JRC Scientific and Technical Reports

38th PLENARY MEETING REPORT OF THE SCIENTIFIC, TECHNICAL AND ECONOMIC COMMITTEE FOR FISHERIES (PLEN-11-03)

PLENARY MEETING, 7-11 November 2011, Brussels

Edited by John Casey & Hendrik Doerner

CORRIGENDUM

Relating to Section 8.4: NL cod avoidance plan

CORRIGENDUM ISSUED ON 29 NOVEMBER 2011

EUR 25109 EN - 2011

JRC EUROPEAN COMMISSION

ipsc Institute for the Protection and Security of the Citizen

The mission of the Institute for the Protection and Security of the Citizen (IPSC) is to provide research results and to support EU policy-makers in their effort towards global security and towards protection of European citizens from accidents, deliberate attacks, fraud and illegal actions against EU policies.

The Scientific, Technical and Economic Committee for Fisheries (STECF) has been established by the European Commission. The STECF is being consulted at regular intervals on matters pertaining to the conservation and management of living aquatic resources, including biological, economic, environmental, social and technical considerations.

European Commission
Joint Research Centre
Institute for the Protection and Security of the Citizen

Contact information
Address: TP 051, 21027 Ispra (VA), Italy
E-mail: stecf-secretariat@jrc.ec.europa.eu
Tel.: 0039 0332 789343
Fax: 0039 0332 789658

https://stecf.jrc.ec.europa.eu/home
http://ipsc.jrc.ec.europa.eu/
http://www.jrc.ec.europa.eu/

JRC 67886

EUR 25109 EN
ISBN 978-92-79-22332-7
ISSN 1831-9424 (online)
ISSN 1018-5593 (print)
doi:10.2788/20245

Luxembourg: Publications Office of the European Union

38th PLENARY MEETING REPORT OF THE SCIENTIFIC, TECHNICAL AND ECONOMIC COMMITTEE FOR FISHERIES (PLEN-11-03)

CORRIGENDUM

Section 8.4 of the Report of the 38th plenary meeting report of the STECF should be replaced in its entirety with the following text:

8.4. Request for an STECF advice whether the measures of the NL cod avoidance plan can be regarded as sufficient for a permanent transfer of kW-days

Background

In 2007 and 2008 many Dutch beam trawl vessels made a transition to the use of demersal trawls. The Council Regulation (EC) No 1342/2008 establishing a long-term plan for cod stocks and the fisheries exploiting those stocks (the cod plan) did not take this transition into account. Due to this transition the baseline (2004-2006) has been established by up to 70% lower than actual utilisation of kW-days by TR2 gear in 2008. Thus NL requested in 2009 to shift the fishing effort from beam trawls (BT2) to demersal trawls (TR1 and TR2) on a 1 to 1 basis, in order to take into account the transition of 2008 in the Dutch fleet.

In this regard, during the 2009 December Council following statement has been adopted:
A Member State may transfer effort from one gear to another once it has informed the Commission about the catches per unit of effort of the respective gear groups. The calculation of transfer should be based on that information. The Member State may implement the effort transfer taking into account also technical measures introduced for cod avoidance, so that the still higher catch per unit of effort in the receiving gear group is compensated for. The Commission accepts that for a fleet segment that has undergone a structural change in its fishing activities, the transfer of fishing effort may become of permanent nature. It is then prepared to propose a revision of the effort allocation accordingly once the information on the catch data has been provided.

In 2011 NL has notified the Commission about implementation of their cod avoidance plan in the geographical area b (the North Sea) of the cod plan. The cod avoidance plan contains number of measures like real time closures, seasonal closures, gear adaptations, move on measures, participation in fully documented fishery and self sampling. The Dutch cod avoidance plan has two aims:

- Permanent transfer of the fishing effort from BT2 gear grouping to TR1 and TR2 gear groupings on 3:1 basis, justifying it by the introduced cod avoidance measures;
- Increase of the fishing effort allocation for vessels in TR1 and TR2 gear categories, in accordance with Article 13(2)(b) and (c).

Terms of Reference

Based on the information provided by NL in relation to their request for effort transfer and effort increase, the STECF is requested to assess the effectiveness of the cod avoidance measures undertaken

by the Dutch authorities. In carrying out its assessment, the STECF is requested to advice whether those measures can be regarded as sufficient for the permanent transfer of the fishing effort between gear groupings concerned as proposed by NL on 3:1 ratio. In carrying out its assessment, the STECF is requested to advice on possible impact on cod mortality if such transfer would be made.

In addition, because the Dutch Cod Avoidance plan in the North sea also aims for increase of the fishing effort in accordance with Article 13(2), STECF is requested to assess, to extent possible, whether impact of the measures foreseen in that plan would likely result in adequate reduction of the cod mortality.

STECF Response

The information available to the STECF on the Dutch Cod Avoidance plan and transfer of fishing effort from BT2 to TR1 and TR2 included:

- a letter to the Commission describing the background for the cod avoidance plan, the measures adopted from the 11th July 2011 and the transfers of KW-days.
- an ex-ante evaluation carried out by the Institute for Marine Resources & Ecosystem Studies (IMARES) of the closures and the move on measures included in the cod avoidance plan
- a description of the fishing effort, landings, discards and cpue for the fleets involved
- a description of a monitoring program.

To address the terms of reference STECF:

- reviewed the information available on the cpue by gear category to estimate the KW-days transfer factors required to avoid an increase in fishing mortality on cod following from a transfer of KW-days from BT2 to TR1 and TR2,
- evaluated the likely impact of the cod avoidance plan on the fishing mortality,

The Netherlands has only about 8 vessels targeting cod. The vessels that have switched from beam trawl to TRI and TR2 vessel groups are mainly targeting flatfish and unregulated species like gurnard, mullet and squid. Cod is considered to be a by-catch in these fisheries. Two TR1 groups can be separated on a national level by making a distinction between TR1 gears with a mesh size lower than 120 mm (cod taken as by-catch) and gears with a mesh size equal to or higher than 120 mm (cod fishers). The Netherlands has applied this split of the TR1 into two sub-groups TR1.1 (mesh size =>100m < 120mm) and TR1.2 (mesh size => 120 mm) and has only accepted that the vessels that have switched from BT2 to TR1 are operating in gear group TR1.1 to ensure that these vessels are not conducting a target cod fishery.

CPUE by gear category

The estimate of cpue's by TR1, TR2 and BT2, presented in the ex-ante evaluation, were based on landing- and effort information from logbooks and IMARES' estimates of cod-discard fractions by weight. The discard fraction of TR2 was based on estimates of cod-catches of twin-trawl vessels presented by Helmond and Overzee (2009)[1].

No information on discards by the Dutch TR1, TR2 and BT2 gear groups has been provided to STECF- and the international cpue ratios given in Table 8.4.1 are based on the assumption that the average discard rates reported for the equivalent three fleets from Belgium, UK and Germany are representative of the Dutch fleets.

1 Helmond, A.T.M. Van Overzee, H.M.J. Van (2009) Discard sampling of the Dutch Nephrops fishery in 2007-2008 Umuiden : Centre for Fishery Research, (CVO report 09.007)

The Commission has requested STECF to discuss the endorsement of correction factors to be applied when transferring kW days from one gear group to another. The question is addressed in section 5.2. The correction factors are average factors by management area, while the factors given in the ex-ante evaluation are based on the best available data for the Dutch gear groups. The ex-ante correction factors and the average correction factors provided for the transfer of kW days from BT2 to TR1 and TR2 are given in the Table 8.4.1. For comparison the correction factors are expressed as cpue for BT2 divided by cpue for TR1 respectively TR2.

To meet the requirement that the transfer of KW-days from BT2 to TR2, TR1.1 and TR1.2 will not lead to an increase in the cod catches the transfer ratios (ratio between KW-days removed from the BT2 and the KW-days added to TR1.1 and TR2 respectively) should be no less than the ratio between the cpue for the gear groups observed.

Table 8.4.1. Cpue ratios for transfer of effort from BT2 vessels to other gear categories, based on the STECF international DCF data and the data presented in the Dutch ex-ante evaluation.

	STECF data international				Data used in ex-ante evaluation			
Year	CPUE TR1.1/BT2	CPUE TR1.2/BT2	CPUE TR1/BT2	CPUE TR2/BT2	CPUE TR1.1/BT2	CPUE TR1.2/BT2	CPUE TR1/BT2	CPUE TR2/BT2
2006	5.7	13.1	11.2	4.5	0.4	63.4	10.9	3.5
2007	6.8	21.8	17.4	7.6	1.3	108.5	22.7	5.8
2008	7.1	16.5	13.3	2.6	1.7	38.6	8.7	2.4
2009	7.1	17.1	14.7	4.0	1.4	12.8	5.4	2.4
2010	4.6	24.5	20.2	5.5	1.8	11.8	5.7	1.8
Mean 2008-2010	6.3	19.4	16.1	4.0	1.6	21.1	6.6	2.2

Evaluation of cod avoidance plan

The Dutch cod avoidance plan includes the following measures:

- Basic Measures for TR1.1, TR1.2 and TR2
    - Real time closures, 9 closures of 64nm^2 per month, based on LPUE (highest landings of cod in 1/16 ICES quadrant). Duration closure: 1 month. In cooperation with UK Seasonal Closures during spawning season. Based on scientific egg survey. In cooperation with UK.

    - Gear adaptations
      TR1: a) 130 mm or greater cod end or b) 120-129 mm cod end and Square Mesh Panels of 90 mm or, c) Square Mesh Panels of 100 mm and greater (was 90 mm), and a catch composition of max. 20% cod.

      TR2: a)Nephrops Square Mesh Panel: the insertion of a 120 mm SMP of minimum length 3 meter in the straight extension of the net or a 130 mm SMP in the taper. The SMP must be no further than 12-15 m from the cod line or, b) large meshes in the square, directly behind the head line of at least 15 meshes of 150 mm or greater (was 140 mm) plus square mesh panel of 90 mm (was 80 mm). A catch composition of max. 20% cod.

- Additional measures applicable to cod by-catch fishers (TR2 and TR1.1)
    - Move on: trigger more than 5 % cod in two consecutive hauls. Minimum displacement 5 NM.
    - Obligatory self sampling of all cod catches. Monitoring at random by observers.

- Additional measures applicable to cod fishers (TR1.2)
    - Participation in fully documented fishery project on voluntary basis. All cod including undersized cod has to be landed. Pilot CCTV starts in 2011.
    - Obligatory self sampling for nonparticipants of the fully documented fishery project.

The ex-ante evaluation of the effect of closures on cod LPUE was conducted by modelling spatial and temporal closures for two fleets (TR1.1 and TR2), based on previous year(s) landing and effort data. The change of cod CPUE was assumed proportional to the change of cod LPUE.

In summary the conclusions of the ex-ante evaluation were:

- Reductions in LPUE can be substantial when the current year is used to inform the choice of closures.
- Reductions in cod LPUE are much less, and can remain unchanged (TRI) on average, when the previous year is used to inform the choice of closures.
- Some reductions (15%) in cod LPUE by TR2 can be achieved even when closures are informed with previous year's data. Using the previous two year's data show similar reductions.
- Reductions in TR1.1 cod LPUE was not achieved when choice of closures was informed with the previous year's data but would be substantial in the situation of real-time closures.
- The move-on measures seem to be potentially the most useful, leading to substantial LPUE reductions, but it all depends on the actual implementation of the measure.
- Setting a maximum cod-LPUE of 20-40 kg/2 hours, to trigger a move-on measure, had on average similar effects as limiting the cod fraction in the (2 hour) landings to 5%, but the variation is less.
- The effects of applying both closure and move-on measures are additive.

STECF notes that the evaluation of the likely effect of the spatial-temporal closures was based on landings assuming that discards were a fix fraction of the catch equal to the estimated average annual discard fraction. This means that the evaluation did not take into account any spatial and temporal variation in discard rates.

STECF furthermore notes that there is no discard information for cod available for the Dutch gear groups and the discard rates used in the ex-ante evaluation are average discard rates for TR1.1 gear groups reported to STECF by Belgium, UK and Germany.

The information presented in the ex-ante evaluation was insufficient to allow the STECF to review the results of the evaluation.

No evaluation of the likely effect of the gear adaptations was available to STECF

STECF Conclusions

A) Conclusions based on cpue data submitted in response to the 2011 DCF data call

Under the assumption of no cod avoidance plan, the analysis of historical cpue data (obtained from the DCF 2011 data call and applying the 2008-2010 average of cpue ratios), and to ensure that a

permanent transfer of KW-days from BT2 to TR1 will not result in an increase in cod catches, STECF concludes the following:

1. The transfer factor of KW days from BT2 to TR1 should be at least 16.1:1 (16.1 BT2 kW days equates 1 TR1 kW day).

2. If the TR1 gear group is split into the two sub-groups TR1.1 (mesh size =>100m < 120 mm) and TR1.2 (mesh size => 120mm) and the transfer is to the TR1.1 group only, the cpue data indicate that the transfer ratio should no less than 6.3:1 (6.3 BT2 kW days equates to 1 TR1.1 kW day).

3. If the TR1 gear group is split into the two sub-groups TR1.1 (mesh size =>100m < 120 mm) and TR1.2 (mesh size => 120mm) and the transfer is to the TR1.2 group only, the cpue data indicate that the transfer ratio should be no less than 19.4:1 (19.4 BT2 kW days equates to 1 TR1.2 kW day).

4. For the transfer of KW-days from BT2 to TR2 the cpue data indicates that the transfer factor should be no less than 4:1 (4 BT2 kW days equates to 1 TR2 kW day).

B) Conclusions based on the summary data presented in the IMARES ex ante evaluation

Under the assumption of no cod avoidance plan, and that the historical cpue data used in the IMARES ex ante evaluation are more representative of the Dutch TR2 fleets than the average international cpue estimated by STECF-EWG 11-11 based on the 2011 DCF data call, STECF concludes the following:

1. The transfer ratio of KW days from BT2 to TR1 should be at least 6.6:1 (6.6 BT2 kW days to 1 TR1 kW day).

2. If the TR1 gear group is split into the two sub-groups TR1.1 (mesh size =>100m < 120 mm) and TR1.2 (mesh size => 120mm) and the transfer is to the TR1.1 group only, a transfer ratio in the order of 1.6:1 would be sufficient (1.6 BT2 kW days equates to 1 TR1.1 kW day)

3. If the TR1 gear group is split into the two sub-groups TR1.1 (mesh size =>100m < 120 mm) and TR1.2 (mesh size => 120mm) and the transfer is to the TR1.2 group only, the cpue data indicate that the transfer ratio should be no less than 21.1:1 (21.1 BT2 kW days equates to 1 TR1.2 kW day).

4. For the transfer of KW-days from BT2 to TR2 the cpue data indicate that the transfer ratio should be no less than 2.2:1(2.2 BT2 kW days equates to 1 TR2 kW day)."

STECF is unable to advise if any of the above transfer ratios is appropriate because of the lack of discards data for the Dutch gear groups.

The conclusions based on the 2011 DCF data call make the implicit assumption that for the gear groups concerned, the average cod discard rates for the gear groups concerned are representative of the same gear groups in the Dutch fleet. Such an assumption may be erroneous.

The cpue data presented in the IMARES ex ante evaluation are based on average discard rates for the Belgian, UK and German gear groups and discards observations in the Dutch nephrops fishery in 2007 - 2008. STECF is unable to judge if these discard rates are representative for the Dutch gear groups.

C) Conclusions regarding the effects of real-time closures and "move on" measures

Although STECF was not in the position to review the ex-ante evaluation of the possible effect of the real time closures and "move on" measures, the Committee finds it likely that the real time closures, if fully implemented and enforced, will result in a reduction in cod catches. STECF, however, considers it almost impossible to give a reliable prediction of the size of the reduction and stresses the need to

have a comprehensive monitoring program in place that will allow an assessment of the effect of the measures. STECF therefore advises that the decision on whether the measures of the cod avoidance plan are sufficient for the permanent transfer of the fishing effort between gear groupings concerned be postponed until a quantitative assessment of the effect of the measures has been conducted.

STECF notes that although a full assessment has not been carried out, the gear adaptations implemented under the provisions of Article 13(2) of the cod management plan for the Dutch TR1 and TR2 fleets, are unlikely to have a significant impact on the catches of cod.

Similarly, STECF is at this stage not in the position to assess whether the impact of the measures foreseen in that plan would likely result in reduction of the cod mortality required to increase the fishing effort in accordance with Article 13(2). Such an assessment may be possible when data from the monitoring plan become available.

European Commission

EUR 25109 EN – Joint Research Centre – Institute for the Protection and Security of the Citizen
Title: 38th Plenary meeting report of the Scientific, Technical and Economic Committee for Fisheries (PLEN-11-03). Corrigendum.

Author(s):
STECF members: Casey, J., Abella, J. A., Andersen, J., Bailey, N., Bertignac, M., Cardinale, M., Curtis, H., Daskalov, G., Delaney, A., Di Natale, A., Döring, R., Garcia Rodriguez, M., Gascuel, D., Graham, N., Gustavsson, T., Jennings, S., Kenny, A., Kirkegaard, E., Kraak, S., Kuikka, S., Malvarosa, L., Martin, P., Motova, A., Murua, H., Nowakowski, P., Prelezzo, R., Sala, A., Somarakis, S., Stransky, C., Theret, F., Ulrich, C., Vanhee, W. & Van Oostenbrugge

Luxembourg: Publications Office of the European Union
2011 – 8 pp. – 21 x 29.7 cm
EUR – Scientific and Technical Research series – ISSN 1831-9424 (online), ISSN 1018-5593 (print)
ISBN 978-92-79-22332-7
doi:10.2788/20245

Abstract

This corrigendum should replace the corresponding section 8.4 of the 38th Plenary meeting report of the Scientific, Technical and Economic Committee for Fisheries (PLEN-11-03). Publications Office of the European Union, Luxembourg, EUR 25033 EN, JRC67714.

The mission of the JRC is to provide customer-driven scientific and technical support for the conception, development, implementation and monitoring of EU policies. As a service of the European Commission, the JRC functions as a reference centre of science and technology for the Union. Close to the policy-making process, it serves the common interest of the Member States, while being independent of special interests, whether private or national.

JRC
EUROPEAN COMMISSION

The Scientific, Technical and Economic Committee for Fisheries (STECF) has been established by the European Commission. The STECF is being consulted at regular intervals on matters pertaining to the conservation and management of living aquatic resources, including biological, economic, environmental, social and technical considerations.

LB-NA-25-109-EN-N

Publications Office