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XI. Red List of Birds of the Wadden Sea Area*

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INTRODUCTION

The Wadden Sea area has a high biological productivity and is very important for large numbers of birds of many species. The high numbers of benthic organisms in the mudflats (especially crustaceans, worms, mussels and snails) are used by large numbers of waders and gulls for food. Terns and gulls feed on fish and crustaceans as well as on discard of fisheries. Ducks and geese graze on salt marsh vegetation and eelgrass.

In addition the habitats above the mean-high-tide water line, such as salt marshes, beaches, and dunes, are breeding areas for numerous bird species. About 350000 – 400000 pairs of birds breed in the entire Wadden Sea. Waders, such as Oystercatcher (*Haematopus ostralegus*), Common Redshank (*Tringa totanus*) and Northern Lapwing (*Vanellus vanellus*) breed more or less evenly distributed over the whole area, whereas gulls (Laridae), terns (Sternidae) and Avocets (*Recurvirostra avosetta*) are mainly concentrated in breeding colonies.

The Wadden Sea is of international importance as a major stop-over site for migrating birds using the East-Atlantic Flyway. Substantial parts of the biogeographical populations of numerous species of waders, geese, ducks and passerines pass through the Wadden Sea on migration and significant numbers spend the winter there. After accumulating fat reserves, they continue their migration between the arctic and neartic breeding sites in Siberia and Canada/Greenland to the wintering areas along the coasts of West Europe and down to South Africa. Some species also winter in high numbers in the Wadden Sea or spend the summer there. The Wadden Sea is of significant importance for the populations of Common Shelduck (*Tadorna tadorna*) and Common Eider (*Somateria mollissima*) as a moulting area in late summer. During moulting, which is a highly energy-consuming process, the birds are dependent on large undisturbed areas.

* This list forms part of the Report on the RED LISTS OF BIOTOPES, FLORA AND FAUNA OF THE TRILATERAL WADDEN SEA AREA. For basic information concerning, for example, function of these lists, species taken into account, structure of the lists and abbreviations used, see also the general introduction to the Red Lists.

The Red List of Birds of the Wadden Sea Area is to be seen as a report on the present status of typical Wadden Sea species. The objective of this Red List is to serve as a tool for nature conservation in the entire Wadden Sea. The Red List focuses mainly on species that are threatened as breeding birds in the Wadden Sea. However, due to the immense importance of the area as a breeding and stop-over site, so called international responsibility categories have been included and applied to species which occur in the area in internationally important numbers as breeding or migrating birds. These categories (IRM and IRR, see under the heading: The criteria) are important to ensure that global nature conservation priorities can be taken into account in the national and regional nature conservation work. The information on the status of the species included in the Red List are also important as indications of the condition of the natural environment. Consequently, information about trends will be important in future lists.

Delimitation of the area and selection of species

The geographical scope of the trilateral cooperation – as agreed at the Trilateral Governmental Conference in Leeuwarden in 1994 – is according to § 9 of the Ministerial Declaration (CWSS 1995):

„– the area seaward of the main dike and the brackish-water limit or, where the main dike is absent, the spring-high-tide water line;
– an offshore zone 3 nautical miles from the baseline;
– the corresponding inland areas which are designated as Ramsar and/or EC Bird Directive areas;
– the islands."

It was agreed to restrict the area covered by the Red Lists to typical coastal habitats e.g. salt marshes, dunes and wet dune valleys (see also: Red List of Biotopes and Biotope Complexes of the Wadden Sea Area) and those species which can be found regularly and are typical for those habitats. Both agreements mentioned above as well as the high mobility of birds are taken into account during compilation of the Red List of Birds of the Wadden Sea Area. The area covered by the Red List of Birds in the Wadden Sea is almost identical with the area covered by the Trilateral Monitoring Programs for Breeding and Migratory Birds in the Wadden Sea.

All species of the Trilateral Monitoring Programs for Breeding and Migratory Birds in the Wadden Sea are included in the Red List of Birds. According to the offshore border of the cooperation area, species such as Red-throated Diver (*Gavia stellata*), Black-throated Diver (*Gavia arctica*) and Common Scoter (*Melanitta nigra*) have to be included in the list (Skov et al., 1995). Many bird species, which breed or roost in areas adjacent to the Wadden Sea, which are however dependent on areas in the Wadden Sea for feeding have also been included in the list. A number of passerine species which are not covered by the Trilateral Monitoring Programs have also been included in the Red List.

Many species which occur in the Wadden Sea can not be considered typical Wadden Sea species and are therefore excluded from the list; other non-breeding species do not occur in the area in significant numbers to qualify for inclusion. The main habitats of such species lie outside the Wadden Sea area in, for example, freshwater habitats in adjacent mainland marshes, or in non-natural habitats on the Wadden Sea islands.

Some Dutch and German mainland freshwater marshes, which are situated adjacent

to the Wadden Sea and which are of international importance for such migrants as swans (*Cygnus* ssp.) and Bean Goose (*Anser fabalis*), are not included in the cooperation area as defined in Leeuwarden and were, therefore, not considered during the compilation of the trilateral Red List. Although similar areas are included in the cooperation area in Denmark they were not considered during the work on the Red Lists for reasons of compatibility.In the northernmost part of the Danish Wadden Sea, where there are no dikes, the whole Ramsar and EEC Bird Directive area, which consists of salt and freshwater marshes, the brackish estuary Varde Å, and all of the peninsula Skallingen, are included, as are the clay extraction ponds adjacent to sea dikes and the Margrethe-Kog. In Schleswig-Holstein the whole Ramsar area is included e.g. all freshwater areas established in the newly reclaimed areas since the 1960s, e.g. Rantum Becken and Hauke-Haien-Koog.

Data source

Comprehensive reports on the results of monitoring of breeding birds (Fleet et al., 1994) and of migratory birds in the Wadden Sea (Meltofte et al., 1994; Rösner et al., 1994) supply the most recent overviews on the status of birds in the Wadden Sea. These reports and the national Red Lists of Birds in the different subregions of the Wadden Sea were used as the basis for the development of a trilateral Red List of Birds for the Wadden Sea area. This trilateral Red List refers to 1991 concerning breeding birds and to 1992/93 concerning migratory birds.

There is a lack of reliable information on status and trends of many bird species which can be considered as natural breeding birds of dune habitats and the sparse information available comes from The Netherlands. There is also a lack of reliable information on the population size of some passerines in the Wadden Sea, e.g. Horned Lark (*Eremophila alpestris*), Twite (*Carduelis flavirostris*) and Snow Bunting (*Plectrophenax nivalis*). Therefore, in some cases, only preliminary evaluations are given.

In future, it would be appropriate to include in the Red List of Birds an indication of the population trends for all species in the Wadden Sea and for all subareas within the region. The joint monitoring programs on birds will provide valuable information for this purpose.

Denmark: The Red List for the birds of Denmark (Asbirk & Sogaard, 1991) was taken as the starting point for the development of a Red List for the Danish Wadden Sea area. The Danish coastal area outside the Wadden Sea is extensive, and some species that are on the national Danish Red List are not included in the Red List for the Danish subarea. One example is the Mute Swan (*Cygnus olor*) which has the category IRM (IRM: international responsibility for a non-breeding species) on the Danish Red List, because more than 20 % of the NW European population winters in Denmark. Since the Mute Swan (*Cygnus olor*) only occurs in small numbers in the Wadden Sea, it is not included in the list for the Danish subarea.

Germany: The comprehensive surveys on breeding and migratory birds in the German Wadden Sea, which have been carried out for many years and which are now included in the Trilateral Monitoring Programs for breeding and migratory birds in the Wadden Sea, form the basis of the „Rote Liste der Brutvogelarten des deutschen Wattenmeer- und Nordseebereichs" (Hälterlein et al.,1995), of the regional lists (Knief et al., 1990; Heckenroth, 1995) as well as of the trilateral Red List.

The Netherlands: The recent Red List for the birds of The Netherlands (Osieck & Hustings, 1994) was taken as the starting point for the development of a Red List for the Dutch Wadden Sea area. In addition, the study by Smit (1982) on the breeding birds of the Wadden Sea area was used. Smit's study includes information from the Atlas of the Breeding Birds of The Netherlands (Teixeira, 1979).

The criteria

Categories with respect to the status of threat

In accordance with the trilaterally agreed system (see general introduction as well as legend below the list), the status of threat is indicated for each Wadden Sea subregion (NL, Nds, SH, DK) and for the entire Wadden Sea as far as information is available. These categories are only applied to species breeding in the area. Additional symbols are defined in the legend of the list. No entry in these rows does not mean that the species does not occur in this subregion, but that it is not endangered in all subregions. In producing the trilateral categories for breeding bird species, the population developments as well as the population sizes of the different subregions were considered.

International Responsibility: IRM and IRR

The Wadden Sea is of utmost importance for the well-being of many bird species because a large part of the latter uses the area as a breeding, moulting or staging site at some time in their annual life cycle. Although these species are often not threatened at present, it was decided to include them in the list, using the categories: international responsibility for migratory bird species (IRM) and international responsibility for resident bird species (IRR). The IRM category has been given to species which fulfil the criterion of the Ramsar Convention, i.e. that at least 1% of the biogeographical population occurs in the Wadden Sea area during some part of the year. The IRR category has been applied to breeding bird species where at least 5% of the north-west-European breeding population occurs in the Wadden Sea. The population sizes used for the calculation of the two categories were taken from Meltofte et al. (1994), Rösner et al. (1994), Fleet et al. (1994) and Rose & Scott (1994); see also Figs 1 and 2. No entry in these rows does not mean that the species does not occur in internationally important numbers in any of the subregions.

Categories with respect to the status of threat factors

Threat factors are included in the list in accordance to the trilaterally agreed system on threat factors (see general introduction). These threat factors are only given for threatened bird species and not for species for which international responsibility is stated.

Threats and conservation

Human activities which either directly or indirectly (e.g. through grazing of domestic animals) reduce breeding success represent the main threat to breeding bird populations in the Wadden Sea at present. The size of available breeding habitat of some of the most

endangered species is reduced drastically by human activities. The potential breeding habitat of, especially, species breeding on beaches and primary dunes is for the most part blocked by human activities. The Little Tern (*Sterna albifrons*) and the Kentish Plover (*Charadrius alexandrinus*) are the most strongly affected species, where, additionally, in their few remaining strongholds, breeding success can also be reduced dramatically due to human activities (Schulz & Stock, 1991; Stock, 1994; Sorensen, 1995).

Loss and changes of habitats due to embankment and coastal protection measures may lead to loss of habitat quality for a lot of bird species. Agricultural use of salt marshes, especially intensive sheep grazing, can reduce breeding success in some species. Heavily grazed areas are not appropriate for breeding bird species, such as Common Redshank (*Tringa totanus*) and ducks, which depend on highly structured sites with areas of higher vegetation.

Due to an increased food supply in the form of fishery discards, the populations of some gull species, mainly the Lesser Black-backed Gull (*Larus fuscus*), have increased in the Wadden Sea (Fleet et al., 1994). On the other hand, the reduction of fisheries' activities and consequently of the amount of discard can lead to changes in the feeding behaviour of species which have been feeding on discard. Such species can switch over to feeding on eggs and young of other species breeding in the area and endanger their populations (Garthe, 1993). Shellfish fishery activities may reduce the food supply of some bird species such as the Common Eider (*Somateria mollissima*), Common Scoter (*Melanitta nigra*) and Oystercatcher (*Haematopus ostralegus*), and cause their populations to decline (Hüppop et al., 1994).

Contamination with micropollutants and heavy metals may threaten the breeding success, especially of fish-eating species and mainly in estuaries (Becker, 1994). Roosting and moulting birds are threatened by disturbances caused by human activities such as tourism, hunting, water sport, recreational boats and aerial traffic. Species, such as divers and Common Scoter (*Melanitta nigra*) are also affected by oil pollution.

Further protection measures should be initiated for certain bird communities in the Wadden Sea. A larger number of extensive potential breeding sites in primary dune and beach areas should be protected from human disturbance in order to restore their attractiveness as breeding sites. This applies as well to many grey dune areas, which have been suffering from intensive human use for decades, eg. by afforestation and planting *Rosa rugosa*.

Summary

350000 – 400000 pairs of breeding birds as well as 10 – 12 millions of migratory waterbirds use the Danish-German-Dutch Wadden Sea as a feeding, roosting and moulting area.

The exact number of migrating birds using the Wadden Sea is unknown. 4 Wadden Sea breeding bird species are (probably) extinct in the area , e.g. Caspian Tern (*Sterna caspia*) and Roseate Tern (*Sterna dougallii*); the status of 5 species is critical, 4 species are endangered, the status of 6 species is vulnerable and of 4 species susceptible. International responsibility can be stated for at least 15 breeding bird species or subspecies, because considerable parts of the north-west-european population (at least 5%) breed in the Wadden Sea (e.g. Eurasian Spoonbill (*Platalea leucorodia*), Common Shelduck (*Ta-*

dorna tadorna), Hen Harrier (*Circus cyaneus*), Avocet (*Recurvirostra avosetta*), Kentish Plover (*Charadrius alexandrinus*), Common Redshank (*Tringa totanus totanus*), Gull-billed Tern (*Gelochelidon nilotica*), Sandwich Tern (*Sterna sandvicensis*), Common Tern (*Sterna hirundo*), Little Tern (*Sterna albifrons*). International responsibility can be determined for at least 54 migratory bird species or subspecies, because considerable parts of the biogeographical population (at least 1%) occur in the Wadden Sea during migration. Some species are present in the Wadden Sea with about 50 % or nearly 90 % of all individuals of the concerned populations, which means a very special international responsibility of the Wadden Sea has to be stated for these species.

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RED LIST OF BIRDS OF THE WADDEN SEA AREA*

EX – Extinct:

Caspian Tern – *Sterna caspia*
Roseate Tern – *Sterna dougallii*
(?) Nightjar – *Caprimulgus europaeus*
Tawny Pipit – *Anthus campestris*

CR – Critical:

Montagu's Harrier – *Circus pygargus*
Dunlin – *Calidris alpina schinzii*
(only the Baltic population)
Ruff – *Philomachus pugnax*
Turnstone – *Arenaria interpres*
Gull-billed Tern – *Gelochelidon nilotica*

EN – Endangered:

Kentish Plover – *Charadrius alexandrinus*
Sandwich Tern – *Sterna sandvicensis*
Little Tern – *Sterna albifrons*
Short-eared Owl – *Asio flammeus*

VU – Vulnerable:

Red-breasted Merganser – *Mergus serrator*
Great Ringed Plover – *Charadrius hiaticula*
Black-tailed Godwit – *Limosa limosa*
Common Redshank – *Tringa totanus totanus*
Common Tern – *Sterna hirundo*
Arctic Tern – *Sterna paradisaea*

SU – Susceptible:

Eurasian Spoonbill- *Platalea leucorodia*
Northern Pintail – *Anas acuta*
Little Gull – *Larus minutus*
Stonechat – *Saxicola torquata*

* Question-marks indicate that in one of the subregions the status of threat is uncertain.

IR – International responsibility:
IRR – international responsibility for resident species:
number of breeding birds: at least 5% of the north-west-European breeding population

15 species or subspecies (see the following List of Threatened Birds)

IRM – international responsibility for migratory species:
number of migrating birds: at least 1% of the biogeographical population occurring in the Wadden Sea area, which uses the area during migration, wintering and summering.

54 species or subspecies (see the following List of Threatened Birds)

LIST OF THREATENED BIRDS OF THE WADDEN SEA AREA[1]

		Red List (trilateral)	Threats	Status of threat in the subregions of the Wadden Sea Area			
				NL	Nds	SH	DK
Red-throated Diver *Gavia stellata*	Roodkeelduiker Sterntaucher Rodstrubet Lom						
		IRM		IRM	IRM	IRM	IRM
Black-throated Diver *Gavia arctica*	Parelduiker Prachttaucher Sortstrubet Lom						
		IRM		IRM	IRM	IRM	IRM
Little Grebe *Tachybaptus ruficollis*	Dodaars Zwergtaucher Lille Lappedykker			EN	(-)	(-)	(-)
Black-necked Grebe *Podiceps nigricollis*	Geoorde Fuut Schwarzhalstaucher Sorthalset Lappedykker			CR	(-)	(-)	(-)
Great Cormorant *Phalacrocorax carbo sinensis*	Aalscholver Kormoran Skarv	*		SU	*	-	SU
		IRM		IRM	IRM	IRM	IRM
Great Bittern *Botaurus stellaris*	Roerdomp Rohrdommel Rordrum			CR	(-)	(-)	(-)

[1] For each bird species, there are two rows: the first one gives the status of threat for breeding birds, the second one the importance of the area for migratory species.
In the first row, statements are only made if the species concerned is threatened or extinct in at least one of the four subregions, or if this species fulfills the criteria of "International responsibility for resident species". In the second row, statements are only made if the species concerned fulfill the criteria of "International responsibility for migratory species".
Some species are threatened in the Dutch part of the Wadden Sea area and may occur as breeding birds in the German and Danish parts but do not breed there in typical coastal habitats of natural origin. For them no trilateral status of threat is given.

		Red List (trilateral)	Threats	Status of threat in the subregions of the Wadden Sea Area			
				NL	Nds	SH	DK
Eurasian Spoonbill *Platalea leucorodia*	Lepelaar Löffler Skestork	**SU, IRR**	POL	SU, IRR	-	-	-
Pink-footed Goose *Anser brachyrhynchus*	Kleine Rietgans Kurzschnabelgans Kortnæbbet Gås	**IRM**		+	+	+	IRM
Greylag Goose *Anser anser*	Grauwe Gans Graugans Grågås	**IRM**		IRM	IRM	+	+
Barnacle Goose *Branta leucopsis*	Brandgans Nonnengans Bramgås	**IRM**		IRM	IRM	IRM	IRM
Dark-bellied Brent Goose *Branta bernicla b.*	Rotgans Dunkelb. Ringelgans Morkbuget Knortegås	**IRM**		IRM	IRM	IRM	IRM
Light-bellied Brent Goose *Branta bernicla hrota*	Witbuikrotgans Hellb. Ringelgans Lysbuget Knortegås	**IRM**		+	+	+	IRM
Common Shelduck *Tadorna tadorna*	Bergeend Brandgans Gravand	***, IRR** **IRM**		* IRM	* IRM	* IRM	* IRM
Eurasian Wigeon *Anas penelope*	Smient Pfeifente Pibeand	**IRM**		IRM	IRM	IRM	IRM
Common Teal *Anas crecca*	Wintertaling Krickente Krikand	**IRM**		IRM	IRM	IRM	IRM
Mallard *Anas platyrhynchos*	Wilde Eend Stockente Gråand	**IRM**		IRM	IRM	IRM	IRM
Northern Pintail *Anas acuta*	Pijlstaart Spießente Spidsand	**SU** **IRM**	EXL, AGR, DIS	CR IRM	CR IRM	SU IRM	SU IRM
Garganey *Anas querquedula*	Zomertaling Knäkente Atlingand			CR	(-)	(-)	(-)
Northern Shoveler *Anas clypeata*	Slobeend Löffelente Skeand	**IRM**		IRM	IRM	IRM	IRM
Greater Scaup *Aythya marila*	Toppereend Bergente Bjergand	**IRM**		IRM	+	+	+

		Red List (trilateral)	Threats	Status of threat in the subregions of the Wadden Sea Area			
				NL	Nds	SH	DK
Common Eider *Somateria mollissima mollissima*	Eidereend Eiderente Ederfugl	*		*	*	SU	SU
		IRM		IRM	IRM	IRM	IRM
Common Scoter *Melanitta nigra*	Zwarte Zeeëend Trauerente Sortand						
		IRM		IRM	IRM	IRM	IRM
Common Goldeneye *Bucephala clangula*	Brilduiker Schellente Hvinand						
		IRM		IRM	+	+	+
Red-breasted Merganser *Mergus serrator*	Middelste Zaagbek Mittelsäger Toppet Skallesluger	**VU**	DIS	-	EN	VU	VU
		IRM		IRM	+	+	+
Hen Harrier *Circus cyaneus*	Blauwe Kiekendief Kornweihe Blå Kærhog	*, **IRR**		*	EN	CR	*
Montagu's Harrier *Circus pygargus*	Grauwe Kiekendief Wiesenweihe Hedehog	**CR**	AGR, HAB, DIS, PAR	CR	CR	(-)	CR
Water Rail *Rallus aquaticus*	Waterral Wasserralle Vandrikse			EN	(-)	(-)	(-)
Spotted Crake *Porzana porzana*	Porseleinhoen Tüpfelsumpfhuhn Plettet Rørvagtel			CR	(-)	(-)	(-)
Oystercatcher *Haematopus ostralegus*	Scholekster Austernfischer Strandskade	*, **IRR**		IRR	*	IRR	*
		IRM		IRM	IRM	IRM	IRM
Avocet *Recurvirostra avosetta*	Kluut Säbelschnäbler Klyde	**IRR**		IRR	IRR	IRR	IRR
		IRM		IRM	IRM	IRM	IRM
Great Ringed Plover *Charadrius hiaticula*	Bontbekplevier Sandregenpfeifer Stor Præstekrave	**VU, IRR**	HAB, DIS	EN	*	SU, IRR	VU
		IRM		IRM	IRM	IRM	IRM
Kentish Plover *Charadrius alexandrinus*	Strandplevier Seeregenpfeifer Hvidbrystet Præste-krave	**EN, IRR**	HAB, DIS, WAT, CLI	CR	CR, IRR	EN, IRR	CR
		IRM		IRM	+	+	+
European Golden Plover *Pluvialis apricaria*	Goudplevier Goldregenpfeifer Hjejle						
		IRM		IRM	IRM	IRM	IRM

		Red List (trilateral)	Threats	Status of threat in the subregions of the Wadden Sea Area			
				NL	Nds	SH	DK
Grey Plover *Pluvialis squatarola*	Zilverplevier Kiebitzregenpfeifer Strandhjejle						
		IRM		IRM	IRM	IRM	IRM
Northern Lapwing *Vanellus vanellus*	Kievit Kiebitz Vibe	*		*	VU	*	*
		IRM		IRM	IRM	IRM	IRM
Red Knot *Calidris canutus*	Kanoetstrandloper Knutt Islandsk Ryle						
(*C.c.canutus*)		**IRM**		IRM	IRM	IRM	IRM
(*C.c.islandica*)		**IRM**		IRM	IRM	IRM	IRM
Sanderling *Calidris alba*	Drieteenstrandloper Sanderling Sandlober						
		IRM		IRM	IRM	IRM	IRM
Curlew Sandpiper *Calidris ferruginea*	Krombekstrandloper Sichelstrandläufer Krumnæbbet Ryle						
		IRM		IRM	+	IRM	+
Dunlin *Calidris alpina*	Bonte Strandloper Alpenstrandläufer Almindelig Ryle	**CR**	HAB, DIS, AGR, WAT	EX (1970)	EX	CR	EN
(*C.a.schinzii*) only baltic population		**IRM**		?	?	IRM	?
(*C.a.alpina*)		**IRM**		IRM	IRM	IRM	IRM
Ruff *Philomachus pugnax*	Kemphaan Kampfläufer Brushane	**CR**	HAB, AGR	CR	CR	CR	CR
		IRM		+	+	+	+
Common Snipe *Gallinago gallinago*	Watersnip Bekassine Dobbeltbekkasin			EN	(-)	(-)	(-)
Black-tailed Godwit *Limosa limosa*	Grutto Uferschnepfe Stor Kobbersneppe	**VU**	HAB, AGR	EN	(-)	(-)	SU
Bar-tailed Godwit *Limosa lapponica*	Rosse Grutto Pfuhlschnepfe Lille Kobbersneppe						
		IRM		IRM	IRM	IRM	IRM
Whimbrel *Numenius phaeopus*	Regenwulp Regenbrachvogel Lille Regnspove						
		IRM		+	+	IRM	+
Eurasian Curlew *Numenius arquata*	Wulp Großer Brachvogel Stor Regnspove	*		*	(-)	(-)	SU
		IRM		IRM	IRM	IRM	IRM
Spotted Redshank *Tringa erythropus*	Zwarte Ruiter Dunkler Wasserläufer Sortklire						
		IRM		IRM	IRM	IRM	IRM

		Red List (trilateral)	Threats	Status of threat in the subregions of the Wadden Sea Area			
				NL	Nds	SH	DK
Common Redshank *Tringa totanus totanus*	Tureluur Rotschenkel Rodben	**VU, IRR**	HAB, AGR	SU	VU	VU	*
		IRM		IRM	IRM	IRM	IRM
Tringa totanus robusta		**IRM**		IRM	IRM	IRM	IRM
Common Greenshank *Tringa nebularia*	Groenpootruiter Grünschenkel Hvidklire						
		IRM		IRM	IRM	IRM	IRM
Common Sandpiper *Actitis hypoleucos*	Oeverloper Flußuferläufer Mudderklire						
		IRM		+	+	+	+
Turnstone *Arenaria interpres*	Steenloper Steinwälzer Stenvender	**CR**	DIS	-	-	CR	CR
		IRM		IRM	IRM	IRM	+
Little Gull *Larus minutus*	Dwergmeeuw Zwergmöwe Dværgmåge	**SU**	DIS	-	-	SU	SU
		IRM		IRM	IRM	IRM	+
Black-headed Gull *Larus ridibundus*	Kokmeeuw Lachmöwe Hættemåge	*, **IRR**		*	*	*	*
		IRM		IRM	IRM	IRM	IRM
Common Gull *Larus canus*	Stormmeeuw Sturmmöwe Stormmåge						
		IRM		IRM	IRM	IRM	IRM
Lesser Black-backed Gull *Larus fuscus*	Kleine Mantelmeeuw Heringsmöwe Sildemåge	*, **IRR**		IRR	*	*	*
Herring Gull *Larus argentatus*	Zilvermeeuw Silbermöwe Solvmåge	*, **IRR**		*	*	*	*
		IRM		IRM	IRM	IRM	IRM
Great Black-backed Gull *Larus marinus*	Grote Mantelmeeuw Mantelmöwe Svartbag						
		IRM		+	+	+	+
Gull-billed Tern *Gelochelidon nilotica*	Lachstern Lachseeschwalbe Sandterne	**CR, IRR**	EXL, AGR, DIS	-	CR, IRR	CR, IRR	CR, IRR
Caspian Tern *Sterna caspia*	Reuzenstern Raubseeschwalbe Rovterne	**EX**	DIS	-	-	EX (1928)	EX (1918)
Sandwich Tern *Sterna sandvicensis*	Grote Stern Brandseeschwalbe Splitterne	**EN, IRR**	HAB, POL, DIS	VU, IRR	EN, IRR	EN, IRR	CR
		IRM		IRM	IRM	IRM	IRM

		Red List (trilateral)	Threats	Status of threat in the subregions of the Wadden Sea Area			
				NL	Nds	SH	DK
Roseate Tern *Sterna dougallii*	Dougalls Stern Rosenseeschwalbe Dougallsterne	**EX**	DIS, EXL	-	-	EX (19th Cent.)	-
Common Tern *Sterna hirundo*	Visdief Flußseeschwalbe Fjordterne	**VU, IRR**	HAB, POL, DIS	VU, IRR	VU, IRR	EN, IRR	VU
		IRM		IRM	IRM	IRM	IRM
Arctic Tern *Sterna paradisaea*	Noordse Stern Küstenseeschwalbe Havterne	**VU**	HAB, POL, DIS	EN	EN	VU	VU
Little Tern *Sterna albifrons*	Dwergstern Zwergseeschwalbe Dværgterne	**EN, IRR**	HAB, POL, DIS, PAR	EN	CR, IRR	EN, IRR	EN
		IRM		IRM	IRM	+	+
Black Tern *Chlidonias niger*	Zwarte stern Trauerseeschwalbe Sortterne	**IRM**		IRM	+	+	+
Short-eared Owl *Asio flammeus*	Velduil Sumpfohreule Mosehornugle	**EN**	HAB, DIS	EN	VU	EN	CR
Nightjar *Caprimulgus europaeus*	Nachtzwaluw Ziegenmelker Natravn	**EX ?**	HAB, CLI	EX (1900)	-	-	?
Horned Lark *Eremophila alpestris*	Strandleeuwerik Ohrenlerche Bjerglærke	**IRM ?***		IRM ?	IRM ?	IRM ?	IRM ?
Tawny Pipit *Anthus campestris*	Duinpieper Brachpieper Markpiber	**EX**	HAB, CLI	EX (1935)	-	-	-
Whinchat *Saxicola rubetra*	Paapje Braunkehlchen Bynkefugl			CR	(-)	(-)	(-)
Stonechat *Saxicola torquata*	Roodborsttapuit Schwarzkehlchen Sortstrubet Bynkefugl	**SU**	HAB	SU	(-)	-	SU
Wheatear *Oenanthe oenanthe*	Tapuit Steinschmätzer Stenpikker			VU	(-)	(-)	(-)
Sedge Warbler *Acrocephalus schoenobaenus*	Rietzanger Schilfrohrsänger Sivsanger			VU	(-)	(-)	(-)

		Red List (trilateral)	Threats	Status of threat in the subregions of the Wadden Sea Area			
				NL	Nds	SH	DK
Great Reed Warbler *Acrocephalus arundinacaeus*	Grote Karekiet Drosselrohrsänger Drosselrorsanger			CR	-	(-)	-
Bearded Tit *Panurus biarmicus*	Baardmees Bartmeise Skægmejse			EN	(-)	(-)	(-)
Red-backed Shrike *Lanius collurio*	Grauwe Klauwier Rotrückenwürger/Neuntöter Rodrygget Tornskade			EN	(-)	(-)	(-)
Twite *Carduelis flavirostris*	Frater Berghänfling Bjergirisk	**IRM?***		IRM ?	IRM ?	IRM ?	IRM ?
Snow Bunting *Plectrophenax nivalis*	Sneeuwgors Schneeammer Snespurv	**IRM?***		IRM ?	IRM ?	IRM ?	IRM ?
Yellowhammer *Emberiza citrinella*	Geelgors Goldammer Gulspurv			EX (1986)	(-)	(-)	(-)

* Lack of reliable information in general, therefore only preliminary evaluations are given.

Legend

Categories regarding the status of threat (see definition in the general introduction):

EX: extinct;
CR: critical;
EN: endangered;
VU: vulnerable;
SU: susceptible;
IR: international responsibility:
IRR: for resident species: number of breeding birds: at least 5% of the north-west-European breeding population;
IRM: for migratory species: number of migrating birds: at least 1% of the biogeographical population uses the Wadden Sea area during migration, wintering and summering.

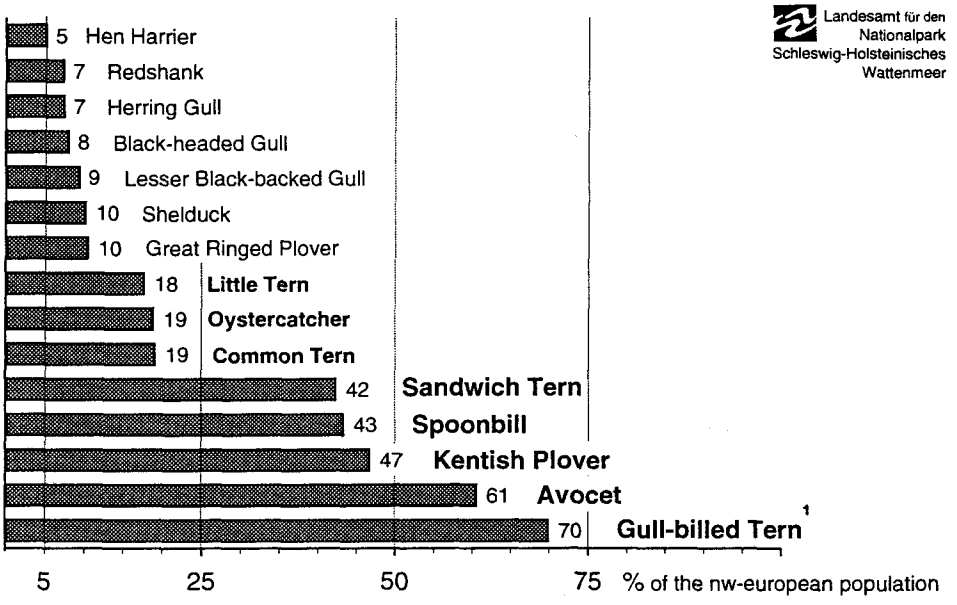
Additional symbols concerning breeding status:

-: species is not a breeding bird in this subregion of the Wadden Sea; however, the species may occur as a winter or summer visitor or as a migrant;
(-): species is not considered for this subregion of the Wadden Sea, because its main distribution lies outside the considered area of the Wadden Sea due to the fact that:
- species occurs in adjacent freshwater marsh areas behind the dikes and occasionally occurs in smaller numbers in the area considered, or
- species occurs in freshwater or terrestrial habitats on the Wadden Sea islands;

*: species is not endangered as a breeding bird in this subregion of the Wadden Sea and is not an established newcomer;
?: status of the species is not known in this subregion of the Wadden Sea.

Additional symbols concerning migratory status:
+: number of migrating birds: less than 1% of the biogeographical population uses the Wadden Sea area during migration, wintering and/or summering;
?: status is not known in this subregion of the Wadden Sea.
Symbols concerning threats:
AFF = afforestation; AGR = agriculture; CLI = climatic change; DIS = disturbance; EUT = eutrophication; EXL = exploitation of living resources; EXM = mineral exploitation; FOR = forestry; HAB = loss of habitat; PAR = parasites; POL = pollution; WAT = water regulation.

For more detailed descriptions see the general introduction to the Red Lists.



[1] Since 1993, 100% of the north-west-European population of the Gull-billed Tern has been breeding in the Wadden Sea area.

Fig. 1. Percentage of the north-west-European population breeding in the entire Wadden Sea 1991 (after Fleet et al., 1994).
A further 6 species reach at least the 1%-level.

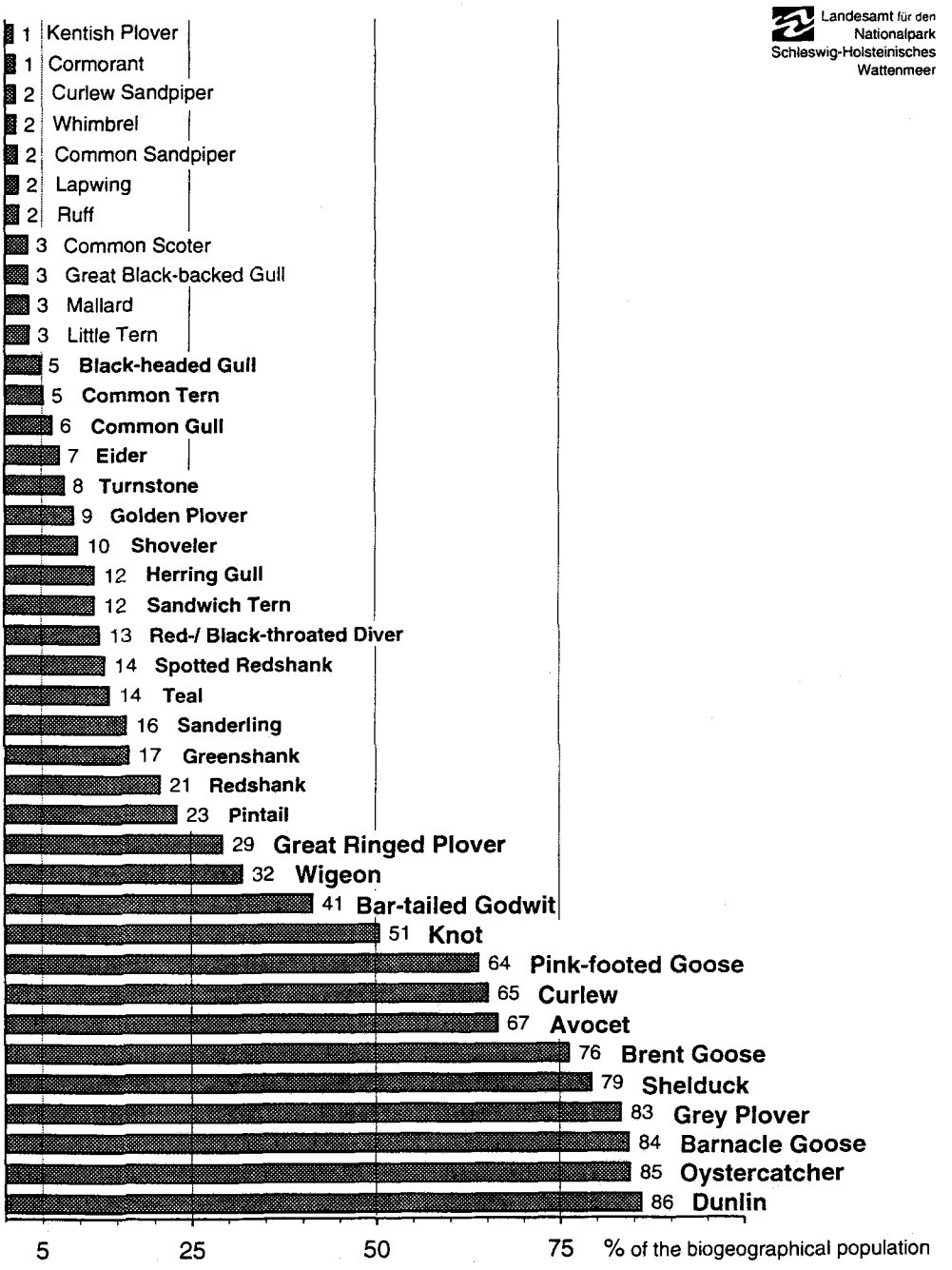


Fig. 2. Percentage of the biogeographical population using the entire Wadden Sea area and the 3 sm-coastal waters during migration (resting, wintering, summering, moulting) (after Meltofte et al., 1994; Rösner et al., 1994).

Furthermore, at least 3 passerine-species, Horned Lark, Twite and Snow Bunting, reach the 1%-level; however, exact numbers are unknown; 10-12 other species, which are not so typical for the area, reach this level especially in the Dutch part of the Wadden Sea, e.g. some diving ducks, Little Gull and Black Tern.