

Extracting info on Measures for marine birds from the Birds Directive Article 12 Reports (2019)

Background on the available data

Under the 2019 reporting requirements for Article 12 of the Birds Directive, member states were required to submit 'Annex B - Bird species' status and trends report'.

Species included

Annex B contains information on all 'regularly occurring' breeding species (and sometimes on subspecies or distinct populations), plus some important migratory/wintering species, with separate information for breeding, wintering and passage populations. Information is only provided for winter and passage populations for a specified subset of species.

Information on the main 'conservation measures' is required for all species listed on Annex I, and any other migratory species triggering SPA designations. Member States are also encouraged to provide this information for Annex II species and, if available, also for remaining species.

The Birds Directive has adopted the HBW/BirdLife International taxonomic checklist (N.B. this differs from species lists currently used in OSPAR marine birds common indicators).

Geographic scope

Since the Birds Directive is an EU Directive, data is only available for EU states (plus UK), and not for OSPAR Member States that are not EU members (Iceland, Norway, Switzerland).

Reported Measures are not divided by terrestrial vs marine (although some will clearly only apply to one or the other).

The scope of the Birds Directive applies beyond territorial seas (and includes EEZ?).

Classification of measures

The list of conservation measures mirrors the list of pressures and threats, and the conservation measures are principally understood as an action to mitigate the impact of past and present pressures. The measures are classified into 13 categories corresponding to the main pressure categories, with the addition of categories for measures related to management of target and other native species.

A list of measures, with corresponding pressures addressed, is available at http://cdr.eionet.europa.eu/help/birds_art12/Reporting%202019/Conservation_measures_Final_20180507.xls.

Information reported on measures

For *each species*, Member States report on:

- Whether or not measures are needed
- Whether (the majority of) measures have been identified, and/or taken.
- The *main* purpose of measures taken, of the following:
 - maintain the current distribution, population and/or habitat for the species;
 - expand the current distribution of the species;

- increase the population size and/or improve population dynamics (improve reproduction success, reduce mortality, improve age/sex structure);
- restore the habitat of the species.
- Whether the (majority of the) measures took place inside Natura 2000, inside and outside Natura 2000, or only outside Natura 2000.
- The timeframe during which a response to the measures is expected to occur (short-term / medium-term / long-term).
- A list of the main conservation measures (a maximum of ten).
- The HBW/BirdLife International taxonomic checklist is used.

Data availability

A csv file containing all Contracting Parties' 2019 Article 12 reports can be downloaded at:

<https://www.eea.europa.eu/data-and-maps/data/article-12-database-birds-directive-2009-147-ec-1>

HTML and XML versions of individual contracting parties' reports can be accessed via the Central Data Repository: <https://cdr.eionet.europa.eu/>

Data extraction

A csv file containing all Contracting Parties' 2019 Article 12 reports was downloaded from:

<https://www.eea.europa.eu/data-and-maps/data/article-12-database-birds-directive-2009-147-ec-1>

Only reports from Member States with territorial waters within the OSPAR area were included in the analysis: Belgium, Denmark, France, Germany, Ireland, The Netherlands, Portugal (including the Azores), Spain, Sweden, United Kingdom (including Gibraltar). The Azores and Gibraltar were treated as separate countries because their seas lie within different OSPAR regions from those of Portugal and the UK. Reports from other countries were excluded as it was assumed that reported pressures related only to birds using terrestrial habitats or marine areas outside the OSPAR area.

Only reports for species included in the B1 Common Indicator assessment were included in the analysis. Species were allocated to Species Groups according to this list. Four species (Black Tern, Pochard, Slavonian Grebe, Smew) were excluded from the dataset because information from ICES indicated that they do not occur within the OSPAR region on a Regular or Common basis (N.B. this information source did not include waders or wildfowl except seaducks, so no species from these groups could be eliminated using this information source).

Measure reports were excluded when they were reported as occurring within the member state, *and* the species was known *not* to be regular or common in all OSPAR regions intersecting the reporting country's territory (based on the same source from ICES and according to Table 1).

OSPAR Region	Countries
I	N/A
II	Belgium, Denmark, France, Germany, Sweden, The Netherlands, United Kingdom
III	France, Ireland, United Kingdom
IV	France, Portugal, Spain, United Kingdom (Gibraltar)
V	Portugal (Azores)

Table 1: Countries by OSPAR Region. Some minor intersections of EEZs are ignored (e.g. The EEZ of France also intersects Region V).

Measures across all OSPAR Member States

To summarise reported measures for species across all countries, measure reports were counted once per country, species and measure (i.e. season was ignored).

The ten most frequently recorded measures for species were as follows:

Ranking	Measure description	Count of reports
1	Reduce impact of outdoor sports, leisure and recreational activities	127
2	Improvement of habitat of species from the directives	83
3	Management of hunting, recreational fishing and recreational or commercial harvesting or collection of plants	72
4	Manage conversion of land for construction and development of infrastructure	68
5	Restore habitats impacted by multi-purpose hydrological changes	64
6	Management of habitats (others than agriculture and forest) to slow, stop or reverse natural processes	63
7	Manage drainage and irrigation operations and infrastructures in agriculture	62
=8	Management of problematic native species	51
=8	Management, control or eradication of other invasive alien species	51
10	Maintain existing extensive agricultural practices and agricultural landscape features	44

Table 2: The ten measures that were most frequently recorded for B1 Indicator Species by littoral OSPAR Member States in 2019 Article 12 reports for the Birds Directive. Measures were counted once per species and per country.

Measures by Species Group

To summarise reported measures for each species group across all countries, measure reports were counted once per country, species and pressure (i.e. season was ignored). Species were assigned to species groups according to the B1 Indicator species list (as mentioned above).

The five most frequently recorded measures for each species group were as follows:

Functional Group	Ranking	Measure description	Count of reports
Benthic Feeder	1	Management of hunting, recreational fishing and recreational or commercial harvesting or collection of plants	10
	2	Reduce impact of outdoor sports, leisure and recreational activities	7
	3	Restore habitats impacted by multi-purpose hydrological changes	6
	4	Manage conversion of land for construction and development of infrastructure	5
	=5	Habitat restoration of areas impacted by residential, commercial, industrial and recreational infrastructure, operations and activities	4
	=5	Improvement of habitat of species from the directives	4
	=5	Management of professional/commercial fishing (including shellfish and seaweed harvesting)	4
Grazing Feeder	1	Manage drainage and irrigation operations and infrastructures in agriculture	17
	2	Management of hunting, recreational fishing and recreational or commercial harvesting or collection of plants	16
	3	Reduce impact of outdoor sports, leisure and recreational activities	15
	4	Adapt mowing, grazing and other equivalent agricultural activities	13

	=5	Improvement of habitat of species from the directives	9
	=5	Restore habitats impacted by multi-purpose hydrological changes	9
Surface Feeder	1	Reduce impact of outdoor sports, leisure and recreational activities	33
	2	Management, control or eradication of other invasive alien species	30
	3	Improvement of habitat of species from the directives	24
	4	Management of problematic native species	23
	5	Manage conversion of land for construction and development of infrastructure	18
Wading Feeder	1	Reduce impact of outdoor sports, leisure and recreational activities	63
	2	Management of habitats (others than agriculture and forest) to slow, stop or reverse natural processes	45
	3	Improvement of habitat of species from the directives	41
	4	Manage drainage and irrigation operations and infrastructures in agriculture	37
	5	Restore habitats impacted by multi-purpose hydrological changes	36
Water Column Feeder	1	Reduce bycatch and incidental killing of non-target species	15
	2	Manage conversion of land for construction and development of infrastructure	11
	3	Management of hunting, recreational fishing and recreational or commercial harvesting or collection of plants	10
	4	Reduce impact of outdoor sports, leisure and recreational activities	9
	=5	Adapt/manage renewable energy installation, facilities and operation	8
	=5	Management of professional/commercial fishing (including shellfish and seaweed harvesting)	8

Table 3: The five measures that were most frequently recorded (including ties) for B1 indicator species in each species group by littoral OSPAR Member States in 2019 Article 12 reports for the Birds Directive. Measures were counted once per species and per country.

Measures by OSPAR region

To summarise reported measures for each OSPAR region, measure reports were counted once per country, species and measure (i.e. season was ignored).

Measures were allocated to OSPAR region according to country, as per Table 1. It was assumed that measures reported as acting within each member state were located within OSPAR regions according to Table 5, but this may not always have been the case, as member states' EEZs often overlapped other OSPAR Regions. Where member states cross more than one OSPAR region (see Table 5), the measures were attributed to all relevant OSPAR regions (i.e. they were counted more than once).

Measure reports were excluded from the counts for each OSPAR region when the information received from ICES (as mentioned above) indicated that the species was rare or vagrant in that OSPAR region. It was not possible to filter only on species listed as common or regular within each region because the ICES information only included a subset of the species of interest.

The ten most frequently recorded measures in each OSPAR region were as follows:

OSPAR Region	Ranking (within Region)	Measure description	Count of reports
2	1	Reduce impact of outdoor sports, leisure and recreational activities	93
	2	Manage conversion of land for construction and development of infrastructure	65
	3	Management of hunting, recreational fishing and recreational or commercial harvesting or collection of plants	62

	4	Restore habitats impacted by multi-purpose hydrological changes	59
	5	Manage drainage and irrigation operations and infrastructures in agriculture	56
	6	Management of habitats (others than agriculture and forest) to slow, stop or reverse natural processes	44
	7	Maintain existing extensive agricultural practices and agricultural landscape features	36
	8	Adapt mowing, grazing and other equivalent agricultural activities	32
	=9	Management of professional/commercial fishing (including shellfish and seaweed harvesting)	28
	=9	Management, control or eradication of other invasive alien species	28
3	1	Reduce impact of outdoor sports, leisure and recreational activities	62
	2	Manage conversion of land for construction and development of infrastructure	59
	3	Management of hunting, recreational fishing and recreational or commercial harvesting or collection of plants	29
	=4	Adapt mowing, grazing and other equivalent agricultural activities	23
	=4	Manage drainage and irrigation operations and infrastructures in agriculture	23
	=6	Manage changes in hydrological and coastal systems and regimes for construction and development	22
	=6	Restore habitats impacted by multi-purpose hydrological changes	22
	=8	Management of problematic native species	21
	=9	Management, control or eradication of other invasive alien species	21
	10	Reduce/eliminate noise, light, heat or other forms pollution from industrial, commercial, residential and recreational areas and activities	19
4	1	Reduce impact of outdoor sports, leisure and recreational activities	57
	2	Improvement of habitat of species from the directives	56
	3	Management of hunting, recreational fishing and recreational or commercial harvesting or collection of plants	32
	4	Reduce impact of mixed source pollution	31
	5	Management of professional/commercial fishing (including shellfish and seaweed harvesting)	28
	6	Management of habitats (others than agriculture and forest) to slow, stop or reverse natural processes	23
	7	Habitat restoration of areas impacted by residential, commercial, industrial and recreational infrastructure, operations and activities	22
	8	Management of problematic native species	21
	9	Manage changes in coastal conditions for marine aquaculture	19
	10	Prevent conversion of natural and semi-natural habitats, and habitats of species into agricultural land	18
5	1	Management, control or eradication of other invasive alien species	5
	=2	Adopt climate change mitigation measures	4
	=2	Improvement of habitat of species from the directives	4
	=2	Management of problematic native species	4
	=2	Reduce/eliminate marine contamination with litter	4
	=6	Manage changes in hydrological and coastal systems and regimes for construction and development	3
	=6	Other measures related to natural processes	3
	=6	Reduce impact of outdoor sports, leisure and recreational activities	3
	9	Reduce/eliminate noise, light, heat or other forms pollution from industrial, commercial, residential and recreational areas and activities	2

Table 4: The ten most frequently recorded measures for B1 Indicator Species by littoral OSPAR Member States in each OSPAR region in 2019 Article 12 reports for the Birds Directive. Measures were counted once

per species and per country. Only nine measures were included in the dataset (following filtering) for Region 5.

Measures by OSPAR region and Species Group

Using the specifications described in the previous two sections, reports were divided by OSPAR region, then grouped by species group. The five most frequently reported measures for each combination of species group and OSPAR region were as follows:

OSPAR region	Functional group	Ranking (within region and species group)	Measure description	Count of reports
2	Benthic Feeder	1	Management of hunting, recreational fishing and recreational or commercial harvesting or collection of plants	9
		=2	Reduce impact of outdoor sports, leisure and recreational activities	6
		=2	Restore habitats impacted by multi-purpose hydrological changes	6
		4	Manage conversion of land for construction and development of infrastructure	5
		5	Management of professional/commercial fishing (including shellfish and seaweed harvesting)	3
	Grazing Feeder	1	Manage drainage and irrigation operations and infrastructures in agriculture	16
		=2	Management of hunting, recreational fishing and recreational or commercial harvesting or collection of plants	14
		=2	Reduce impact of outdoor sports, leisure and recreational activities	14
		=4	Adapt mowing, grazing and other equivalent agricultural activities	8
		=4	Maintain existing extensive agricultural practices and agricultural landscape features	8
		=4	Manage conversion of land for construction and development of infrastructure	8
		=4	Restore habitats impacted by multi-purpose hydrological changes	8
	Surface Feeder	1	Reduce impact of outdoor sports, leisure and recreational activities	23
		2	Manage conversion of land for construction and development of infrastructure	16
		3	Management, control or eradication of other invasive alien species	15
		4	Management of hunting, recreational fishing and recreational or commercial harvesting or collection of plants	11
		5	Restore habitats impacted by multi-purpose hydrological changes	9
	Wading Feeder	1	Reduce impact of outdoor sports, leisure and recreational activities	41
		2	Manage drainage and irrigation operations and infrastructures in agriculture	34
		3	Restore habitats impacted by multi-purpose hydrological changes	33

		4	Management of habitats (others than agriculture and forest) to slow, stop or reverse natural processes	30	
		=5	Maintain existing extensive agricultural practices and agricultural landscape features	26	
		=5	Manage conversion of land for construction and development of infrastructure	26	
	Water Column Feeder	1	Manage conversion of land for construction and development of infrastructure	10	
		2	Reduce impact of outdoor sports, leisure and recreational activities	9	
		=3	Adapt/manage renewable energy installation, facilities and operation	8	
		=3	Reduce bycatch and incidental killing of non-target species	8	
		5	Management of hunting, recreational fishing and recreational or commercial harvesting or collection of plants	7	
	3	Benthic Feeder	=1	Manage conversion of land for construction and development of infrastructure	3
			=1	Reduce impact of outdoor sports, leisure and recreational activities	3
=3			Management of hunting, recreational fishing and recreational or commercial harvesting or collection of plants	2	
=3			Reduce impact of transport operation and infrastructure	2	
=5			Adapt mowing, grazing and other equivalent agricultural activities	1	
=5			Habitat restoration of areas impacted by residential, commercial, industrial and recreational infrastructure, operations and activities	1	
=5			Implement climate change adaptation measures	1	
=5			Manage changes in hydrological and coastal systems and regimes for construction and development	1	
=5			Manage drainage and irrigation operations and infrastructures in agriculture	1	
=5			Management of problematic native species	1	
=5			Management of professional/commercial fishing (including shellfish and seaweed harvesting)	1	
=5			Management, control or eradication of other invasive alien species	1	
=5			Other measures related to natural processes	1	
=5			Other measures to reduce impacts from marine aquaculture infrastructures and operation	1	
=5			Prevent conversion of natural and semi-natural habitats, and habitats of species into agricultural land	1	
=5			Reduce impact of lead poisoning	1	
=5			Restore habitats impacted by multi-purpose hydrological changes	1	
Grazing Feeder			1	Reduce impact of outdoor sports, leisure and recreational activities	11
			2	Adapt mowing, grazing and other equivalent agricultural activities	8
		=3	Manage conversion of land for construction and development of infrastructure	7	
		=3	Manage drainage and irrigation operations and infrastructures in agriculture	7	

		=5	Manage the use of natural fertilisers and chemicals in agricultural (plant and animal) production	6
		=5	Management of hunting, recreational fishing and recreational or commercial harvesting or collection of plants	6
	Surface Feeder	1	Manage conversion of land for construction and development of infrastructure	15
		2	Reduce impact of outdoor sports, leisure and recreational activities	14
		3	Management, control or eradication of other invasive alien species	10
		4	Management of problematic native species	5
		=5	Management of hunting, recreational fishing and recreational or commercial harvesting or collection of plants	4
		=5	Restore habitats impacted by multi-purpose hydrological changes	4
	Wading Feeder	1	Reduce impact of outdoor sports, leisure and recreational activities	29
		2	Manage conversion of land for construction and development of infrastructure	26
		3	Manage changes in hydrological and coastal systems and regimes for construction and development	18
		4	Management of hunting, recreational fishing and recreational or commercial harvesting or collection of plants	17
		5	Reduce/eliminate noise, light, heat or other forms pollution from industrial, commercial, residential and recreational areas and activities	16
	Water Column Feeder	1	Manage conversion of land for construction and development of infrastructure	8
		=2	Reduce bycatch and incidental killing of non-target species	5
		=2	Reduce impact of outdoor sports, leisure and recreational activities	5
		=4	Control/eradication of illegal killing, fishing and harvesting	2
		=4	Management of professional/commercial fishing (including shellfish and seaweed harvesting)	2
		=4	Management, control or eradication of other invasive alien species	2
4	Benthic Feeder	1	Habitat restoration of areas impacted by residential, commercial, industrial and recreational infrastructure, operations and activities	3
		=2	Implement climate change adaptation measures	2
		=2	Improvement of habitat of species from the directives	2
		=2	Management of hunting, recreational fishing and recreational or commercial harvesting or collection of plants	2
		=2	Reduce impact of mixed source pollution	2
		=2	Reduce impact of outdoor sports, leisure and recreational activities	2
		=2	Reduce impact of transport operation and infrastructure	2
	Grazing Feeder	=1	Management of hunting, recreational fishing and recreational or commercial harvesting or collection of plants	5

		=1	Reduce impact of outdoor sports, leisure and recreational activities	5	
		=3	Improvement of habitat of species from the directives	4	
		=3	Prevent conversion of natural and semi-natural habitats, and habitats of species into agricultural land	4	
		=5	Management of habitats (others than agriculture and forest) to slow, stop or reverse natural processes	2	
		=5	Reduce impact of lead poisoning	2	
		=5	Reduce impact of mixed source pollution	2	
	Surface Feeder	1	Improvement of habitat of species from the directives	16	
		=2	Management of professional/commercial fishing (including shellfish and seaweed harvesting)	12	
		=2	Reduce impact of mixed source pollution	12	
		4	Management of problematic native species	11	
		5	Reduce impact of outdoor sports, leisure and recreational activities	10	
	Wading Feeder	1	Reduce impact of outdoor sports, leisure and recreational activities	38	
		2	Improvement of habitat of species from the directives	29	
		3	Management of habitats (others than agriculture and forest) to slow, stop or reverse natural processes	18	
		=4	Manage changes in coastal conditions for marine aquaculture	17	
		=4	Management of hunting, recreational fishing and recreational or commercial harvesting or collection of plants	17	
	Water Column Feeder	1	Management of professional/commercial fishing (including shellfish and seaweed harvesting)	6	
		=2	Improvement of habitat of species from the directives	5	
		=2	Reduce impact of mixed source pollution	5	
		=4	Habitat restoration of areas impacted by residential, commercial, industrial and recreational infrastructure, operations and activities	3	
		=4	Management of hunting, recreational fishing and recreational or commercial harvesting or collection of plants	3	
		=4	Reduce bycatch and incidental killing of non-target species	3	
		=4	Reduce impact of multi-purpose hydrological changes	3	
		=4	Reduce impact of transport operation and infrastructure	3	
		=4	Support conservation measures in another EU Member State	3	
	5	Surface Feeder	=1	Adopt climate change mitigation measures	4
			=1	Improvement of habitat of species from the directives	4
			=1	Management of problematic native species	4
			=1	Management, control or eradication of other invasive alien species	4
			=1	Reduce/eliminate marine contamination with litter	4
		Wading Feeder	=1	Manage changes in hydrological and coastal systems and regimes for construction and development	1
			=1	Management, control or eradication of other invasive alien species	1
			=1	Reduce impact of outdoor sports, leisure and recreational activities	1

Table 5: The five measures that were most frequently recorded for B1 indicator species in each OSPAR region and for each species group by littoral OSPAR Member States in 2019 Article 12 reports for the Birds Directive. Measures were counted once per species and per country. Ties are included. Few measures were reported within Region 5, so it was not possible to list five measures for each species group within this region.