Uittreksel uit het verslag van de STECF-meeting van 16-20 april 2012 Brussel

6. Request from the Dutch Authorities on the use of the Pulse Trawl in ICES Area IVc and IVb

Background

In March 2006, the Commission requested ICES to evaluate the use of an electric "pulse-trawl" to target plaice and sole in the beam trawl fishery in the North Sea.

ICES were requested to give advice on the ecosystem effects of a potential derogation to Regulation (EC) No 850/98 to allow the use of the pulse trawl on a commercial basis.

Following its assessment ICES advised that while there were many positive aspects of the pulse trawl, there were several issues primarily relating to the potential for inflicting increased unaccounted mortality on target and non-target species that needed to be addressed before final conclusions could be drawn on the likely ecosystem effects of this gear. Following the 2006 advice, the Commission subsequently granted Member States a derogation for 5% of the fleet to use the pulse trawl on a restricted basis provided attempts were made to address the concerns expressed by ICES. This derogation has been renewed annually since 2007.

In consultation with the Commission and the Dutch Ministry, in 2009 ICES was asked to update this advice on the ecosystem effects of the pulse trawl. This assessment concentrated on a number of experiments that had been carried out in the Netherlands since the earlier ICES assessment. While the advice was largely positive, issues regarding the methodology used in the experiments were raised, principally that the experiments carried out may not representative of commercial fishing conditions. Since this assessment further research has been carried out and reviewed by an ICES Study Group (SGELECTRA) set up to consider all aspects of electrical trawling.

It is also now apparent that within the Netherlands, driven primarily by the cost of fuel, there is now demand to use the pulse trawl and the number of vessels applying to fish under the 5% derogation exceeds the number of licences available. The Dutch authorities have made several requests to the Commission to allow them to increase the number of vessels allowed to fish or even remove the derogation altogether.

Terms of Reference

In the light of available information, STECF is requested to give its opinion on whether the concerns expressed by ICES in 2006 and 2009 regarding the ecosystem and other effects (in particular control and enforcement issues) of this gear have been adequately answered. If so STECF are asked to comment on the potential ecosystem effects and impacts on catches, and where possible on the fishing mortality, of target and non-target species resulting from an increase in the number of vessels allowed to use the gear (currently restricted to 5% of the fleet) or the current derogation being removed totally. STECF is further asked to comment on whether the current provisions contained in paragraph 3.2 of Annex III of Regulation 43/2009 are sufficient and appropriate to control the use of the gear and prevent the use of harmful electrical pulses.
Species concerned: Sole (*Solea solea*), Plaice (*Pleuronectes platessa)*, Cod (*Gadus morhua),* Benthic species **Gears concerned:** Beam Trawls

STECF response

STECF observations

Since 2006, there has been a considerable amount of useful work undertaken to address the several concerns raised by ICES in 2006 and 2009 on the pulse trawl. In addition, an ICES study group on Electric Trawling SGELECTRA (ICES, 2011) reviewed progress in this field. Their findings are relevant to this particular request to STECF. There are also new research Dutch reports recently available contain additional useful data on pulse trawl technology.

The work has addressed the concerns relating to elasmobranchs and benthic organisms assuming that the effects would be similar for all species within these groups. ACOM (2009) concluded that the laboratory experiments on elasmobranchs, benthic invertebrates to test the effects of electric pulses were generally well designed and interpreted correctly and that those experiments indicate minimal effects on elasmobranchs and benthic invertebrates.

While the work undertaken has highlighted that the impact of the plulse trawl on the mortality of large cod remains unknown and is undesirable, bycatches of cod in the tested gear are low and conversely, the pulse trawl offers a number of significant biological, ecological and economic benefits, such as reduction of fuel consumption, decrease in fishing mortality on the target species and reduced impact on habitats.

Pulse trawl technology appears to have many potential positive benefits if used in a responsible manner. The technology and its future face the risk of reputational damage and widespread opposition if environmentally harmful designs reach market. Effective legislation and enforcement of this technology will be critical in this respect. The review of the development of pulse trawling shows highly variable differences in catch efficiency between pulse and conventional gears. In some cases, particularly with older high voltage (>2000v) systems, catch rates of commercial species were at least 50% greater than conventional gears. However, the more recent (lower voltage systems) show the catch efficiency of a pulse beam trawl is significantly less than conventional beam trawls. Given the characteristics of the current system (technical characteristics of the pulse beam trawl), the extension of number of vessels using the electric pulse systems could significantly reduce fishing mortality of target and nontarget species including benthic organisms. This is under the assumption that there is no corresponding increase in unaccounted (avoidance) mortality.

Defining an adequate regulatory, control and enforcement systems represents a critical barrier for expanding the use of pulse systems in general. Widespread introduction of inefficiently regulated pulse systems could potentially result in considerable ecological damage. While the current systems under development appear to have positive impacts, the current regulatory framework is insufficient to prevent the introduction of potentially damaging systems despite adhering to current regulatory limits.

Given the complexity and interactions between pulse characteristics, using a prescriptive legislative approach will result in highly complex and technical regulations, which will also prevent further development of the system. An alternative results-based approach may be more appropriate and will reverse the burden of proof from the legislators. It is envisaged that a range of pre agreed ecological indicators based on both field and aquarium studies should be developed and used to benchmark any system being proposed for commercial implementation. STECF agrees that the certification system under development by the Dutch, could provide a basis for an appropriate regulatory framework.

STECF conclusions

STECF concludes that most ecological concerns raised by ICES have been adequately addressed. One ecological issue remains (possible avoidance mortality of cod), but this cannot be quantified at present.

STECF concludes that provided that the current characteristics and the use of the gear remain unchanged, an increase in the proportion of the beam trawl fleet allowed to use the gear in the southern North Sea will reduce catches and fishing mortality for both target an non-target species including benthic organisms.

STECF concludes that the critical barrier for lifting the derogation is control and enforcement and that the current provisions on the characteristics of the pulse trawl are not sufficient and not appropriate to prevent unregulated and harmful pulse trawl practices / technologies to be used.

STECF concludes that a results based approach will be suitable to tackle the problem of control and enforcement and that the certification system under development by the Dutch could provide a basis for an appropriate regulatory framework.

STECF recommendations

STECF recommend that the control and enforcement issues are resolved before the proportion of the beam trawl fleet using pulse trawls is increased.

STECF recommend that any extension of the fishing area should be considered only after an impact assessment on the effects of the pulse trawl on the ecosystem, in particular when species not subject to a prior impact study, such as *Nephrops*, could be encountered by the gear.

STECF recommend that any application of pulse technology in other gear types should be considered only after an impact assessment on the effects of the new pulse gear on the ecosystem, in particular when species not subject to a prior impact study.