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## CVO report

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### Annual Report of the Netherlands to the European Commission on the implementation of Council Regulation 812/2004 on cetacean bycatch

#### Results of fishery observations collected during 2009

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## Summary

This report contains the results of the ongoing monitoring programme on the incidental bycatch of cetaceans in Dutch pelagic fisheries in 2009. EU Council Regulation 812/2004 requires observer coverage in ICES areas VI, VII and VIII in the period 1 December – 31 March (fleet segment LND003 and NLD005) and outside this area in all areas year round (fleet segment LND004 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 2009, during 10 fishing trips, 63 days and 186 hauls were observed in fleet segment NLD003 and NLD005; 64 days and 133 hauls were observed in fleet segment NLD004 and NLD006. With a total number of fleet days of 593 in fleet and 1047, the coverage in segment NLD003 and NLD005 was 10.6 % and 6.1% in segment NLD004 and NLD006.

No bycatch of cetaceans were recorded. The observed bycatch rate of 0.00 dolphins per day is in line with the findings in 2006 - 2008 when the bycatch rate was also 0.00 dolphins per day.

Within this Dutch programme, 14 days and 31 hauls have been observed on a trawler under English flag; 26 days and 52 hauls have been sampled on a trawler under German flag. The data collected during these trips have been send to the institutes carrying out the regulation in their countries.

## Samenvatting

Dit rapport bevat de resultaten van het doorlopende waarnemerprogramma in 2009 naar de bijvangst van dolfijnen in de Nederlandse pelagische visserij. Verordening 812/2004 vereist een waarnemers inspanning in de ICES gebieden VI, VII en VIII in de periode van 1 december tot en met 31 maart (vlootsegment NLD003 en NLD005) en buiten deze periode in alle gebieden het hele jaar rond (vlootsegment NLD004 en NLD006). In de Nederlandse situatie is het waarnemerprogramma geïntegreerd met het verzamelen van vangst- en discardgegevens onder EU Verordeningen 1543/2000 en 1639/2001.

In 2009 zijn, tijdens 10 reizen waarnemingen uitgevoerd gedurende in totaal 63 dagen met 187 trekken in vlootsegment NLD003 en NLD005; 64 dagen en 133 trekken in vlootsegment NLD004 en NLD006. Met een totaal aantal visdagen van 593 in vlootsegment NLD003 en NLD005 en 1047 in vlootsegment NLD004 en NLD006, was de dekking respectievelijk 10.6% en 6.1%.

Er werden geen bijvangsten van dolfijnachtigen waargenomen. De gevonden mate van bijvangst van 0.00 dolfijnen per dag, verschilt niet van die van de periode 2006 - 2008 toen er ook geen bijvangsten werden waargenomen.

Binnen dit Nederlands programma, werd 14 dagen en 31 trekken waargenomen op een trawler onder Engelse vlag. Daarnaast werden 26 dagen en 52 trekken bemonsterd op een trawler onder Duitse vlag. De tijdens deze reizen verzamelde gegevens zijn naar de instituten gestuurd die de EU verordening uitvoeren.

## Introduction

Council Regulation No 812/2004<sup>1</sup> 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
- 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

This report covers the ongoing monitoring of Dutch pelagic fisheries in the period January – December 2009.

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 scheme 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. 1543/2000<sup>2</sup> and C.R. 1639/2001<sup>3</sup> amended by C.R. 1581/2004<sup>4</sup> (EC 2000) (EC 2001). The project under this regulation aims at an overall coverage of approximately 10% in European waters.

Earlier studies on the incidental bycatch of cetaceans have been reported by Couperus (1995; 1997a; 2006; 2007; 2008; 2009) covering the period 1992 -1996 and 2004 - 2007. The format of this report is according to the template provided by the ICES Study Group for Bycatch of Protected Species (SGBYC) with adjustments from the Advice Drafting Group/ACOM in 2008 (ICES 2008, 2009). The format requires to report on the use of pingers, hence the inclusion of table 2 and the inclusion of a column on pingers in table 4.

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<sup>1</sup> 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

<sup>2</sup> 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

<sup>3</sup> 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

<sup>4</sup> 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

## Pinger use

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. Pingers were used in none of the studied fleet segments (table 2).

## Methods

### *Observer effort*

The monitoring of the pelagic fleet is integrated with the collection of discards data under EC Data Collection Regulations 1543/2000 and 1639/2001. In this programme 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. 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.

Table 1 presents the fleet segments that have been studied. The single pair of pair trawlers in the pelagic fleet is considered a different "fleet". Till 2007 these two groups have been treated as one fleet (consisting of two fleetsegments).

In 2009 on 10 trips an observer joined the vessel in segment NLD003 and NLD004. According to the national logbook database, the number of fleet days in area VI, VII and VIII during season 2009 was 520. With 63 observer days the coverage was 10,6% in segment NLD003. The coverage in segment NLD004 was  $830/64=7.7\%$ .

### *Registration of bycatches*

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 labeled and frozen for further examination at the institute.

## Results

In total 319 hauls and 127 days have been observed during the 10 observer trips (table 3). Note 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. On the other hand if a vessel did not fish at all, this day is not counted. Thus the sum of all days at sea is not necessarily the same as the total fishing days at sea. Figure 1 shows the positions of all these hauls. Of these hauls, 186 were in fleet segment NLD003 and 133 in segment NLD004. The two pair trawlers (segment NLD005 and NLD006) have not been sampled (Table 3). Total coverage (observed days/total days x 100 = %) were (NLD003)  $63/520 \times 100 = 12.1\%$ , (NLD004)  $64/830 \times 100 = 7.7\%$ , (NLD005)  $0/73 \times 100 = 0\%$  and (NLD006)  $0/217 \times 100 = 0\%$  or (NLD003&005)  $63/593 = 10.6\%$  and (NLD004&006)  $64/1047 = 6.1\%$ .

In the observed hauls no bycatches of cetaceans occurred (table 4).

Within the Dutch programme, 14 day and 31 hauls have been observed on a trawler under English flag; 26 days and 52 hauls have been sampled on a trawler under German flag. These data have been send to the institutes carrying out the regulation in their countries.



## Discussion

*(This discussion is the same as last years report. Only some numbers have been changed. The content is just as relevant as last year. Here the text has been repeated for the readers convenience)*

With 10.6% coverage of fleet segment NLD003 and NLD005 and 6.1% coverage of fleet segment NLD004 and NLD006 the target of 10% and 5% has been fulfilled. The observer programme is combined with the collection of discards data which aims at an overall random coverage of 10%. The coverage in fleet segment A may therefore vary from year to year. The advantage of this approach is that incidental bycatches (and discards) can be estimated directly for the whole fleet without having to apply a stratum approach, which would be very complicated, due to the number of different stocks/fisheries and the continuous overlap between these during most of the trips. In addition, stratification would require to disregard some fisheries, because the number of fisheries is higher than the number of observed trips. Moreover, fishery plans often change in the course of a trip. Couperus et al. (2004) distinguished 12 types of fishery which is equal to the annual number of observer trips. Some of these fisheries are much larger in terms of effort and landings than others. Hence it is not possible to cover all types of fishery by effort or landings with the current observer effort. In this light stratification can be considered a pitfall if the objective is to estimate national or European bycatch rates. Note that the distinction between single en pair trawlers in this study is only a division in fleet segments: the random sampling scheme was applied to single and pair trawlers as one group.

The recorded bycatch is 0.00, which is similar to rates found in 2005 -2008. In these years only a few specimens have been recorded. A more extensive evaluation of bycatch rates in the light of developments in the fishery from the 1990ies till 2005 is given by Couperus (Couperus 2006).

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 – 2009 compared to the rates in the 1990ies are probably related to the increased fishery in the blue whiting fishery (Couperus 2006). In addition, the bycatch rate is lowered due to the extension of the observed period with the month December since 2004.

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 2006-2009 season 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 quota's of pelagic target species.

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## Tables

Table 1. Required effort by fleet segment according to EU council regulation 812/2004.

Code number for segment	ICES area fleet	Gear type	Target species	Number of vessels	Months of operation
NLD003	VI, VII, VIII	Pelagic trawl	hor, mac, bw, her	12	1,2,3,12
NLD004	all area's except VI, VII, VIII in months 1,2,3,12	Pelagic trawl	hor, mac, bw, her, arg	12	all months, except 1,2,3,12 in area's VI,VII,VIII
NLD005	VI, VII, VIII	Pelagic trawl pair	hor, mac, her	2	1,2,3,12
NLD006	other area's	Pelagic trawl pair	hor, mac, her	2	1-12

Table 2. Description of bycatch mitigation measures (pingers). See table 1 for a description of the fleet segments.

Fleet segment	Pingers mandatory?	% using of vessel pingers	comments	Other bycatch mitigation measures
NLD003	no	0		no
NLD004	no	0		no
NLD005	no	0		no
NLD006	no	0		no

Table 3. Description of fishing effort and observer effort in towed gear.

Fleet segment	ICES sub area	Total fishing effort					Total observer effort achieved					Coverage % (days at sea)
		No. of vessels	No. of trips	Days at sea*	No. of hauls	Average towing time (hours/day)	No. of vessels	No. of trips	Days at sea*	No. of hauls	Average towing time (hours/day)	
NLD003	VIIIb	2	3	9	ni	ni	0	0	0	0	ni	0.0%
NLD003	VIIb	7	13	48	ni	ni	2	2	5	14	ni	10.4%
NLD003	VIIc	8	15	104	ni	ni	2	2	14	33	ni	13.5%
NLD003	VIIId	7	15	116	ni	ni	3	3	15	71	ni	12.9%
NLD003	VIIe	5	7	10	ni	ni	1	1	2	5	ni	20.0%
NLD003	VIIh	4	6	17	ni	ni	1	1	1	1	ni	5.9%
NLD003	VIIj	10	20	107	ni	ni	4	4	13	35	ni	12.1%
NLD003	VIIk	2	3	4	ni	ni	1	1	1	1	ni	25.0%
NLD003	VIa	8	17	102	ni	ni	2	2	12	26	ni	11.8%
NLD003	VIb	2	2	3	ni	ni	0	0	0	0	ni	0.0%
NLD004	IIA	9	14	105	ni	ni	1	1	7	9	ni	6.7%
NLD004	IIB	3	5	24	ni	ni	1	1	11	20	ni	45.8%
NLD004	IVa	6	11	74	ni	ni	2	2	15	41	ni	20.3%
NLD004	IVb	6	9	20	ni	ni	0	0	0	0	ni	0.0%
NLD004	IVc	7	25	50	ni	ni	1	1	4	6	ni	8.0%
NLD004	VIIIb	3	3	12	ni	ni	0	0	0	0	ni	0.0%
NLD004	VIIb	6	6	35	ni	ni	0	0	0	0	ni	0.0%
NLD004	VIIId	6	13	131	ni	ni	1	1	2	2	ni	1.5%
NLD004	VIIe	5	9	32	ni	ni	1	1	1	1	ni	3.1%
NLD004	VIIj	7	12	169	ni	ni	1	1	3	5	ni	1.8%
NLD004	VIa	8	20	175	ni	ni	3	3	21	49	ni	12.0%
NLD004	Vb	1	1	3	ni	ni	0	0	0	0	ni	0.0%
NLD005	VIIId	2	12	53	ni	ni	0	0	0	0	ni	0.0%
NLD005	VIIe	2	4	16	ni	ni	0	0	0	0	ni	0.0%
NLD005	VIIj	2	2	4	ni	ni	0	0	0	0	ni	0.0%
NLD006	IVa	2	10	53	ni	ni	0	0	0	0	ni	0.0%
NLD006	IVb	2	10	32	ni	ni	0	0	0	0	ni	0.0%
NLD006	IVc	2	20	27	ni	ni	0	0	0	0	ni	0.0%
NLD006	VIIIb	2	4	15	ni	ni	0	0	0	0	ni	0.0%
NLD006	VIIId	2	8	47	ni	ni	0	0	0	0	ni	0.0%
NLD006	VIIe	2	10	31	ni	ni	0	0	0	0	ni	0.0%
NLD006	VIIj	2	4	8	ni	ni	0	0	0	0	ni	0.0%
NLD006	VIa	2	4	4	ni	ni	0	0	0	0	ni	0.0%

\*Note 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. On the other hand if a vessel did not fish at all, this day is not counted. Thus the sum of all days at sea is not necessarily the same as the total fishing days at sea.

Table 4. Netherlands: bycatch rate of cetaceans, fleet segment and target species

Fleet segment	Cetacean species	Bycatch rate (specimens/day)	Total bycatch estimate	CV percent
NLD003	-	0	0	0.046
NLD004	-	0	0	0.046
NLD005	-	not observed	not observed	
NLD006	-	not observed	not observed	



## Annex

Bycatch rates In Dutch pelagic fishery between 1 January and 31 March in 1993-1996 and between 1 December and 31 March in the seasons 2004/2005, to 2007/2008 in ICES area's VI, VII and VIII. Data from the period 1993-1996 are from 6 observer trips reported in Couperus (1994; 1995 and 1997). Dolphin species involved were Atlantic white-sided dolphin (*Lagenorhynchus acutus*; n=7), short beaked common dolphin (*Delphinus delphis*; n=6) and long-finned pilotwhale (*Globicephala melas*; n=1).

	hauls	days*	Incidents	dolphins	inc/ haul	dolphins/ haul	inc/day	dolphins/day
1993	75	25	0	0	0.00	0.00	0.00	0.00
1994	105	48	5	6	0.05	0.06	0.10	0.13
1995	37	13	1	3	0.03	0.08	0.08	0.23
1996	47	26	4	5	0.09	0.11	0.15	0.19
04/05	143	63	2	3	0.01	0.02	0.03	0.05
05/06	135	66	1	1	0.01	0.01	0.02	0.02
06/07	76	43	0	0	0.00	0.00	0.00	0.00
07/08	137	110	0	0	0.00	0.00	0.00	0.00
08/09	186	110	0	0	0.00	0.00	0.00	0.00

\*The number of days presented here are the actual number of days at sea (these include real fishing days, but also drifting/processing of the catch and searching), unlike the numbers presented in table 3 of the main text in which only real fishing days at sea are presented.