data is included in the RDBES (2020-2022). Annual reporting.
• Review bycatch estimations of PETS and rare species by other expert groups (2020-2021). Annual reporting.
• Report on - and support on board sampling practices at national institutes with regard to PETS (2020-2022). Annual reporting.
• Report on - and support redesign of national databases with regard to PETS (2020-2022). Annual reporting.
• Update the inventory of sampling programmes by ICES member countries where bycatches of protected, endangered, and threatened species (PETS) are recorded that was initiated at WKPETSAMP in 2018. |
| d | Review and colaborate with SCRDB on design-based sampling and estimation. | The RDBES is the practical tool for ICES to ensure the quality and transparency of commercial catch data. WGCATCH has always supported the development of the RDB and now the RDBES. It's knowledge and expertise on the underlying sampling designs are critical to the appropriate use and implementation of the estimation proceedures required by the ICES advisory process. The ICES Data Centre and SC-RDB have requested 'WGCATCH to continue advising RDBES development and ensuring the development encompasses statistically sound | 3.2, 3.3, 3.6 | Routine ToR | Address specific recommendations from the SCRDB and RDBES associated working groups |

			3.1, 3.2	Routine ToR	
		sampling schemes and proper methods of estimation'.			
e	Collaborate in the advisory process, liaising with assessment groups and benchmarks on commercial catch issues	Commercial catch data is a major input to ICES stock assessments. The accuracy of commercial catch data is highly dependent on the quantity and quality of the sampling and estimation carried by at national level and stock coordinatation level. WGCATCH is the ICES EG that deals with sampling design, estimation and quality of commercial catch data that is provided to the assessment process by the national authorities. It is a key-player in informing on the quality of the time series used and suggesting improvements to sampling and estimation methods. Over 2020-22, WGCATCH will work with the ACOM legacy groups and Fisheries Resources Steeirng Group (FRSG) to have a more active participation in the assessment and benchmark processes.	3.1, 3.2	Routine ToR	• Address specific recommendations from assessment expert groups in relation to commercial catch data to be used/revised in future benchmarks • Activily seek involvement in a review and updated of the current benchmark process for data compilation of commercial catch data, so these take resent WGCATCH findings into account
f	Collaborate with other ICES groups dealing with other aspects of catch data (e.g., WGBIOP, WGRFS, PGDATA, WGTIFD, WGBYC), , RCGs (LM) and commercial catch focused external projects.	WGCATCH links with ACOM, SCICOM, EOSG, EGs under EOSG (e.g., PGDATA, WGBIOP, WGRFS) and the ICES secretariat to inform on guidelines on quality and quantity of catch data. WGCATCH further links and obtains information from research projects that address sampling and estimation of commercial catches	3.1, 3.2	Routine ToR	

Summary of the Work Plan

YEAR 1	ToR a)
	• Intersessional indentify relevant topics | contents for commercial sampling guidelines and come up with a framework for having ready-available and updated guidelines. Liase with PGDATA, RDBES core group and ICES data centre in the process and take the work done by former WK's into account • Identify practical issues with sampling of commercial catches, focusing on sampling of unsorted catches (sampling of e.g. small pelagic, fish for reduction, fish pumped into factories and processors), start solving the issues and develop

tools for identification of issues. Start to develop the guidelines based on these issues, solutions and tools.

- Agree on ToRs for the post stratification WK in 2021 (WKPOST).
- Review the R-packages developed for optimization of length and age data (in separate WK: WKBIOPTIM4) and discuss results at the meeting.

ToR b)

- Intersessional produce and complete the templates to document sampling effort of biological data on SSF. Extend the 2018 questionnaire to the large scale fisheries (LSF) and refine the risk assessment for transversal data quality methodology developed in 2018/2019, by including LSF in the risk assesment map and compare SSF and LSF status. Assess the differences between scientific estimate and control data.
- Document sampling effort of biological data on SSF
- Continue to develop best practices guidelines on sampling and census data for SSF for transversal variables and evaluate its implementation
- Following development of RDBES database and making recommendation for the proper integration of SSF data and their specificities into
- Peer review publication on SSF
- Annual chapter in report detailing work progress, next work-plan and deliverables

ToR c)

- Continue to support RDBES developments
- Report and support on board sampling practices at national institutes, including re-desing of national databases
- Initiate review of by-catch estimations of PETS/rare species by other expert groups

ToR d)

- Intersessional liase with PGDATA and ACOM to start the process of giving WGCATCH (as a proxy for commercial catches) a more active role in the assessment and benchmark processes.

ToR e)

- This ToR will be dealt with on a yearly basis by WGCATCH.

ToR f)

- This ToR will be dealt with on a yearly basis by WGCATCH.

YEAR 2	ToR a)

- Continue updating and developing the guidelines for commercial sampling.
- Identify issues with sampling designs, focusing on sampling of sorted landings on-shore (sampling of e.g. fish for human consumption sold at auctions and other landing sites), start solving issues and develop tools for identifying issues. Start to update and develop guidelines based on the issues, solutions and tools.
- Intersessional indentify relevant topics | contents for guidelines on estimation of catch parameters and come up with a framework for having ready-avialable and updated guidelines. Liase with the RDBES core group take the work done by former WK's into account, including WGCATCH's estimation WK's in 2021 and former RDBES WK's
- Review outcomes of WKRATIO and WKPOST. Start producing best practices for estimation

ToR b)

- Develop guidelines for SSF biological sampling
- Continue to develop best practices guidelines on sampling and census data for SSF

transversal variables-and evaluate its implementation

- Following development of RDBES database and making recommendation for the proper integration of SSF data and their specificities into
- Evaluate the use of geospatial data (e.g. GPS, AIS) to improve effort estimates and produce guidelines
- Annual chapter in report detailing work progress, next work-plan and deliverables
- Identify stocks for case-studies to analyse the length frequency between SSF and LSF

ToR c)

- Continue to support RDBES
- Report on - and support on board sampling practices at national institutes, including re-desing of national databases
- Continue review of by-catch estimations of PETS species by other expert groups
- Intersessional liaison with WGBYC and draft ToRs for a WK that addresses estimation of rare things (e.g. species, events) (WKRARE, 2022) in the following year. Taking the review of present methods into account. Approve proposed ToR's at the meeting

ToR d)

- Intersessional liaise with PGDATA and ACOM to start a process of giving WGCATCH (as a proxy for commercial catches) a more active role in the assessment and benchmark processes

ToR e)

- This ToR will be dealt with on a yearly basis by WGCATCH.

ToR f)

- This ToR will be dealt with on a yearly basis by WGCATCH.

YEAR 3	**ToR a)**

- Continuei updating and developing the guidelines for commercial sampling.
- Identify issues with sampling designs, focusing on sampling of sorted landings at-sea (e.g. obserserver programes at-sea targeting fish for human consumption), start solving issues and develop tools for identifying issues. Update and develop guidelines based on the issues, solutions and tools.
- Continuei updating and developing the guidelines for estimation, taking the work from WKRARE (2022) into account

ToR b)

- Intersessionally produce and issue an informal data call for provision of length frequency data, from the stocks identified in previous meetings
- Analysis on length frequency data from SSF and LSF and evaluate the relevance and impact of SSF data for the stock assessment
- Develop guidelines for SSF biological sampling
- Evaluate the use of geospatial data (e.g. GPS, AIS) to improve effort estimates and produce guidelines
- Continue to develop best practices guidelines on sampling and census data for SSF transversal variables-and evaluate its implementation
- Following development of RDBES database and making recommendation for the proper integration of SSF data and their specificities into
- Annual chapter in report detailing work progress, next work-plan and deliverables

ToR c)

- Continue to support RDBES
- Report on - and support on board sampling practices at national institutes,

including re-desing of national databases

- Review outcomes of WKRARE and update guidelines | best pratice (from ToR a) in accordance

ToR d)

- Intersessional liase with PGDATA and ACOM to start the process of giving WGCATCH (as a proxy for commercial catches) a more active role in the assessment and benchmark processes.

ToR e)

- This ToR will be dealt with on a yearly basis by WGCATCH.

ToR f)

- This ToR will be dealt with on a yearly basis by WGCATCH.

Supporting information

Priority	WGCATCH supports the development and quality assurance of regional and national catch sampling schemes and estimation procedures that can provide reliable quality input data to stock assessment and advice, while making the most efficient use of sampling resources. As catch data are the main input data for most stock assessments and mixed fisheries modelling and an essential component of analysis of ecosystem effects of fisheries, especially with regard to the application of the Precautionary Approach, these activities are considered to have a high priority.
Resource requirements	The research programmes which provide the main input to this group are already underway, and resources are already committed. The additional resources required to undertake additional activities in the framework of this group is negligible. WGCATCH builds extensively on experiences gained within PGCCDBS, WKACCU, WKPRECISE, WKMERGE, WKPICS, SGPIDS, WGRFS and previous WGCATCH work in the period 2014-2019. European countries are encouraged to provide the WG with any requested documentation of their sampling programmes and manuals, estimation methods, quality assurance procedures, for review and feedback by the WG, and to ensure that their national members of WGCATCH have sufficient resources to conduct the necessary intersessional work to address the ToRs. The attendance of 1-2 top-level experts in the area of statistically sound sampling and estimation will be secured to review the quality of final outputs of WGCATCH.
Participants	The Group is normally attended by some 30–40 participants, including members, and chair-invited 1-2 external experts.
Secretariat facilities	None.
Financial	Member States may fund this through their EMFF programme. ICES may cover the attendance of reviewers.
Linkages to ACOM and groups under ACOM	WGCATCH falls under the joint ACOM/SCICOM steering group on integrated ecosystem observation and monitoring (EOSG), and supports the ICES advisory process by promoting improvements in quality of fishery data underpinning stock-based and mixed fishery assessments, ecosystem indicators related to fishery affects, and in developing data quality indicators and quality reports for use by assessment EGs and benchmark assessments.

Linkages to other committees or groups	There is a very close working relationship with all catch-related EGs and end-users including WGBIOP (in relation to collection of stock-based biological variables from fishery catches), PGDATA (in relation to data requirements of stock assessment EGs and benchmark assessment groups, optimization of catch sampling programmes and communication of quality information on commercial catch data), WGBYC (in relation to the sampling design and estimation of PETS bycatch and other incidental by-catches), RCM/RCGs and the Liaison Meeting (e.g., in relation to data requirements and regional sampling designs), the SC-RDBES and the ICES Data Centre (in relation to RDBES issues), STECF EWGs dealing with EU-MAP and other legistalitive changes that impact catch sampling and JRC (in relation to data provision from commercial catch sampling programmes).
Linkages to other organizations	The work of this group is closely aligned with similar work in FAO, GFCM, CECAF, NAFO/NEAFC and in the Census of Marine Life Programme.