Survival of discarded plaice (Pleuronectes platessa) from Norway lobster (Nephrops norvegicus) otter-trawl fishery

The introduction of landing obligations in the European Union common fisheries policy has increased the focus on discard survival. Since species with scientifically proven high survival rates may be exempted from the landing obligations, the economic significance for the fishing industry is large. Landing obligations include individuals below the minimum conservation reference size (MCRS), which are not allowed to be sold for human consumption. The Norway lobster (Nephrops norvegicus) fishery is a high value fishery, but with a substantial amount of bycatch of plaice (Pleuronectes platessa) below the MCRS. In the present study, observations were made on the short-term survival of plaice at or below the MCRS, discarded from a small otter board trawler targeting Nephrops in Skagerrak (ICES 3a). The average short-term survival of plaice was 15% at haul level, ranging from 0% to 39%, after 10 days of captive observation. Survival significantly decreased with time on deck and the retention of debris in the codend (p < 0.0001), while survival was not correlated to size. Vitality assessments, using a combined reflex impairment and injury score, were tested as predictor of survival and were significantly associated to survival (p < 0.0001) both for individual fish and when grouped by hauls. Seabird predation behaviour was assessed and it was estimated that seabirds predated or pursued 85% of discarded plaice below the MCRS.

General information
Publication status: Published
Organisations: National Institute of Aquatic Resources, Section for Aquaculture, Aalborg University
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Pages: 645-654
Publication date: 2019
Peer-reviewed: Yes

Publication information
Journal: Journal of Applied Ichthyology
Volume: 35
Issue number: 3
ISSN (Print): 0175-8659
Ratings:
BFI (2019): BFI-level 1
Web of Science (2019): Indexed yes
Original language: English
Keywords: Bycatch, Discard ban, Discard survival, Injury assessment, Landing obligation, RAMP, Reflex action mortality predictor, Vitality assessment
DOIs:
10.1111/jai.13888
Research output: Contribution to journal › Journal article – Annual report year: 2019 › Research › peer-review