WGTIFD – Working Group on Technology Integration for Fishery-Dependent Data

2018/MA2/EOSG08 The **Working Group** on **Technology Integration for Fishery-Dependent Data (WGTIFD)**, co-chaired by Brett Alger*, United States and Lisa Borges*, Portugal will work on Terms of Reference (ToRs) and generate deliverables as listed in the Table below.

	Meeting dates	Venue	Reporting details	Comments (change in Chair, etc.)
Year 2019	7-9 May	ICES HQ, Denmark	Interim report by 21 June to ACOM/SCICOM	
Year 2020	6-8 October	Online meeting	Interim report by 20 November to ACOM/SCICOM	
Year 2021	30 November - 2 December	Online meeting	Final report by Date Month to ACOM/SCICOM	

ToR descriptors

ToR	Description	Background	Science Plan Codes	Duration	Expected Deliverables
a	Inventory and review the various national fisheries dependent hardware and software applications and approaches highlighting synergies and similarities with an aim to improve cooperation and collaboration. Indicate readiness states, availability and development plan including scientific training dataset availability.	As a new WG, it is imperative to initially assess the technologies currently available and in development, the objectives of the schemes under which they are deployed in fisheries and scientific research, what data is being collected and by whom. This TOR will build upon a forthcoming paper examining REM use around the globe, to include other technologies currently deployed in fisheries	4.1, 4.5	Year 1	Draft a review paper for publication in a peer -reviewed journal.
b	Define consistent vocabulary across approaches and develop communication strategies for attracting participation in voluntary programs, and deploying and implementing electronic technologies for fisheries dependent observation.	There are a range of terms and perspectives on monitoring technologies, and a perception by some that cameras are on vessels for purely enforcement purposes. While we do not need to standardize terms, this TOR will help us better understand one another's terms, appreciate challenges for gaining participants, and collectively communicate that the primary goal of monitoring technologies is fisheries data collection.	4.1, 4.5	Ongoing	Incorporate general terms and communication strategies for writing regulations, technical documents, and various forms media. Include section in first working group report documenting use of terminology
c	Evaluate risks and benefits of technologies across different fisheries and data requirements to	There are many choices in designing a monitoring program, including hardware, software, data	3.5, 4.4	Year 3	ICES Cooperative Research Report on best practices

	establish methodological acceptance for science and management.	transmission, and other technical aspects. Additionally, it can be challenging to incorporate data from new sources into existing monitoring programs and stock assessments. This TOR is a handbook for those designing/redesigning their programs that illustrates how to integrate new information of comparable accuracy/precision and quality with data collected through traditional means.			
d	Develop tools and innovative strategies for collecting, handling, processing and analysing fishery-dependent data from electronic technologies	Many technologies are being deployed alongside one another (e.g., VMS, electronic logbooks, and REM). This TOR will examine how to integrate the many data collection technologies in a single approach to ease the reporting burdens and costs of data collection, reduce duplication of effort.	4.2, 4.3	Year 3	Section of working group report providing technical guidelines on integration of fishery-dependent data from various sources in a consistent manner.
e	Report on developments in machine learning and computer vision technologies and their applications in fisheries dependent data collection and cooperate with WGMLEARN on methodological advances and communicate with WGMLEARN on the topic.	The field of computer vision and machine learning is rapidly advancing in fisheries. This TOR will be examined at each working group meeting and other opportunities of engagement to ensure our working group products reflect current applications	4.3, 4.4	Ongoing	Produce a peer-reviewed paper summarising the state of the art in year 3.
f	Organize a session at ICES ASC			Year 2	Topic session in 2020

Summary of the Work Plan

Year 1	Produce an annual overview of the working group's progress
Year 2	Produce an annual overview of the working group's progress
Year 3	Produce a final report on the working group's progress and completed TORs

Supporting information

Priority	Fisheries stakeholders and managers are looking to improve the timeliness, quality, cost effectiveness, and accessibility of fishery-dependent data by integrating innovative technology into monitoring programs. Remote electronic monitoring (REM) has clear potential to meet these challenges by incorporating cameras, gear sensors, and electronic reporting (ER) into fishing operations. We believe that ICES can provide a forum for exchanging information to share relevant technical applications and policy development to harmonize how data is collected and used for fisheries management and science.

Resource requirements	None to ICES, nationally the programs that will provide input to this group are established, there is no need for additional resources.
Participants	Electronic monitoring is a growing topic of interest, with programs in every Region in the United States and the EU. We expect an initial working group to consist of 20-30 people, with expansion into other parts of the globe growing the group to more than 50.
Secretariat facilities	None.
Financial	No financial implications.
Linkages to ACOM and groups under ACOM	
Linkages to other committees or groups	WGMLEARN, WGCATCH, WGFAST, PGDATA WGSFD, WKSEATEC ICES Data Centre, DIG
Linkages to other organizations	