

Stichting DLO Centre for Fisheries Research (CVO)

Annual report on the implementation of Council Regulation (EC) No 812/2004 – 2013

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Annual report on the implementation of Council Regulation (EC) No 812/2004 1 - 2013

Member State: Netherlands

Reference Period: 2013

Date: 19 December 2014

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¹ Council Regulation (EC) No 812/2004 of 26.4.2004 laying down measures concerning incidental catches of cetaceans in fisheries and amending Regulation (EC) No 88/98.

Article 6 of the Regulation,

^{1.} Each year, Member States shall send the Commission, by 1 June, a comprehensive annual report on the implementation of Articles 2, 3, 4 and 5 during the previous year. The first report shall cover both the remaining part of the year following the entry into force of this Regulation and the entire year that follows.

^{2.} On the basis of the observers' reports provided according to Article 5(3) and all other appropriate data, including those on fishing effort collected in application of Council Regulation (EC) No 1543/2000 of 29 June 2000 establishing a Community framework for the collection and management of the data needed to conduct the common fisheries policy, the annual report shall include estimates of the overall incidental catches of cetaceans in each of the fisheries concerned. This report shall include an assessment of the conclusions of the observers' reports and any other appropriate information, including any research conducted within the Member States to reduce the incidental capture of cetaceans in fisheries. When reporting on the results of scientific studies or pilot projects as provided for in Articles 2(4) and 4(2), Member States shall ensure that sufficiently high quality standards are reached in their design and implementation and shall provide detailed information concerning those Standards to the Commission.

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Summary

This report contains the results of the on-going monitoring programme on the incidental bycatch of cetaceans in Dutch pelagic fisheries in 2013. EU Council Regulation 812/2004 requires observer coverage in ICES areas VI, VII and VIII in the period 1 December – 31 March (fleet segment NLD003 and NLD005) and outside this area in all areas year round (fleet segment NLD004 and NLD006). In the Dutch situation the monitoring is integrated with the collection of discards data under the EC Data Collection Regulations 1543/2000 and 1639/2001.

In 2013, during 6 fishing trips, 54 days and 152 hauls were observed in fleet segment NLD003; 50 days and 138 hauls were observed in fleet segment NLD004. With a total number of fleet days of 575 in fleet segment NLD003 and NLD005 combined and 816 in fleet segment NLD004 and NLD006 combined, the coverage was 9.4% and 6.1% respectively. Thus the target of the Pilot Monitoring Scheme of 10% for NLD003 & NLD005 combined has not been fulfilled. The target of 5% for NLD004 & NLD006 has been fulfilled. Six of twelve trips monitored by the Netherlands, were on board British, German and French vessels. The observer effort consisted of 106 days (268 hauls), covering roughly half of the total Dutch monitoring effort. The data collected during these trips will be made available to the ICES Working Group on Bycatch of Protected Species (WGBYC).

The observed bycatch rate of 0.00 dolphins per day is in line with the findings in 2006 - 2012 when the bycatch rate was 0.00-0.01 dolphins per day.

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ACOUSTIC DETERRENT DEVICES

1 General Information

The EU regulation obliges the use of pingers in certain fleet segments. According to the criteria mentioned in the regulation, the Dutch fishery includes no fleet segments in which pingers are mandatory.

2 Acoustic Deterrent Devices

2.1 Mitigation measures

The use of pingers is obligatory in ICES sub area IV for vessels larger than 12m in the period 1 August till 31 October, using nets that do not exceed 400m length. The vast majority of the fleet fishes in this period for sole with much longer nets. If some vessels are required required to use pingers, this is not registered or known by governmental authorities, nor are the fishermen aware that they should use pingers. Most probably no acoustic deterrents are in use by Dutch gill net fishers.

3 Monitoring and assessment

3.1 Monitoring and assessment of the effects of pinger use

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OBSERVER SCHEMES

4 General information on implementation of Articles 4 and 5

Council Regulation No 812/2004² is obliging Member States to monitor bycatches of cetaceans in certain fisheries, certain periods of the year and in certain European Waters and to report the results of the monitoring to the European Commission. In the Netherlands, the monitoring was commissioned by the Ministry of Agriculture, Nature Conservation and Food Quality to Wageningen IMARES, the former Netherlands Institute for Fisheries Research, and started on 1 January 2005.

The aim of this study is to assess the incidental bycatch of cetaceans in the Dutch pelagic fisheries. Under the regulation the following fleet segments in the Netherlands should be monitored:

- Pelagic fishery in the period of 1 December till 31 March in ICES areas VI, VII and VIII; in this
 report referred to as fleet segment NLD003 for single pelagic vessels and NLD005 for pair
 trawlers.
- Pelagic fishery in European waters during the year excluding the fishery in the period 1
 December till 31 March in ICES areas IV, VII and VIII; in this report referred to as fleet segment
 NLD004 for single pelagic vessels and NLD006 for pair trawlers.

The regulation does not require monitoring of fishery with set gill nets (fleet segment NLD007, including also tangle nets and trammel nets) in ICES area IVc where (most of) the fishery activity from Dutch ports takes place. The use of acoustic deterrent devices is obligatory for vessels larger than 12m, fishing in certain areas, including IVb, but not in IVc.

Under the regulation a coverage should be reached leading to a CV of the bycatch estimate of 30% or less. However, in a situation where there are very few bycatch incidents, this CV is not realistic (ICES, 2009). Therefore the target of the current monitoring programme in the Netherlands is to cover the fleet effort according to the Pilot Monitoring Scheme (PMS) set for the first two years. The required pilot coverage is 10% for the period of 1 December till 31 March in ICES area VI, VII and VIII and 5% in the rest of the year with exclusion of fleet segment NLD003. In the Dutch situation the monitoring is integrated with the collection of discards data under EC Data Collection Regulations: C.R. 1543/2000³ and C.R. 1639/2001⁴ amended by C.R. 1581/2004⁵. The project under this regulation aims at an overall coverage of approximately 10% in European waters and includes pelagic trawlers under foreign flag, which land the catch in Dutch ports. Data collected under EC. Reg. 812/2004 on board of these vessels are sent to the scientists responsible for the execution of the national monitoring programs in their countries.

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² Council Regulation (EC) No 812/2004 of 26.4.2004 laying down measures concerning incidental catches of cetaceans in fisheries and amending Regulation (EC) No 88/98

 $^{^3}$ Council Regulation (EC) No 1543/2000 of 29 June 2000 establishing a Community framework for the collection and management of the data needed to conduct the common fisheries policy

⁴ Commission Regulation (EC) No 1639/2001 of 25 July 2001 establishing the minimum and extended Community programmes for the collection of data in the fisheries sector and laying down detailed rules for the application of Council Regulation (EC) No 1543/2000

⁵ Commission Regulation (EC) No 1581/2004 of 27 August 2004 amending Regulation (EC) No 1639/2001 establishing the minimum and extended Community programmes for the collection of data in the fisheries sector and laying down detailed rules for the application of Council Regulation (EC) No 1543/2000

Earlier studies on the incidental bycatch of cetaceans have been reported by Couperus (1995, 1997a) covering the period 1992 -1996. The period 2004 – 2012 is covered by standard reports on the implementation of EC Regulation 812/2004.

Monitoring of bycatch of cetaceans is conducted by of the Centre of Fisheries Research (Centrum voor Visserijonderzoek: CVO) on behalf of the Ministry of Economic Affairs, Agriculture and Innovation. CVO hires IMARES to carry out the observer trips and to prepare the report.

Difficulties: In the observer programme for pelagic fleet (NLD003-006) the observer effort is spread quasi random over the year. The observer trips are scheduled equally over the year and observers join the first trawler that comes in if accommodation is available. However, the choice of area and target species are often last minute decisions of the owner of the vessel and may even alter during the trip itself. Therefore it is impossible to foresee or plan the exact effort in the area that has to be monitored under EC Regulation No 812/2004.

The fact that the sampling program includes the monitoring of vessels under foreign flag which land in Dutch ports, adds to the unpredictability of the coverage of the Dutch fleet segments.

5 Monitoring

5.1 Description of fishing effort and observer effort in towed gear

The fleet consists of 10 freezertrawlers and one set of pair trawlers. The freezertrawlers fish from December to March in ICES sub areas VI, VII and VIII comprise fleet segment NLD003. Fleet segment NLD004 are the same freezertrawlers fishing in area's I-XIV all year round. The single set of pair trawlers is here considered a different fleet and is likewise divided in two fleet segments (in reports till 2007 the freezertrawlers and the pair trawlers have been treated as one fleet consisting of two fleet segments).

In 2013 on 6 trips an observer joined the vessel in segment NLD003-NLD004. NLD005 and NLD006 have not been covered. According to the national logbook database, the number of days fished by the whole pelagic fleet (NLD003-NLD006) in 2013 was 1391 for whole Dutch pelagic fleet. With 104 observer days the overall coverage of the pelagic fleet was 7.5%. The number of sampled hauls was 290. The text table provides the effort and coverage by fleet segment:

| Fleet segment | Fleet days | Observer days | Coverage required | Coverage achieved |
|-----------------|------------|---------------|-------------------|-------------------|
| | | | according to PMS | |
| NLD003 | 508 | 54 | 10% | 10.6% |
| NLD004 | 783 | 50 | 5% | 6.4% |
| NLD005 | 67 | 0 | 10% | 7.9% |
| NLD006 | 33 | 0 | 5% | 0.0% |
| NLD003 & NLD005 | 575 | 54 | 10% | 9.4% |
| NLD004 & NLD006 | 816 | 50 | 5% | 6.1% |

Table 2 provides fleet effort and observer coverage by ICES subarea.

Notice that a vessel may have visited several areas on one day which means that a day on which a vessel fished in two areas is counted as two days. Thus the sum of all days at sea is not necessarily the same as the total fishing days at sea. Observer days and fleet days during which no fishing took place are not counted as effort days.

On board one French trawler, one trip (11 days), 28 hauls have been monitored, no bycatches were observed. On board two German trawlers, during three trips (65 days), 168 hauls have been monitored, no bycatches were observed. On board of one British vessel, during two trips (30 days), 72 hauls have been monitored. This is together 268 hauls, during 106 days, consisting roughly half of the total Dutch observer effort. The data collected during these trips will be made available for WGBYC.

5.2 Description of fishing effort and observer effort in static gear

The set gill net fishery has not been monitored as there is no obligation to monitor this fishery in ICES sub area IV.

6 Estimation of incidental catches

6.1 Incidental catch rates by fleet segment and target species

In the sampled fishing area's in the pelagic fishery no bycatch incidents, have been observed (Table 4).

7 Recording of incidental catches

On pelagic trawlers for each tow, the observer was present on the bridge during shooting and hauling. Position and time were recorded at the beginning of each haul. The time was recorded again when hauling started. The rear window of the bridge gives a good view on the rear deck, so that bycatches of cetaceans can be recorded from there. Of any bycatch, length and sex must be recorded. In the case of cetacean bycatches, and if the crew agrees, the animals are labelled and frozen for further examination at the institute.

8 Discussion

With 9.4% coverage of fleet segments NLD003 and NLD005 the target of 10% has not been fulfilled. The target of 5% for the fleet segments NLD004 and NLD006 has been fulfilled (6.1% coverage). The overall coverage of pelagic vessels operated by the Dutch is roughly twice as high taken in account that 6 of 12 trips of the discards sampling program were on vessels with foreign flag. The observer programme is combined with the collection of discards data which aims at an overall random coverage of 10%. The coverage in the fleet segments varies therefore from year to year.

The recorded bycatch rate in the pelagic fishery is 0.00, which is similar to rates found in 2005 - 2012. In the Dutch fishery, bycatches of dolphins occur mainly in the fishery for horse mackerel and mackerel west of Ireland in February and March (Couperus, 1997b). The relatively low bycatch rates in 2005 – 2013 compared to the rates in the 1990ies are probably related to a shift in effort from horse mackerel towards the blue whiting fishery (Couperus, 2006).

Due to the high number of hauls without bycatches it is not possible to estimate the bycatch rate with any accuracy with the current observer effort. The total bycatch mortality of cetaceans caused by Dutch pelagic freezer trawlers in the 2005-2013 seasons is in the order of magnitude of zero to several tens. However, data from the 1990ies suggest that the bycatch rate may vary, partly induced by changes in the quotas of pelagic target species.

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9 References

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TABLES

Table 1. Pingers used in fleet segment set gill nets.

| Metier | Fishing area | Pinger characteristics | Other mitigation |
|--------|--------------|------------------------|------------------|
| | | | measures |
| - | - | - | - |

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| | | | Total fishing effort | | | | Total observer effort achieved | | | | | | | | | |
|--------------|------------------------|---------|----------------------|--------|---------|------------|--------------------------------|--------|---------|--------|---------|------------|--------|------------|-------------|----------|
| Fishery | | | | | | <u> </u> | | | | | | | | | | |
| segment | | | | | | Months | | Total | | | | Months | | Total | | |
| (ref in this | | Fishing | No. of | No. of | Days at | of | No. of | towing | No. of | No. of | Days at | of | No. of | towing | Type of | |
| report) | Metier | area | vessels | trips | sea | operation | hauls | time | vessels | trips | sea | operation | hauls | time (min) | monitoring* | Coverage |
| NLD003 | OTM small pelagic fish | Vla | 5 | 10 | 55 | 1,2,3 & 12 | unk | unk | 2 | . 2 | 7 | 1,2,3 & 12 | 22 | 4284 | PMS | 12.7% |
| NLD003 | OTM small pelagic fish | VIb | 2 | 2 | 16 | 1,2,3 & 12 | unk | unk | C | 0 | C | 1,2,3 & 12 | 0 | 0 | PMS | 0.0% |
| NLD003 | OTM small pelagic fish | VIIb | 9 | 15 | 119 | 1,2,3 & 12 | unk | unk | 1 | . 1 | 1 | 1,2,3 & 12 | 1 | 100 | PMS | 0.8% |
| NLD003 | OTM small pelagic fish | VIIc | 8 | 15 | 105 | 1,2,3 & 12 | unk | unk | 2 | . 2 | 19 | 1,2,3 & 12 | 61 | 9540 | PMS | 18.1% |
| NLD003 | OTM small pelagic fish | VIId | 9 | 16 | 80 | 1,2,3 & 12 | unk | unk | 1 | 1 | 9 | 1,2,3 & 12 | 30 | 1225 | PMS | 11.3% |
| NLD003 | OTM small pelagic fish | VIIe | 6 | 7 | 42 | 1,2,3 & 12 | unk | unk | 1 | . 1 | 12 | 1,2,3 & 12 | 30 | 6015 | PMS | 28.6% |
| NLD003 | OTM small pelagic fish | VIIh | 8 | 14 | 28 | 1,2,3 & 12 | unk | unk | 1 | . 1 | . 3 | 1,2,3 & 12 | 3 | 495 | PMS | 10.7% |
| NLD003 | OTM small pelagic fish | VIIIa | 0 | 0 | 0 | 1,2,3 & 12 | unk | unk | 1 | . 1 | | 1,2,3 & 12 | 1 | 155 | PMS | #DIV/0! |
| NLD003 | OTM small pelagic fish | VIIIb | 4 | 5 | 12 | 1,2,3 & 12 | unk | unk | 1 | . 1 | 2 | 1,2,3 & 12 | 4 | 385 | PMS | 16.7% |
| NLD003 | OTM small pelagic fish | VIIj | 8 | 9 | 50 | 1,2,3 & 12 | unk | unk | 0 | 0 | C | 1,2,3 & 12 | 0 | 0 | PMS | 0.0% |
| NLD003 | OTM small pelagic fish | VIIk | 1 | 1 | 1 | 1,2,3 & 12 | unk | unk | C | 0 | C | 1,2,3 & 12 | 0 | 0 | PMS | 0.0% |
| NLD004 | OTM small pelagic fish | lla | 2 | 2 | 14 | 1-12 | unk | unk | C | 0 | C | 1-12 | 0 | 0 | PMS | 0.0% |
| NLD004 | OTM small pelagic fish | IIb | 2 | 2 | 16 | 1-12 | unk | unk | C | 0 | C | 1-12 | 0 | 0 | PMS | 0.0% |
| NLD004 | OTM small pelagic fish | IVa | 6 | 14 | 125 | 1-12 | unk | unk | 1 | . 1 | 15 | 1-12 | 41 | . 6855 | PMS | 12.0% |
| NLD004 | OTM small pelagic fish | IVb | 7 | 18 | 126 | 1-12 | unk | unk | 0 | 0 | C | 1-12 | 0 | 0 | PMS | 0.0% |
| NLD004 | OTM small pelagic fish | IVc | 6 | 13 | 21 | 1-12 | unk | unk | 1 | . 1 | 1 | 1-12 | 1 | . 25 | PMS | 4.8% |
| NLD004 | OTM small pelagic fish | VIa | 8 | 17 | 167 | 4-11 | unk | unk | 1 | . 1 | 1 | 1-12 | 16 | 0 | PMS | 0.6% |
| NLD004 | OTM small pelagic fish | VIb | 1 | 1 | 1 | 4-11 | unk | unk | 0 | 0 | 0 | 4-11 | 0 | 0 | PMS | 0.0% |
| NLD004 | OTM small pelagic fish | VIIa | 1 | 1 | 1 | 4-11 | unk | unk | C | 0 | C | 4-11 | 0 | 0 | PMS | 0.0% |
| NLD004 | OTM small pelagic fish | VIIb | 7 | 9 | 26 | 4-11 | unk | unk | C | 0 | C | 4-11 | 0 | 0 | PMS | 0.0% |
| NLD004 | OTM small pelagic fish | VIIc | 3 | 3 | 5 | 4-11 | unk | unk | 0 | 0 | 0 | 4-11 | 0 | 0 | PMS | 0.0% |
| NLD004 | OTM small pelagic fish | VIId | 8 | 18 | 87 | 4-11 | unk | unk | 1 | . 1 | 18 | 4-11 | 45 | 7430 | PMS | 20.7% |
| NLD004 | OTM small pelagic fish | VIIe | 7 | 14 | 108 | 4-11 | unk | unk | 1 | . 1 | 12 | 4-11 | 28 | 4140 | PMS | 11.1% |
| NLD004 | OTM small pelagic fish | VIIg | 1 | 1 | 1 | 4-11 | unk | unk | 0 | 0 | 0 | 4-11 | 0 | 0 | PMS | 0.0% |
| NLD004 | OTM small pelagic fish | VIIh | 3 | 4 | 11 | 4-11 | unk | unk | 1 | . 1 | 4 | 4-11 | 7 | 1645 | PMS | 36.4% |
| NLD004 | OTM small pelagic fish | VIIIb | 5 | 6 | 13 | 4-11 | unk | unk | C | 0 | 0 | 4-11 | 0 | 0 | PMS | 0.0% |
| NLD004 | OTM small pelagic fish | VIIj | 4 | 6 | 61 | 4-11 | unk | unk | C | 0 | C | 4-11 | 0 | 0 | PMS | 0.0% |
| NLD005 | PTM small pelagic fish | VIId | 2 | 8 | 21 | 1,2,3 & 12 | unk | unk | C | 0 | C | 1,2,3 & 12 | 0 | 0 | PMS | 0.0% |
| NLD005 | PTM small pelagic fish | VIIe | 2 | 7 | 15 | 1,2,3 & 12 | unk | unk | C | 0 | C | 1,2,3 & 12 | 0 | 0 | PMS | 0.0% |
| NLD005 | PTM small pelagic fish | VIIh | 2 | 6 | 19 | 1,2,3 & 12 | unk | unk | C | 0 | C | 1,2,3 & 12 | 0 | 0 | PMS | 0.0% |
| NLD005 | PTM small pelagic fish | VIIIb | 2 | 2 | 12 | 1,2,3 & 12 | unk | unk | C | 0 | 0 | 1,2,3 & 12 | 0 | 0 | PMS | 0.0% |
| NLD006 | PTM small pelagic fish | IIIa | 1 | 1 | 1 | 1-12 | unk | unk | C | 0 | 0 | 1-12 | 0 | 0 | PMS | 0.0% |
| NLD006 | PTM small pelagic fish | IVa | 2 | 5 | 17 | 1-12 | unk | unk | C | 0 | 0 | 1-12 | 0 | 0 | PMS | 0.0% |
| NLD006 | PTM small pelagic fish | IVb | 2 | 6 | 12 | 1-12 | unk | unk | C |) C | 0 | 1-12 | 0 | 0 | PMS | 0.0% |
| NLD006 | PTM small pelagic fish | IVc | 1 | 1 | 1 | 1-12 | unk | unk | C |) C | C | 1-12 | 0 | 0 | PMS | 0.0% |
| NLD006 | PTM small pelagic fish | VIIIb | 2 | 2 | 2 | 4-11 | unk | unk | C |) C | C | 4-11 | 0 | 0 | PMS | 0.0% |

Table 2. Fleet effort and observer effort in towed gear

^{*}PMS = Pilot Monitoring Scheme

Table 3. Fleet effort and observer effort in static gear (fleetsegment NLD007)

| | Total fishing effort | | | | | | | Total observer effort achieved | | | | | | | |
|--------|----------------------|---------|-------|---------|-------------|-----------|-------|--------------------------------|-------|---------|----------|-----------|-------|----------|----------|
| | | | | | | | | | | | Months | | | | |
| | | | | | Months | Total | Total | | | | of | Total | Total | Type of | |
| | Fishing | No. of | No.of | Days at | of | length of | soak | No. of | No.of | Days at | operatio | length of | soak | monitori | |
| Metier | area | vessels | trips | sea | operation | nets | time | vessels | trips | sea | n | nets | time | ng* | Coverage |
| Nets | IVb | 0 | 0 | 0 | 1-12 | unk | unk | 0 | 0 | 0 | 0 | 0 | 0 | | |
| Nets | IVc | 6 | 28 | 27 | 1-12 | unk | unk | 0 | 0 | 0 | 0 | 0 | 0 | | |
| GTR | IVb | 0 | 0 | 0 | 10-12 & 1-4 | unk | unk | 0 | 0 | 0 | 0 | 0 | 0 | | |
| GTR | IVc | 14 | 152 | 154 | 10-12 & 1-4 | unk | unk | 0 | 0 | 0 | 0 | 0 | 0 | | |
| GNS | IVa | 1 | 1 | 1 | 1-12 | unk | unk | 0 | 0 | 0 | 0 | 0 | 0 | | |
| GNS | IVb | 12 | 44 | 106 | 1-12 | unk | unk | 0 | 0 | 0 | 0 | 0 | 0 | | |
| GNS | IVc | 105 | 2209 | 2732 | 1-12 | unk | unk | 0 | 0 | 0 | 0 | 0 | 0 | | |

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Table 4. Bycatch rates

| | | | | | | _ | | _ | | |
|------------------------|---------|----------------|------------|-----------|-----------|------------|---------|---------|------------|----|
| | | | | | Numl | ber of | | | | |
| | | | | | speci | mens | | | | |
| | | | | | incidenta | lly caught | | | | |
| | | | | | by | | Incid | ental | | |
| | | | | | spe | cies | catch | rates | | |
| | | | Incidental | | | | | | Total | |
| | | | caught | Number | | | | | incidental | |
| | Fishing | Main target | cetacean | of | With | Without | With | Without | catch | |
| Metier | area | species | species | incidents | pingers | pingers | pingers | pingers | estimate | CV |
| OTM small pelagic fish | VIa | Blue Whiting | | 0 | 0 | 0 | 0 | 0 | | |
| OTM small pelagic fish | VIb | | | | | | | | | |
| OTM small pelagic fish | VIIb | Horse mackerel | | 0 | 0 | 0 | 0 | 0 | | |
| OTM small pelagic fish | VIIc | Blue Whiting | | 0 | 0 | 0 | 0 | 0 | | |
| OTM small pelagic fish | VIId | Herring | | 0 | 0 | 0 | 0 | 0 | | |
| | VIIe | Horse mackerel | | 0 | 0 | 0 | 0 | 0 | | |
| | VIIh | Horse mackerel | | 0 | 0 | 0 | 0 | 0 | | |
| _ · · | VIIIa | Horse mackerel | | 0 | 0 | 0 | 0 | 0 | | |
| OTM small pelagic fish | VIIIb | Mackerel | | 0 | 0 | 0 | 0 | 0 | | |
| OTM small pelagic fish | VIIj | | | | | | | | | |
| OTM small pelagic fish | VIIk | | | | | | | | | |
| OTM small pelagic fish | lla | | | | | | | | | |
| | IIB | | | | | | | | | |
| <u> </u> | IIb | | | | | | | | | |
| | IVa | Herring | | 0 | 0 | 0 | 0 | 0 | | |
| | IVb | Herring | | 0 | 0 | 0 | 0 | 0 | | |
| | IVc | Herring | | 0 | 0 | 0 | 0 | 0 | | |
| OTM small pelagic fish | Vla | Ŭ | | | | | | | | |
| OTM small pelagic fish | VIb | | | | | | | | | |
| | VIIa | | | | | | | | | |
| | VIIb | | | | | | | | | |
| OTM small pelagic fish | VIIc | Blue Whiting | | 0 | 0 | 0 | 0 | 0 | | |
| OTM small pelagic fish | VIId | Herring | | 0 | 0 | 0 | 0 | 0 | | |
| | VIIe | Horse mackerel | | 0 | 0 | 0 | 0 | 0 | | |
| · ē | VIIg | | | | | | | | | |
| OTM small pelagic fish | VIIh | Horse mackerel | | 0 | 0 | 0 | 0 | 0 | | |
| | VIIIb | Mackerel | | 0 | 0 | 0 | 0 | 0 | | |
| OTM small pelagic fish | VIIj | | | | | | | | | |
| PTM small pelagic fish | VIId | | | | | | | | | |
| PTM small pelagic fish | VIIe | | | | | | | | | |
| PTM small pelagic fish | VIIh | | | | | | | | | |
| PTM small pelagic fish | VIIIb | | | | | | | | | |
| | Illa | | | | | | | | | |
| | IVa | | | | | | | | | |
| | IVb | | | | | | | | | |
| | IVc | | | | | | | | | |
| | VIIIb | | | | | | | | | |

Signature

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Approved by: Ing. S.W. Verver
Head WOT, Centre for Fisheries Research

Signature:

Date: 15 January 2015

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