

High survival exemption for plaice caught by TR2 vessels using Otter Trawls in ICES areas VII f and VII g

Request under Article 15.4(b) of Regulation (EU) 1380/2013 to exempt from the landing obligation plaice caught by Otter trawls in ICES areas VII f and VII g.

Summary

Article 15.4(b) of Regulation (EU) 1380/2013 on the Common Fisheries Policy states that the landing obligation shall not apply to:

“species for which scientific evidence demonstrates high survival rates, taking into account the characteristics of the gear, of the fishing practises and of the ecosystem;”

In response to industry’s view that Plaice has a high rate of survival, the Centre for Environment, Fisheries and Aquaculture Science (Cefas) was commissioned to carry out a number studies on high survivability of Plaice. The sea trials were carried out in Bideford Bay off the coast of North Devon (ICES area 7f) on a vessel representative of normal fishing activity targeting Rays, Plaice and Dover sole using TR2 Otter trawls.

The North Western Waters regional group notes that scientific evidence demonstrates a survivability rate of 78% for plaice (*Pleuronectes platessa*) caught by TR2 vessels using Otter Trawls in area VII f and recommends that catches of Plaice caught in areas VII f and g should be exempt from the landing obligation on grounds of high survival rates, as provided for by Article 15.4(b) Regulation (EU) 1380/2013. This will reduce the risk of vessels being prevented from continuing to fish at sea due to their low Plaice quota.

Key Information

Exemption target:	Plaice (<i>Pleuronectes platessa</i>)
Exemption grounds:	High survivability.
Survivability rates:	78%
Vessels affected:	49 (UK)
Discard rate:	73%
2018 UK TAC:	77

Fishery

In 2017, 49 vessels registered in the UK caught plaice with Otter trawls in area VIIIf and VIIg, landing 13 tonnes.

The discard rate for plaice in area VIIIf and VIIg is 73%. An estimated 17.85 tonnes will be discarded in 2018. The survival rate in the study is a minimum of 78%, which would indicate that at around 13.92 tonnes of the discarded Plaice will survive. The survival rate is discussed further below.

Study

Sea trials were carried out in Bideford Bay (ICES rectangle 31E5 in ICES 7f), off the coast of North Devon (see Figure 1) on a vessel which is a fibre-gall hulled trawler of 9.95 m overall length with a 148kw engine. In total 10 hauls were made during three days in March 2015. The fishing activity of the vessel was representative of normal practice and was considered to be comparable to that of the South Wales trawler fleet. All fishing was carried out during March 2015, on typical fishing grounds for this vessel at this time of the year. Rays were the main target species.



Figure 1. Map of Bideford Bay, North Devon.

Fishing activity at sea

At sea the trawl gear was deployed, towed, and hauled as per normal commercial fishing practice. The cod ends were emptied into the aft pounds and the nets were fully re-deployed prior to catch sorting. The crew sorted the catch by hand, and any small, unwanted rays present were thrown back to the sea immediately. The unwanted plaice and other unwanted species were left in the pond and, at the point of normal discarding were collected from the deck by the observer and placed into a 5-stone fish basket.

Data collection

Each plaice caught was measured and recorded by length, then assess for vitality. Each individual fish was measured and scored using a predefined assessment protocol developed methods described in the ICES WKMEDS 2014 report and refined in the Cefas laboratory using aquarium kept plaice. Vitality was assess using a semi-quantitative assessment of activity and a quantitative reflex and injury scoring method.

Catch composition

The catch composition was dominated by Lesser Spotted Dogfish, rays and plaice. All sole and plaice caught were recorded. The length distribution is shown in Figure 3. A total of 572 plaice was caught and assessed for vitality. In total, 18 plaice was assessed as being dead at the point that they would be discarded. The remaining fish were scored and a proportion of fish was selected for the on-board observation tanks. Table 1 sets out the vitality assessment and survivability probability of Plaice from the hauls used in the study.

Estimate of survival

To generate an estimate of survival for this fishery required the application of survival rates from another source. Using the same method, during the same period, survival estimates by vitality category were generated from an otter trawl working in the neighbouring ICES sub division. The estimate generated inferred that survival was the same for each vitality, as was observed in a closely related otter trawl fishery. This assumed that the stresses endured by the fish in one fishery were the same as those of the other and that health vitality assessments were consistent across both studies.

Table 1: Survivability and catch profile of study by vitality assessment for plaice.

Vitality assessment	Proportion of fish at each vitality	Survivability probability (%)
Excellent	0.57	73
Good	0.14	10
Poor	0.26	7
Dead	0.03	-

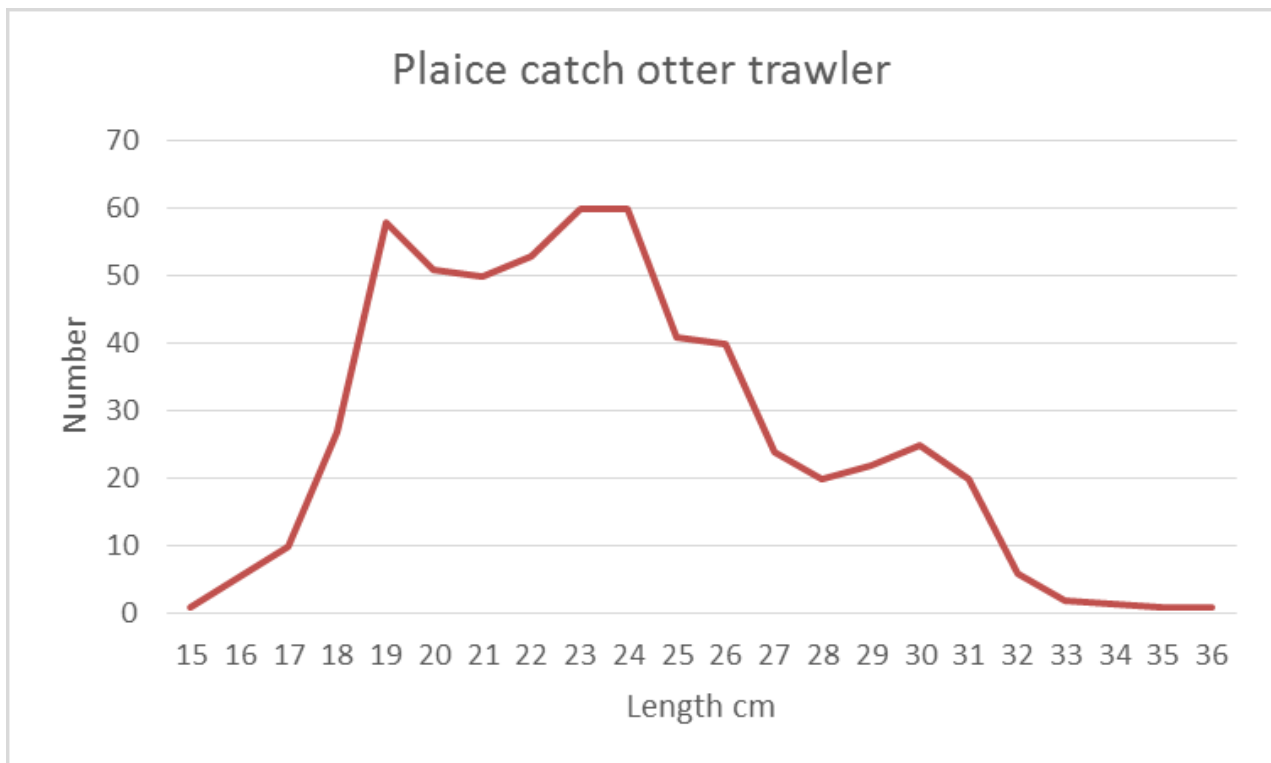


Figure 2. Length frequencies of plaice caught by a Bristol Channel otter trawler

Results

The estimated survival for otter trawl caught plaice, 78% (75-88%).

The study identified a number of potential stressors on the captive fish associated with the methodology in this study, which are likely to have resulted in experimental induced mortality and therefore underestimated survival. Specifically these stressors included:

- Handling fish to conduct the vitality assessments, length measurements and to put fish into the on-board tanks
- Captivity in the on-board tanks (movement caused by vessel movement; proximity with other fish; serial flow of water from top to bottom tank)
- Stopping water flow to on-board tanks on approach to port until docked (reducing dO₂)
- Transfer of fish into tubs (handling of fish)
- Carrying tubs off the vessel and transporting, by van, to onshore holding tanks (increased temperature, reduced dO₂, movement)
- Handling the fish to transfer into onshore tanks
- Adjusting to salinity and temperature

Constructing survival studies on small commercial vessels in remote ports is technical and logistical challenging. Due to restricted deck space the vessels could only hold small number of fish in suitable tanks, and these must be transferred to shore when fishing for less than one day, this meant that the use of controls had to be limited and there were unavoidable additional stressors exerted on the fish. The survival estimates should, therefore, be interpreted as minimum discard survival estimates.

Conclusion

The UK believes that the fishing practices in Bideford Bay resulting in survival rates of 73% for bycatches of Plaice are representative of general fishing practices by the vessels using otter trawls in ICES areas VII f & g. On this basis we would like to request a high survival exemption for plaice caught by TR2 Otter trawls in ICES Areas VII f & g.

Further information on the study can be found in Annex C, under the Otter Trawl study.

Table 5: Completed STECF table for high survivability proposal

Country	Exemption applied for (species, area, gear type)	Species as bycatch or target	Number of vessels subject to the landing obligation	Landings (by landing obligation subject vessels)	Estimated Discards	Estimated Catch	Discard Rate	Estimated discard survival rate from provided studies
UK	Plaice VIIIf, g Otter Trawls	Bycatch	49	13t	17.85t based on area discard rate	30.85t	73% for stock in VIIIf, g	78%