ICES Theme Session O

**Landings obligation as a pathway towards the integration of CFP and MSFD – lessons learned and forward look after 2015**

**Conveners: Tom Catchpole (UK), Clara Ulrich (Denmark) and Marie-Joëlle Rochet (France)**

Moving to a system of catch quotas, rather than landings quotas may serve two objectives: (1) motivate selective fishing (thereby reducing the fishing mortality of fish previously discarded), and (2) make the best use of unwanted catches and minimise waste. Some potential side-effects of this policy might be useful, for example, unregistered fishing mortality may be reduced if all fish killed as a result of fishing are landed and reported. However, other side-effects might have a potentially negative impact on other policies objectives, such as increased overall fishing mortality, less profitable and fuel-efficient fisheries, or unintended consequences on the ecosystem.

In this context, the overall objective of the theme session O was to provide an overview on what is known or expected about such effects, and thereby to shed some light on whether there is scientific evidence that the landing obligation can serve the objectives of the reformed EU Common Fisheries Policy. The session aimed also to discuss whether and how these objective may interlink with other high level policies, including MSY and Marine Strategy Framework Directive. This would contribute framing the potential contribution of ICES to the topic, and highlight knowledge gaps and research needs.

The session was well attended and dynamic, with 17 oral presentations and 1 ½ h lively discussion afterwards. The presentations covered several analyses, including i) impact assessment and possible changes in fishermen behaviour; ii) estimation of impact on bycatch and data poor stocks, and broader ecosystem aspects; iii) survival of selected species during fishing operations; and iv) expected issues in control, monitoring and data collection. Many talks included methodological aspects of generic interest beyond the case studies they were applied to. The discussion afterwards reflected on the same aspects, and allowed many questions and concerns to be raised.

Regarding point i), bioeconomic simulation models give a contrasted picture of the expected impact of the landing obligation. Some fleets are expected to be impacted much more dramatically than others under current fishing patterns (O:01, O:06, O:11, O:12). To maximise economic returns or simply to avoid bankruptcy, fishers will therefore have to avoid catching small and low value fish, which would otherwise be sold for little or no return, and also those species that are most restrictive, to minimise the risk of a premature end to the fishing season (O:02). Therefore, fishing strategies and fishing gears used are expected to change the selectivity patterns, so that catch profiles match the quota compositions available to vessel operators. Indeed, evidence is already emerging that fishers are experimenting different changes in gear and vessel technology and/or changes in their fishing in time and place (O:13, O:15). These empirical results demonstrate that by making vessel operators accountable for the commercial species they catch, catch limits will reduce the flexibility currently available to them (discarding what they do not want to count against quota) and induce changes, as was expected in the objective (1).

Point ii) emphasises research priorities for ICES, as the effects of discarding on the ecosystem are still poorly known (O:16). It is likely that some species do benefit by using this discarded material as an additional food source, for example seabirds and benthic scavengers. As part of the fishing process, this additional food is an unnatural pressure on the ecosystem, however minimising this pressure was not a specific objective of the reformed CFP. Ultimately, the changes in selectivity induced by the avoidance of small fish might also have some consequences on the growth and the reproductive potential of the target species, which can potentially have unexpected adverse consequences (O:05). At present, little can thus be scientifically said whether the landing obligation will have positive or negative effects on the achievement of MSFD objectives. New research improving the assessment, monitoring and management of sensitive bycatch species can help understanding the broader ecological implication of discarding (O:17, O:18), and the landing obligation will also provide new information on those species that were previously discarded. The objective (2) of minimising waste and ecosystem impact by utilising all of the fish caught is therefore not entirely supported by scientific evidence, and was mostly driven by societal and ethical concern. The absence of clearly demonstrated ecological benefits of bringing all catches to shore undermines the perceived legitimacy of the regulation and the will to comply from the industry (O:10). Judging from the debate at the end of the session, this legitimacy issue is certainly among the most important and urgent issues to be addressed and resolved if the implementation of the landing obligation is to be successful.

Regarding point iii), there is scientific evidence that some fish and other marine organisms survive after having been thrown back in the sea. The new CFP regulation allows for the possibility of exemptions from the landing obligation for species for which "scientific evidence demonstrates high survival rates, taking into account the characteristics of the gear, of the fishing practices and of the ecosystem”. This has led to the examination of existing discard survival studies and to the formulation of a new ICES workshop, Methods to Estimate Discard Survival (WKMEDS). Many new studies are also being initiated. New ways to improve survival are also being experimented by the industry to obtain these exemptions, including technological innovations and better handling procedures, and some results presented are encouraging (O:08, O:09).

Finally, some presentations reflected the concern about the risk of unintended increase in fishing mortality if the mechanisms required to control catches are not in place (point iv). There is currently a requirement for fishers to record quantities of discards where these exceed 50kg per species per trip. Based on scientific estimates of discarding, compliance with this regulation appears low, and it is difficult to enforce as even when the controller does have a record of discards there is nothing against which verification can be made (it has been discarded!). Therefore, the requirement to land of all fish could also be seen as a way to improve the ability to control the change from landings to catch limits. But with the need to land all catches, comes the need for changes in the control of fisheries, from one focussed on landings made at the port to one focussed on catches taken at-sea. At this time, there is concern that the mechanisms required to control catches will not be in place. Because assessed fishing mortality includes estimated levels of discards for many stocks, the move from landings to catch limits could incorporate an upward adjustment of the landings quota to a catch quota by adding some or all of the estimated discards (O:03). With adequate controls in place (including making a broader use of technological solutions such as Electronic Monitoring), this increased catch limit would not increase fishing mortality (assuming discard estimates are right!). With effective controls, the incentives to change selectivity would be induced and a results-based system would likely emerge whereby, with high confidence in reported catches, the input controls (technical measures, effort controls etc) could be reduced or removed (O:14). In the absence of adequate controls however, increasing the catch limits, with the inclusion of discards, could increase fishing mortality levels, as fishers may continue to discard undetected. The implications of this are that the data on catches reduces in quality, fishing mortality rates are in excess of that set by managers, and scientific advice and the health of commercial fish stocks deteriorate to the detriment of the fishing industry.

There are also implications for scientific observer programmes in the absence of sufficient control (O:19). Unless the requirement to document catches and bring those catches ashore is legitimised by the fishers, access to fishing vessels for scientists could be withdrawn, as fishers do not want to be observed in non-compliant behaviour. Where access continues, and in some Member States taking observers to sea is a legal requirement, it is possible that different behaviour will be observed to that which the vessel would otherwise have undertaken. The extent to which this may occur is unknown, however some consider there is still some value in collecting scientific observations on catches for comparison with industry reported catches. Scientifically observed catch patterns, accepting the potential for bias, could be the only data available to compare with fisher’s data in the absence of further control mechanisms.

In conclusion, the session highlighted many different and important aspects of the landing obligation. There is potential for significant changes, with wide-ranging implications on a great range of scientific fields under ICES, including: discard survival methodology, ecosystem consequences of the landing obligation, as well as a comprehensive approach to the data required to carry out stock and ecosystem assessments, with consideration of data quality. Whether it is a shift in selectivity and a move to a results-based management system or increasing uncertainty in catch data and scientific advice, it will need careful consideration and a realisation of the risks and opportunities. The most successful outcome will be borne out of an open dialogue between vessel operators, scientists and fisheries managers.