Socio-economic and institutional incentives influencing fishers behaviour in relation to discard

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In fishery it is practical impossible totally to avoid catch of fish or other organisms which cannot be sold or cannot be landed of legal reasons and therefore is unwanted in the catch (Pascoe 1997). The dominant answer to this is to discard the unwanted part of the catch. We here define discards as the proportions of both target and non-target catches discharged back overboard, either 'live' or 'dead' (Rochet and Trenkel 2005).

At political level discards are regarded as a central problem. But it is dealt with in different ways across management systems. Some Nordic countries have prohibited discards, though with some modification, as well as Alaska and New Zealand. Until now the EU has prohibited discards of fish for quota species, which can be landed legally (high grading), whereas it is legal to discard non-commercial fish and organisms and even compulsory to discard fish, which cannot be landed legally due to lack of quota. But in relation to the 2012 revision of the EU Common Fisheries Policy discard ban is discussed as a central element (EU Commission 2007, Kelleher 2005, Johnsen and Eliasen 2011).

A discard ban in itself is difficult to police, which is also the experience in the countries with discard ban. Within full or limited discard ban creating incentives for the fishers to reduce the discard within the possible limits is of importance. Therefore understanding what creates incentives for changed behaviour is a need for support the intention of reducing the discard level by using existing or developing new measures.

The paper argues for discards as a by-product of the fishing process. The process of discarding takes place in the sorting process on the vessels. What are caught are (partly) a result of choices earlier on in the fishing process and right up to the trip (choice of gear, fishing place and time etc.) as well as the strategic choices (choice of vessel, investments in quotas and catches and dealing with the equipment etc.). Therefore the discard level and patterns partly depend on the behaviour of the fisher. A concept of “selective behaviour” would then be choices before and during the fishing process which leads to a higher selectivity and lower discard than generally in the fishery.

The behaviour is seen as a result of individual choices which are embedded in the institutional orders of Community, State, and Market and under the external conditions; natural and fleet structures etc., which in the short run for the individual is as external as the natural conditions.
Based on this approach a list of specific factors which potentially can influence the behaviour leading to discard (or high selectivity) in the fishing process is developed.

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The list of factors influencing discard behaviour has been used as a check list for a study of fishers´ interpretation and behaviour in regard discard in three trawl fisheries cases in Denmark, Greece and United Kingdom. In the same process the relevance of the specific factors of the list were tested.

The paper describes the methodology of desk study and semi-structured interviews for the case studies (Schein 2004, Bernard 1994, Kvale 2004) and describes briefly the cases; the UK case consisting of three specific trawl fisheries; Prawn Fishers in NW England, trawlers in mixed fishery in NE England and beam trawlers of Devon, the Greek case focusing on trawlers in mixed
fishery fishing from 8 major ports in the Ionian and Aegean Seas and the Danish case focusing on nephrops trawlers in the Kattegat (Eliasen et. al forthcoming).

Despite huge differences between the cases in regard management systems and national settings, comparing the factors influencing discard level and pattern in each case reveals that the same measures can lead to very different outcome depending on interaction with other factors. The comparison gives examples of specific interrelation between stock situation, regulation and market leads to the specific pattern; MLS is wanted by the fishers in DK and not respected in Greece due to the market in both cases, Further the MLS leads to discards of undersized fish of commercial species in UK and DK, but very little in Greece, as the market accept small fish and the MLS regulation is of various reasons on weakly enforced. Transferability of catch rights reduces quota related discard in the DK case, but cannot in the UK cases because there are sufficient total quota in one case and not the other.

The comparison also showed that fisher attitudes towards the fishery and especially discard influences the marginal of what is discarded and especially commitment in trying to avoid and reduce discard, the selective behavior. The attitude can partly be seen as developed under broad public and political pressure (as in the UK and DK cases), as this by the fishers is seen as a driver behind their documented initiatives to develop new regulation tools as well as new gear also with higher selectivity.

All case also demonstrated that there is no common and general understanding of what is discard – and what is the problematic discard. A common understanding of what is the discard problem – or at least clarity of the positions – is probably a precondition for cooperation towards reduction of discards.

Finally the paper evaluates the specific factors of the list and finds that most of the factors in isolation, but especially in combination, can be seen to influence discard level and behavior, though importance and effect (augmented or reduced discard) depends on the specific context. Some directly influence the present behavior, while others set a framework for actual behavior and the basis for eventual fisher involvement and active role in attempts to develop and implement mitigating measures. The list therefore is a fine checklist in an analysis of possible drivers for discard and opportunities for including the fishers’ behavior in developing mitigating measures for reducing discard.

References


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