

## **The Landing Obligation:** Economic implications for the Danish fishery in the North Sea

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The Landing Obligation is a ban on discarding in fisheries and is implemented by the EU as a part of the Common Fisheries Policy. The Landing Obligation has been gradually implemented and is in full effect as of 2019. It covers all fish species subject to quotas in the Danish fishery.

By using the bioeconomic fishery model FISHRENT, I analyse how the Danish demersal fishery in the North Sea is expected to be economically impacted by the Landing Obligation. The estimations are compared with a base scenario in which the model projects how the fishery would have developed in the absence of the Landing Obligation. The results show that for the total fleet there is a decrease in profit, but that the effect varies for different fleet segments. Especially the segment of large trawlers suffers economically from the Landing Obligation.

Different mitigation measures are analysed and their capability to mitigate the negative effects of the Landing Obligation are reported. Specifically, a *de minimis* exemption, allowing discards of up to 5% of the catches, and a reduction in the Minimum Landing Size for cod (i.e. allowing smaller cods to be sold for human consumption), are able to partially mitigate the effects.

With the Landing Obligation all fish must be landed. This means that the fish that were previously discarded must now be counted within the quota. Therefore, the EU has made top-ups for different quotas, increasing the quota to incorporate the previous discards which are now landed. In the thesis I add such a top-up for hake to the model. The results show that with this top-up the total fishery is actually better off in economic terms. Both compared to the cases where the Landing Obligation are implemented (with and without mitigation measures) and to the base scenario where there is no Landing Obligation. However, examining the distribution between different segments reveals that it is the segment of the large trawlers that is the driver of this result. This is the only segment benefitting from the top-up. All other segments experience a decrease in profit with the top-up on hake.