

The ICES/FAO Working Group on Fishing Technology and Fish Behaviour (WGFTFB) (Chair: Dr. Norman Graham, Norway) will meet in Izmir, Turkey, from Monday 3th – Friday 7th April 2006.

Terms of Reference

i.) A review of the species and size selectivity issues relating to commercial and survey pelagic and semi-pelagic trawls.

A report will be presented to WGFTFB in April 2006.

Proposed by Haraldur Einarsson and Chris Glass

ii.) WGFTFB should explore the means by which it can best provide appropriate information for assessment working groups and ACFM in fishery and ecosystem based advice. This will include the information required for fisheries-based forecasts, technological changes and changes in fishing practices, implementation of regulations and other fleet adaptations, ecosystem effects of fishing and potential mitigation measures. This advice will be focussed on the North Sea and address the assessment WG tasks as identified in the report of AMAWGC.

Proposed by Dave Reid (FRS Aberdeen), Dominic Rihan (BIM), and Norman Graham (IMR)

iii.) The Topic Group from 2004 on alternative fishing gears for traditional species that are environmentally friendly and responsible fishing methods will be continued for a further year, reporting to WGFTFB in 2006.

Bjarti Thomsen, Faroes

iv.) The Topic Group from 2004 on the use of multiple size selection devices in towed gears will be continued for a further year, reporting to WGFTFB in 2006.

Norman Graham, IMR, Norway and Barry O'Neill, FRS, Aberdeen

v.) A topic group should be formed to:

- Review and update the existing “Definitions and classification of fishing gear categories” to the same detail level as in the FAO Technical Paper 222
- In collaboration with the FAO Working Party on Fisheries Statistics, will contact appropriate national and international fisheries management bodies to determine the current status and usage of gear classifications. The group will identify inconsistencies between adjacent areas and make recommendations for any actions needed to harmonise the use of gear classifications. The group will also identify specific gear parameters that could be monitored to provide better estimates of commercial CPUE.

Proposed by Wilfried Thiele, FAO and John Willy Valdemarsen, IMR, Norway

Will work by correspondence and report at ICES-FAO FTFB WG meeting in 2006. The co-chairs will invite members to the group representing important FAO regions to assist in the revision process.

<p>Scientific justification:</p>	<p>i) In the last decade there has been increasing pressure on pelagic species in the north Atlantic as well as in other areas. There are reports of widespread discarding, slipping and meshing in many pelagic fisheries but little research has been carried out into improving gear design and selectivity to mitigate these problems. Bycatch of non-target species, for example demersal species, also remains a problem in some fisheries. There is also uncertainty as to whether fishing pressure influences the migrations or shoaling behaviour of pelagic species including capelin.</p> <p>It is proposed to relate current pelagic trawl designs to fish behaviour in the trawl in order to identify gear modifications that might improve gear selectivity. A review of all known information on pelagic trawl selectivity will be carried out including industry initiatives using T90 and hexagonal mesh, on which there has been only limited technical assessment. A review of current knowledge on fish behaviour and escape mortality will also be carried and this will cover both the target pelagic species and bycatch species. Gaps in the information base will be identified. The expected output will be the identification of areas of further gear research and fish behaviour to improve the selectivity of pelagic trawls.</p> <p>ii) WGFTFB is receiving requests for advice that require it to apply its expertise in novel ways. This topic will be undertaken over two years and be structured in an incremental way. Reports will be made to FTFB & AMAWGC in 2006 at which point the approach taken will be reviewed. The two-year duration reflects the complexity of the task, particularly for countries like Norway with diverse fleets and fisheries, and it will be undertaken in collaboration with assessment groups at a national level. The main areas to be covered will be:</p> <ol style="list-style-type: none"> 1. The fisheries and their impacts, including information on vessel and gear types, recent technological changes within the fisheries and the potential impacts (quantitative and qualitative) of future developments. 2. Effect of fishing on the ecosystem, including identifying those fisheries with significant discard and ghost fishing problems, with data on discard and escape mortality, where gear-related technical measures can reduce ecosystem impacts and where there are possibly ineffective technical measures. 3. Mixed fisheries and fisheries interactions, providing additional information on medium or high discard practices, assessing the potential for using catch information rather than landings and the identification of more localised species interactions. 4. Regulations and their effects including a summary of legislation relating to fishing gear construction and operation in the region, best estimates of the selective properties as per legislative description (if available), information on the scale and type of regulation circumvention and, where regulations are 'optional'; identifying the degree of uptake where possible. Also identifying any other unregulated aspects of design and operation that may have significant selection or ecological effects. 5. Factors affecting fishing operations; for example any major changes in fishing patterns will be noted and these changes and their potential causes will be reported and interpreted. Similarly, if it is foreseen that fleet operational changes may take place, this will also be noted. <p>iii) There are a considerable number of fisheries worldwide that have mandated the use of additional devices (other than cod-end mesh size) for adjusting size selection. These include the use of escape panels (BACOMA etc) and grids such as the Sort-X There is an increasing volume of evidence that suggests that, in some instances, the same effect can be achieved simply by increasing the mesh</p>
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size. The introduction of such devices this may place an additional financial cost on the fishermen and complicate legislative procedures may be important considerations. In other fisheries, particularly multi-species, the benefits of such devices are that they are more effective with one species (or group) while not impacting on others, square mesh panels and Nephrops trawls being one example. There may also be other benefits for managers; for example, these 'additional' devices may provide more predictable selectivity.

iv) Many fishing practices are essentially the same as when developed centuries ago. Many are energy inefficient and are deleterious to the environments. Here we aim to use the natural behavioral patterns of fish to develop energy efficient non-deleterious harvesting practices that may have applications in fisheries worldwide.

v) A common nomenclature and definition of fishing gears used in world fisheries is fundamental for discussions of many gear related issues. A modern fishing gear classification should reflect the diversity of fishing gears in use as well as being useful for management purposes. Besides the fishing gear classification developed by FAO in 1971 with later revisions, countries and regional fisheries management bodies have adopted their own classifications. The joint FAO/ICES working group FTFB is the most competent global group to identify and describe the fishing gears used globally. As the present gear classification was developed several years ago a need for an update is expressed by the Coordinating Working Party on Fisheries Statistics (CWP) and other global bodies dealing with fishing gear.

There are a number of examples where different codes for a given gear are applied at a national and international level; making direct comparisons between national statistics problematic. To harmonise gear codes across areas is a considerable undertaking and may take several stages. In the first instance the group will identify inconsistencies between and within fisheries regions and compare these to the updated FAO gear classification codes. The group will identify an appropriate actions required to harmonise gear code usage including identification of relevant stakeholders e.g. stock assessment scientists, gear technologists and data managers, necessary for such an undertaking.

Fisheries management bodies are often dependant on catch per unit fishing gear effort for stock assessment purposes. A better understanding of the catching performance of the various gear units might be useful to facilitate this task. The work to be conducted by the topic group is in consultation with the users of such data identify how fishing gear technologist can assist in the development of proper fishing gear classes, including indicators of catching performance of such gear units.