

Annual report on the implementation of Council Regulation (EC) No 812/2004 – (2012)

Member State: Ireland

Reference Period: 1st January to 31st December 2012

Date: 1st June 2013

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Acknowledgements: Thanks to the following contributors:

- Effort data - Susan Coughlan, SFPA
- Observer data - Ciaran O'Donnell and Macdara O'Cuaig, MI – John Boyd, GMIT

Summary

A total of 79 trips comprising 276 days at sea and 398 hauls were observed across a range of fisheries in 2012. Some 171 and 64 days were carried out on board pelagic trawlers as part of DCF work and dedicated independent observer programmes for bycatch of protected species respectively. A further 41 days were carried out as part of a study examining interactions between seals and set net fisheries. No bycatch was observed in pelagic trawl fisheries. Apart from 4 common dolphins observed as bycatch by a midwater trawler engaged in research in 2006, no cetacean bycatch incidences have occurred from a total of 984 days at sea observed since monitoring under EC 812/2004 commenced in 2005. Of these 984 days a total of 219 days were carried out as part of dedicated independent observer programmes for bycatch of protected species conducted from 2010 to 2012 with no cetacean bycatch observed. Results to date suggest that the risk of bycatch and other protected species in Irish pelagic trawl fisheries is very low.

A total of 122 days at sea have been observed in gillnet, tangle net and trammel net fisheries in 2011 and 2012 as part of a study examining interactions between seals and Irish set net fisheries. One harbour porpoise was observed as bycatch in 2012 with bycatch of seals more common in specific set net fisheries as outlined below.

ACOUSTIC DETERRENT DEVICES

1. General Information

No administrative measures were taken in relation to gillnet pingers in 2012. Dolphin Disuasive Devices (DDD) which have worked well in reducing bycatch in the UK pair pelagic trawl fishery for bass have been provided to 12 vessels involved in the Irish pair pelagic trawl fishery for albacore tuna. A total of 163 observed days at sea, including 64 independent observer days, have been carried out in this fishery since 2005 with no cetacean bycatch observed. DDDs are easy to deploy and can further reduce the likelihood of any bycatch occurring if fishermen feel there is a risk of this type of event occurring.

2. Acoustic Deterrent Devices (Article 2 and 3)

2.1 Mitigation measures

Four pinger models, Airmar, Aquamark 100, Fumunda and Savewave, have previously been tested in Irish fisheries. Vessels previously involved in pinger testing trials remained in possession of the devices at the end of the trial but it is not known if these vessels continue to use the devices.

3. Monitoring and assessment

3.1 Monitoring and assessment of the effects of pinger use (Article 2.4)

Extensive research on the practicalities and spacing of gillnet pingers has previously been carried out by BIM in Ireland and has been reported in previous reports under 812/2004 and at WGBYC. BIM have also been heavily involved in the development and testing of pelagic trawl pingers as also reported previously.

3.3. Derogation

Based on pinger spacing research carried out by Ireland and Denmark, a temporary derogation under Article 3(2) of Regulation 812/2004 allowed for an increase in maximum spacing between pingers to 500m for digital devices from 13 June 2007 for a period of two years. This derogation has not yet been renewed.

3.4 Overall assessment

ADDs can reduce harbour porpoise bycatch in set net fisheries. Numerous trials have shown that pingers of several types can reduce porpoise bycatch by around 90%. ADDs are, however, expensive, where many are required (e.g. for set net fisheries), require periodic maintenance to check and replace batteries and can interfere with net setting and hauling. A combination of these factors has meant uptake by fishermen has remained sporadic despite regulation. There is still ambivalence towards ADDs from NGOs due to perceived habitat exclusion and environmental

noise effects. The seriousness of these effects is unproven. Habituation has also been cited as a reason that ADDs don't work although again there is no evidence that this is an issue. DDD devices have good potential to work in pelagic trawl fisheries where incidental bycatch of common dolphins may occur.

OBSERVER SCHEMES

4. General information on implementation of Articles 4 and 5

Four fleets/metiers >15m in size were identified as requiring observer coverage in relation to Articles 4 and 5 of 812/2004. These metiers are defined according to Appendix IV of Commission Decision 2008/949/EC as:

Metier Code	Level 4	Level 5
1.	Set gillnets (GNS)>15	Demersal fish
2.	Midwater otter trawl (OTM)	Small pelagic fish
3.	Midwater pair trawl (PTM)	Small pelagic fish
4	Midwater pair trawl (PTM)	Large pelagic fish

An additional metier consisting of set gillnet vessels <15m in size was sampled in 2012 linking in with the requirement to carry out pilot observer schemes on smaller vessels under EC 812/2004. This metier was defined as:

Metier Code	Level 4	Level 5
5.	Set gillnets (GNS) <15	Demersal fish

- Under 15m vessels

Pelagic trawling effort by vessels under 15m increased in 2012. A total of 440 days at sea were carried out on pelagic trawlers < 15m corresponding to 11% of total pelagic trawl effort. Three days observer coverage were carried out on pelagic trawling vessels under 15m in 2012 with no cetacean bycatch recorded.

Eight days at seas were carried out on gillnet vessels <15m in 2012 as part of a study examining interactions between fisheries and seals.

Provide information on:

- Legislative or administrative measures following provisions of Art.4 or 5.

Independent observer programmes dedicated to provisions under 812/2004 initiated in 2010 continued during 2012. In addition to a study commissioned by BIM and carried out by GMIT, an additional independent observer study in the Celtic Sea herring fishery was commissioned by the Irish South and West Fishermen's Producers Organisation ISWFPO and carried out by the Irish Whale and Dolphin Group.

The objectives of the BIM programme in 2012 were to carry out observer coverage on Irish vessels in the following fisheries in a representative manner:

- 10% coverage of the pelagic trawl fisheries (single and pair) >15m for Mackerel, Herring, Horse Mackerel, Blue whiting and other relevant species (small pelagic) covering at least 3 vessels during the pilot period specified in 812/2004 of December to March.

A total of 90 days at sea observer coverage were achieved from August 2011 to March 2012 across the fisheries outlined above with zero cetacean bycatch reported as part of the BIM study. A further 26 days were carried out by the ISWFPO.

- Difficulties implementing articles 4 and 5 of 812/2004

Pelagic trawl monitoring during the independent observer programme in accordance with the EC regulation 812/2004 resulted in zero cetacean bycatch being observed. Based on this result, it is impossible to design a sampling strategy aimed at achieving a co-efficient of variation no higher than 0.30 for the most frequently caught species. Ireland will therefore continue to implement pilot monitoring schemes in accordance with Annex III of 812/2004.

- Nature of onboard observations

Onboard observations were also carried out as part of discard and stock surveys carried out under the Data Collection Framework (DCF) by the Marine institute, technical trials carried out by BIM and provision of data on tuna fishing under DCF and ICCAT requirements.

5. Monitoring

5.1 Description of fishing effort and observer effort in towed gear

Metier	Fishing Area (Ices Division)	Season	Trips EF	Days at sea EF	No of hauls EF	Trips Ob	Days at sea Ob	No of hauls Ob
2	Ila	1-3	7	17	20			
2	IVa	10-12	23	109	69			
2	VIa	10-12	59	263	245	1	5	4
2	VIa	10-12	0	0	1		5	11
2	VIa	1-3	33	146	142	2	14	13
2	VIa	4-6	1	36	4	1	12	22
2	VIb	1-3	2	7	9	1	2	2
2	VIIa	10-12	1	3	2			
2	VIIb	10-12	9	38	34			
2	VIIb	1-3	22	103	83	1	3	3
2	VIIb	7-9		5	10		5	10
2	VIIc	10-12	4	22	14			
2	VIIc	1-3	4	16	7			
2	VIIc	7-9	1	4	4	1	4	4
2	VIIg	10-12	18	35	31		8	13
2	VIIg	1-3	3	19	3			
2	VIIg	7-9	4	13	6			
2	VIIh	10-12	2	24	22			
2	VIIh	1-3	1	15	12			
2	VIIh	7-9	4	42	29		1	2
2	VIIIa	10-12	4	29	4			
2	VIIj	10-12	11	59	36	1	2	3
2	VIIj	1-3	25	159	104			
2	VIIj	7-9	0	0	5		9	17
2	VIIIk	7-9	0	0	2			
3	Ila	1-3	5	16	10			
3	IVa	10-12	25	114	40	5	20	12
3	VIa	10-12	71	258	145	3	13	13
3	VIa	1-3	49	192	90	6	17	14
3	VIa	7-9	6	16	13			
3	VIb	1-3	0.5	1.5	2	1	3	3
3	VIIa	10-12	16	28	28	5	10	10
3	VIIb	10-12	16	52	79	1	2	3
3	VIIb	1-3	53	223	102	2	8	6
3	VIIb	7-9	0.5	1	5.5			
3	VIIc	1-3	1	3.5	2.5			
3	VIIc	7-9	0	0	4			
3	VIIg	10-12	103	250	213	12	30	17
3	VIIg	1-3	1	2	1			
3	VIIg	7-9	13	35	18.5	1	2	2
3	VIIh	10-12	3	27.5	8.5	2	8	6

3	VIIh	7-9	0	0	2			
3	VIIIa	7-9	0.5	9	1			
3	VIIj	10-12	30	84	48			
3	VIIj	1-3	74	268	158	5	26	23
3	VIIj	7-9	2	65	199	1	7	3
3	VIIk	10-12	6	14	12			
3	VIIk	7-9	2	8	81			
4	VIa	7-9	0	0	0.5			
4	VIIa	7-9	1	8	2.5			
4	VIIc	7-9	0.5	5	0.5			
4	VIIg	7-9	1	6.5	1.5			
4	VIIIe	7-9	3	29	5			
4	VIIj	7-9	42	335	134			
4	VIIk	7-9	26	262	309	1	8	3

5.2 Description of fishing effort and observer effort in static gear

Metier	Fishing Area (Ices Division)	Season	Trips EF	Days at sea EF	No of hauls EF	Trips Ob	Days at sea Ob	No of hauls Ob
1	VIIa	1-3	0	0				
1	VIIa	4-6	0	0				
1	VIIa	7-9	0	0				
1	VIIb	10-12	17	39				
1	VIIb	1-3	21	21		9	9	43
1	VIIb	4-6	68	140		6	8	43
1	VIIb	7-9	42	75		3	3	17
1	VIIc	4-6	1	9				
1	VIIg	10-12	15	72				
1	VIIg	1-3	22	110				
1	VIIg	4-6	30	170		1	5	16
1	VIIg	7-9	31	175				
1	VIIh	10-12	1	9				
1	VIIj	10-12	38	170				
1	VIIj	1-3	35	179		1	6	19
1	VIIj	4-6	13	69		1	2	7
1	VIIj	7-9	20	101				
5	VIIa	7-9	1	1				
5	VIIa	10-12	11	11				
5	VIIa	1-3	42	52				
5	VIIa	4-6	6	9				
5	VIIa	7-9	1	1				
5	VIIb	10-12	7	14				
5	VIIb	1-3	36	47		2	7	21
5	VIIb	4-6	34	34				
5	VIIb	7-9	37	39				
5	VIIg	10-12	123	160				
5	VIIg	1-3	288	429				
5	VIIg	4-6	129	168				
5	VIIg	7-9	72	86				
5	VIIj	10-12	16	30				
5	VIIj	1-3	73	100		1	1	2
5	VIIj	4-6	53	99				
5	VIIj	7-9	90	120				

6. Estimation of incidental catches

6.1 Incidental catch rates by fleet segment and target species

Metier	Fishing Area	Season	Species	No of specimens without pingers	Mesh Size	Target Species
5	VIIb	1-3	Common Guillemot	4	120	Pollack
5	VIIb	1-3	Common skate	2	120	Pollack
5	VIIb	1-3	Porbeagle	1	120	Pollack
5	VIIb	1-3	Spurdog	76	120	Pollack
5	VIIb	1-3	Tope/Smooth hound	40	120	Pollack
5	VIIj	1-3				
1	VIIb	1-3	Common Guillemot	1	320	Crawfish
1	VIIb	1-3	Common seal	1	320	Crawfish
1	VIIb	1-3	Common skate	1	320	Crawfish
1	VIIb	1-3	Grey Seal	6	320	Crawfish
1	VIIb	4-6	Common skate	14	320	Crawfish
1	VIIb	4-6	Grey Seal	2	320	Crawfish
1	VIIb	4-6	Grey Seal	19	320	Crawfish
1	VIIb	4-6	Harbour porpoise	1	320	Crawfish
1	VIIb	7-9				
1	VIIg	4-6				
1	VIIj	1-3				
1	VIIj	4-6				
2	VIIa	10-12				
2	VIIa	10-12				
2	VIIa	10-12				
2	VIIa	1-3				
2	VIIa	4-6				
2	VIIb	1-3				
2	VIIb	1-3				
2	VIIb	7-9				
2	VIIc	7-9				
2	VIIg	10-12				
2	VIIh	7-9				
2	VIIj	10-12				
2	VIIj	7-9				
4	VIIk	7-9				
3	IVa	10-12				
3	VIIa	10-12				
3	VIIa	1-3				
3	VIIb	1-3				
3	VIIa	10-12				
3	VIIb	10-12				
3	VIIb	1-3				
3	VIIg	10-12	blue shark	5		
3	VIIg	7-9				
3	VIIh	10-12				
3	VIIj	1-3				
3	VIIj	7-9				

8. Conclusions

A total of 79 trips comprising 276 days at sea and 398 hauls were observed across a range of fisheries in 2012. Some 171 and 64 days were carried out on board pelagic trawlers as part of DCF work and dedicated independent observer programmes for bycatch of protected species respectively. A further 41 days were carried out as part of a study examining interactions between seals and set net fisheries. No bycatch was observed in pelagic trawl fisheries. Apart from 4 common dolphins observed as bycatch by a midwater trawler engaged in research in 2006, no cetacean bycatch incidences have occurred from a total of 984 days at sea observed since monitoring under EC 812/2004 commenced in 2005. Of these 984 days a total of 219 days were carried out as part of dedicated independent observer programmes for bycatch of protected species conducted from 2010 to 2012 with no cetacean bycatch observed. Results to date suggest that the risk of bycatch and other protected species in Irish pelagic trawl fisheries is very low.

A total of 122 days at sea have been observed in gillnet, tangle net and trammel net fisheries in 2011 and 2012 as part of a study examining interactions between seals and Irish set net fisheries. One harbour porpoise was observed as bycatch in 2012 with bycatch of seals more common in specific fisheries as outlined in Table 6.1. A full report on this work will be produced in due course.

Data on bycatch presented in Table 6.1 includes information on mesh size and target species as well as information on bycatch of all relevant species in line with requests by WGBYC. Total bycatch estimates for defined strata were provided for pelagic trawl fisheries but it was not possible to provide total bycatch estimates in relation to set net operations as Fleet effort data were not reliably available by gear type eg. gillnet, tanglenet etc. Observer data collected to date show major differences in the properties of bycatch associated with these different gear types. This issue will be addressed as part of the seal study and also as part of a drive to develop responsible and sustainable fisheries in Ireland going forward.

9. Annexe

Table 9.1 Summary of Irish Fishing Effort and Observer Coverage in relation to requirements under 812/2004

Metier Code	Level 4	Level 5
1	Set gillnets (GNS) >15	Demersal fish
2	Midwater otter trawl (OTM)	Small pelagic fish
3	Midwater pair trawl (PTM)	Small pelagic fish
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Year	Total Effort (Days at Sea)			
	Metier			
	1	2	3	4
2005	1870	826	1211	118
2006	1537	483	1157	75
2007	1772	533	1201	103
2008	1603	574	1146	218
2009	1474	861	1144	365
2010	1454	1267	1359	305
2011	1268	835	1297	237
2012	1339	1169	1604	645

Year	Observed Effort (Days at Sea)			
	Metier			
	1	2	3	4
2005	63	8	12	14
2006	45	40		11
2007	10	24	14	7
2008		43	17	
2009		48	31	5
2010		52	45	59
2011	71	60	165	48
2012	33	74	146	15

Year	Annual Observer Coverage (%)			
	Metier			
	1	2	3	4
2005	3.37	0.97	0.99	11.91
2006	2.93	8.28	0.00	14.77
2007	0.56	4.50	1.17	6.80
2008		7.49	1.48	
2009		5.57	2.71	1.37
2010		4.10	3.31	19.34
2011	5.60	7.19	12.72	20.30
2012	2.46	6.33	9.10	2.33