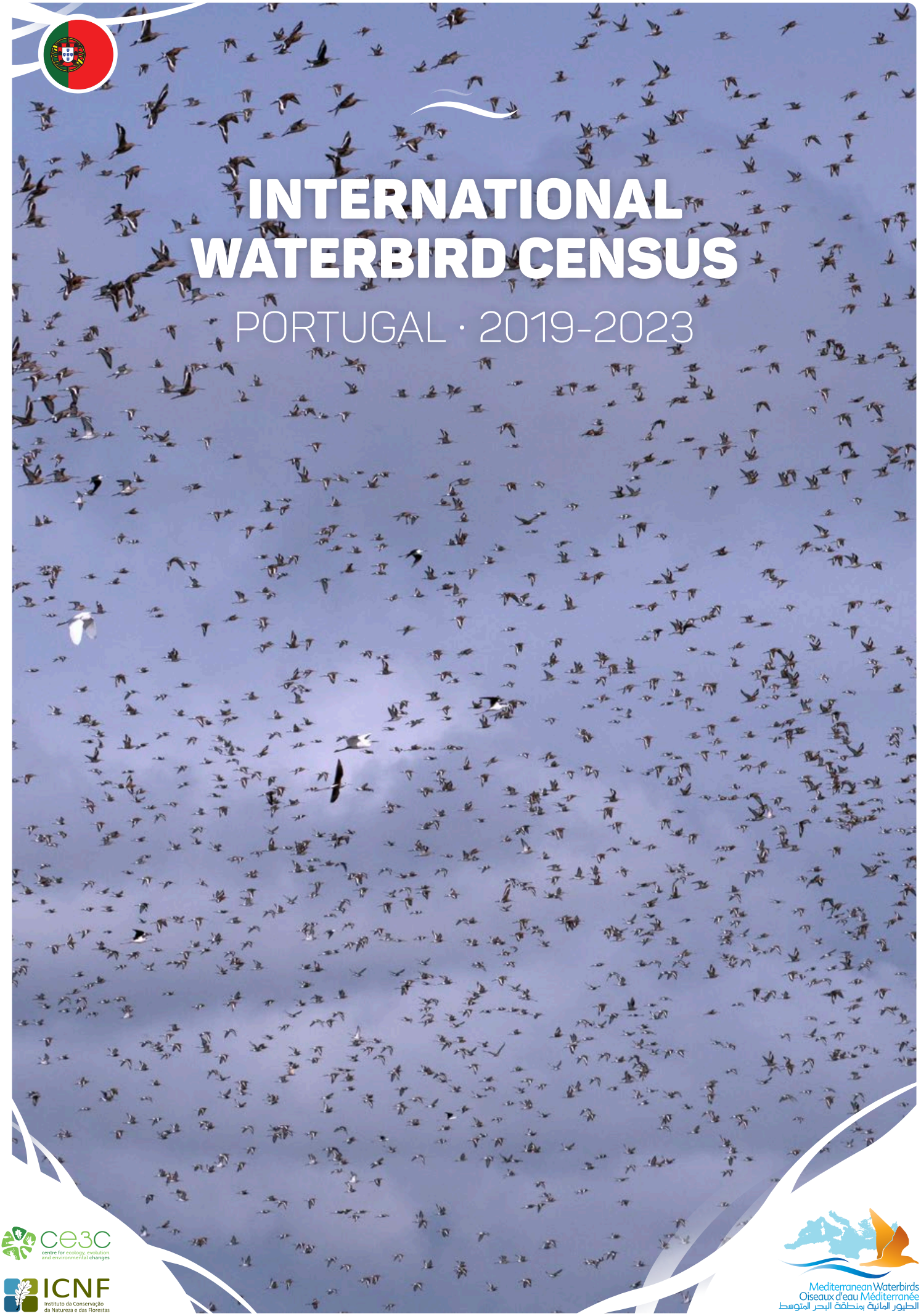

INTERNATIONAL WATERBIRD CENSUS

PORTUGAL · 2019-2023

ce3c centre for ecology, evolution and environmental changes

ICNF Instituto da Conservação da Natureza e das Florestas

Mediterranean Waterbirds
Oiseaux d'eau Méditerranée
الطيور المائية بمنطقة البحر المتوسط

ACKNOWLEDGEMENTS AND LIST OF PARTICIPANTS

This report is the product of the dedication of all those who contributed to the waterbird counts, including the committed staff of the Institute for Nature Conservation and Forestry (ICNF) and the volunteers who generously gave their time. This spirit of collaboration has sustained the national wintering waterbird monitoring program since the 1970s. Key individuals across various regions played essential roles in reviewing and compiling data forms, as well as in keeping the national database up to date.

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Bibliographic reference: F. Moniz, R. Jorge Lopes and M. J. Costa. 2025.
International waterbird census. Portugal report (2019-2023). Medwaterbirds Network, Tour du Valat, 12 p.

Cover image: Flock of black-tailed godwit (*Limosa limosa*) © F. Moniz / **Photo p.2:** Minho River Estuary © R.J. Lopes /
Cartography: Marta Lago, Khalil Baddour / **Translation and proofreading:** Charles La Via
With the contribution of Marta Lago, Khalil Baddour, Laura Dami / **Graphic design and layout:** Atelier Guillaume Baldini

MOBILIZED **NATIONAL OBSERVERS**

There are several wetlands of international importance for waterbird conservation in mainland Portugal, including the Tagus Estuary and the Ria Formosa. These areas are subject to environmental and human pressures, so they require regular monitoring. Wintering waterbird counts, carried out by technicians and volunteers, provide valuable information on the ecological status of these sites.

NUMBER OF VOLUNTEERS:

76

OBSERVERS INVOLVED IN COUNTS

TOTAL NUMBER OF SPECIES OBSERVED:

83

SPECIES OBSERVED IN PORTUGAL (2019-2023)

NUMBER OF WETLANDS VISITED:

94

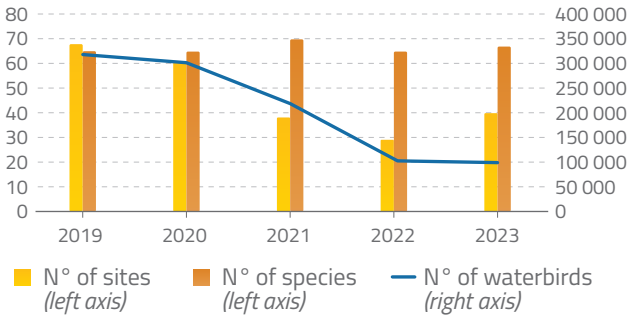
WETLANDS VISITED (2019-2023)

50

WETLANDS REGULARLY VISITED (2019-2023)

EVOLUTION IN THE NUMBER OF SITES VISITED,

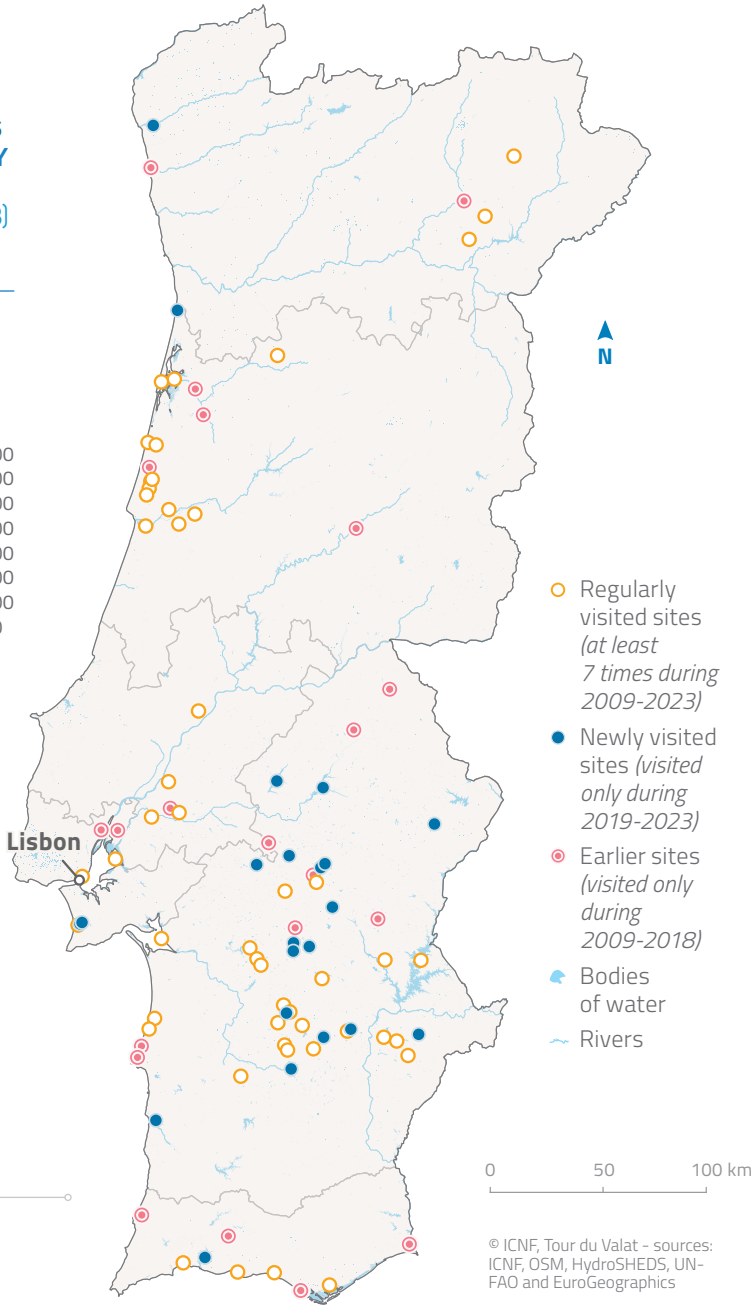
counted species and waterbirds (2019-2023)



Between 2019 and 2023, the number of waterbirds decreased significantly starting in 2021. This was mainly due to reduced survey coverage. In 2022-2023, an important site was not monitored, which affected the total number of records. Nonetheless, species diversity remained stable. In 2023, the number of sites increased due to database changes that split previously grouped sites, rather than to increased monitoring, which helps explain why bird numbers remained low.

DISTRIBUTION OF SITES VISITED

in Portugal (2009–2023), listed by frequency and period, highlighting areas of continuous and recent monitoring.



MAIN TRENDS (2019-2023) IN WATERBIRD POPULATIONS

DECLINING SPECIES, DURING THE ASSESSMENT PERIOD (2019-2023)

SPECIES		VALUES			
English name	Scientific name	Average nb. of birds	Nb. sites	Magn.*	±ES**
Sandwich Tern	*Thalasseus sandvicensis*	77	9	-1,11	0,55
Ferruginous Duck	*Aythya nyroca*	106	11	-0,58	0,24
Eurasian Oystercatcher	*Haematopus ostralegus*	966	7	-0,48	0,23
Grey Plover	*Pluvialis squatarola*	4 944	15	-0,31	0,11
Great Cormorant	*Phalacrocorax carbo*	3 006	83	-0,22	0,07

* **Magn.:** Magnitude / ** **±SE:** Standard error. The trends shown in the tables are at least significant at an alpha risk of 5%.

The table highlights negative trends in the populations of several waterbird species in Portugal. Species such as the Sandwich Tern, Ferruginous Duck, and Grey Plover are all experiencing significant declines, despite AEWA protection. The Great Cormorant shows a decline in wintering numbers, contrasting with a rise in breeding populations, suggesting changes in migratory or habitat use patterns. These trends stress the importance of ongoing monitoring to inform and guide waterbird conservation efforts.

Ferruginous Duck (*Aythya nyroca*) © P. Dedicoat

HIGHLIGHTS

The conservation of water birds is threatened by the degradation of estuaries, the conversion of salt pans, the draining of lagoons, and the intensification of agriculture. These pressures impact their habitats and feeding grounds. Direct or indirect human disturbances exacerbate the situation. Regular monitoring of habitats is essential in order to identify risks and mitigate conflicts, thereby ensuring the survival of these species and preserving key sites that are essential for their conservation.

GREY PLOVER (*Pluvialis squatarola*)

The **Grey Plover** population in Portugal is declining due to habitat loss and frequent disturbances in feeding and high-tide roosting areas. The constant presence of humans causes the birds to repeatedly take flight, resulting in significant energy loss. Even brief or quiet activities are enough to disrupt their rest and make feeding difficult. This continuous disturbance affects the birds' ability to recover and maintain the energy reserves needed to survive the winter and prepare for spring migration.

Grey Plover (*Pluvialis squatarola*) © P. Dedicoat

INCREASING SPECIES,
DURING THE ASSESSMENT PERIOD (2019-2023)

SPECIES		VALUES			
English name	Scientific name	Average nb. of birds	Nb. sites	Magn.*	±ES**
Black-headed Gull	*Larus ridibundus*	1 744	17	2.26	0,81
Glossy Ibis	*Plegadis falcinellus*	28 198	17	0.88	0,35
Common Crane	*Grus grus*	434	6	0.48	0,23
Egyptian Goose	*Alopochen aegyptiaca*	81	31	0.42	0,16
Common Redshank	*Tringa totanus*	2 430	20	0.42	0,14
Red-crested Pochard	*Netta rufina*	973	31	0.25	0,11

* **Magn.:** Magnitude / ** **±SE:** Standard error. The trends shown in the tables are at least significant at an alpha risk of 5%.

Positive trends may be due to the addition of new monitoring sites, as is the case with the Red-crested Pochard. For the Glossy Ibis this trend is linked to the abundance of Louisiana crawfish in rice fields. Despite the positive trend in waterbird counts, national censuses targeting the Common Crane indicate a decline in the species (Cruz, C.M. *et al.* 2024).

Egyptian goose (*Alopochen aegyptiaca*) © P. Dedicoat

EGYPTIAN GOOSE (*Alopochen aegyptiaca*)

The **Egyptian Goose** is an exotic and invasive species that is expanding rapidly in Portugal, with populations established in Porto, Lisbon, the Alentejo, and other regions. Its presence poses a threat to nature conservation as it competes with native birds, takes over their nests and can produce hybrids with other species, causing damage to agriculture and the environment. Without effective control plans, the risk of conflict with native species increases, making containment increasingly difficult.

HIGHLIGHTS

Portugal's extensive network of protected wetlands of international importance has helped some waterbird populations to increase in number. Long-term monitoring since the 1970s has been vital, yet the number of people involved in the monitoring programme remains low. To ensure continued success, we must expand the network of observers and strengthen our relationships with birdwatchers to ensure regular monitoring continues. Consistent data collection is essential for the effective conservation of these species.

1 WETLAND MAY BE DESIGNATED AS AREAS OF INTERNATIONAL IMPORTANCE

WETLANDS OF INTERNATIONAL IMPORTANCE FOR WATERBIRDS

Identification based on mid-January (2019-2023) count data for Ramsar Criteria 5 and 6.
Empty cells in the "Ramsar site" column identify sites not included in the Ramsar network.

INTERNATIONAL IMPORTANCE SITE	*Designated Ramsar site*	*> 20 000 waterbirds*	Northern Pintail	Ferruginous Duck	Kentish Plover	Greater Flamingo	Eurasian Spoonbill	Glossy Ibis	Grey Plover	Northern Shoveler
Number of sites		3	1	1	1	1	3	2	1	1
Albufeira da Bolarina				○						
Estuário do Sado	Ⓡ	○			○		○	○		
Estuário do Tejo	Ⓡ	○	○			○	○	○	○	○
Ria Formosa	Ⓡ	○					○			

- **Criterion 5:** A wetland should be considered internationally important if it regularly* supports 20,000 or more waterbirds.
- **Criterion 6:** A wetland should be considered internationally important if it regularly* supports 1% of the individuals in a population of one species or subspecies of waterbirds.

* **To define the notion of "regularly,"** we have applied the following rule (currently under review by COP15 RAMSAR, 2025): A wetland is considered to regularly support a population of waterbirds of a given size if either of the following conditions is met:

1. The average of the annual maxima recorded over a period of at least five years reaches or exceeds the required threshold; or
2. The required number of birds is recorded in at least two-thirds of the years for which adequate data are available, provided that data are available for at least three years in total.

In Portugal there are currently 31 Ramsar Sites, covering 132 487 ha. 13 of them are located in mainland Portugal, and 18 in the Azores. Originally, 5 sites were designated because they supported 1% of the individuals in a population of one or more species of waterbirds (Paúl do Boquilobo, Lagoa de Santo André e Sancha, Paúl do Taipal, Estuário do Sado and Sapais de Castro Marim). Estuário do Sado was also designated because it supported on average more than 20,000 waterbirds.

HIGHLIGHTS

Paúl do Boquilobo, Lagoa de Santo André e Sancha, Paúl do Taipal and Sapais de Castro Marim, which met Ramsar criteria in the past, were not regularly monitored during the period 2019-2023, thus preventing the qualification of their importance for this period. An increase in count coverage, specifically in these sites, is desirable in order to keep the data updated.

SUGGESTED ACTIONS

Albufeira da Bolarina, a small dam located in the region of Alentejo, which is not yet designated as a Wetland of International Importance, meets Ramsar criterion 6 for the Ferruginous Duck. This qualification means that this site could now be declared as a Ramsar site.

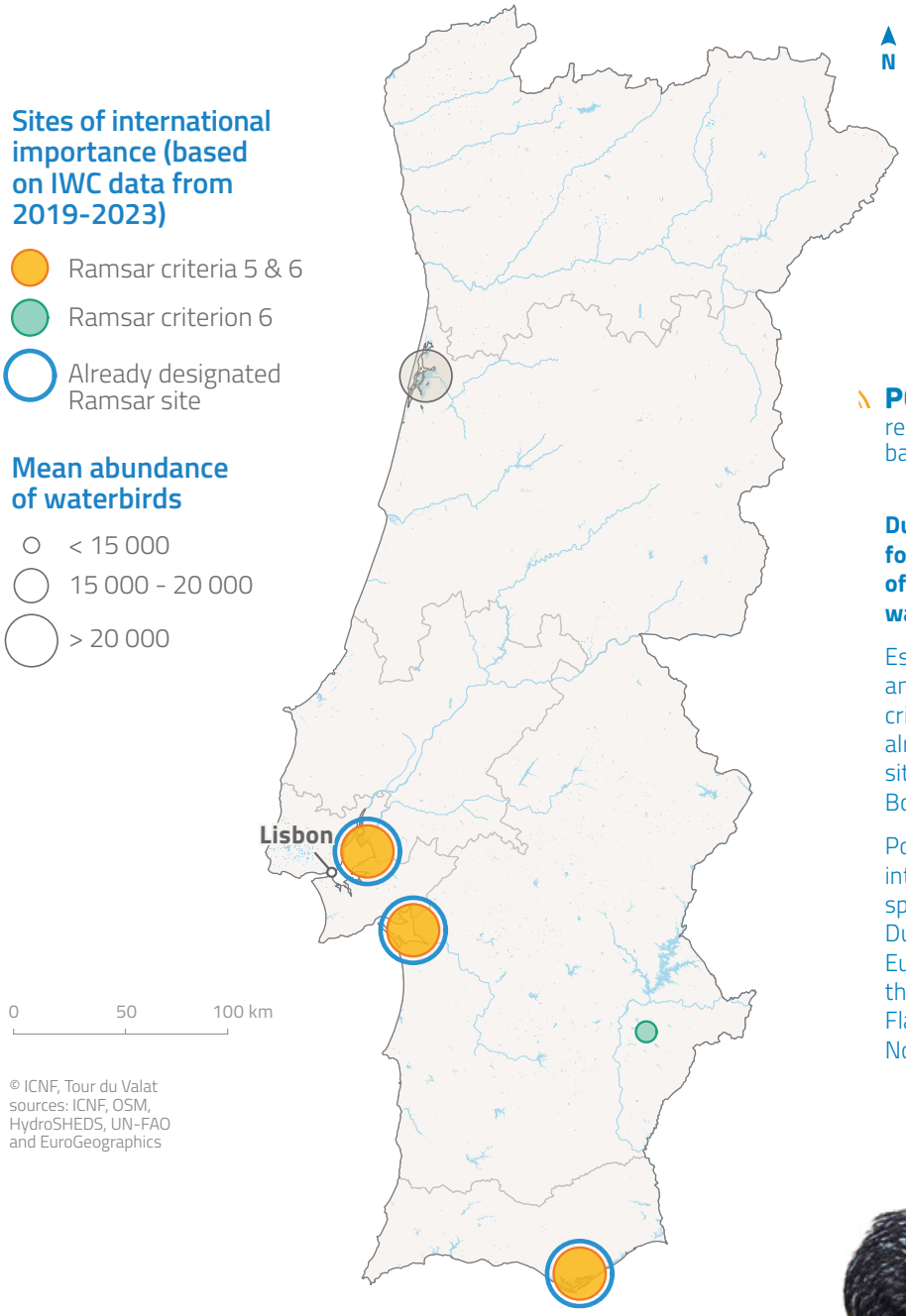
Mondego Estuary

Sites of international importance (based on IWC data from 2019-2023)

- Ramsar criteria 5 & 6
- Ramsar criterion 6
- Already designated Ramsar site

Mean abundance of waterbirds

- < 15 000
- 15 000 - 20 000
- > 20 000



PORTUGUESE WETLANDS

responding to Criteria 5 and 6 based on 2019-2023 IWC data.

During the 2019-2023 period, four sites met the Ramsar criteria of international importance for waterbirds.

Estuário do Tejo, Estuário do Sado and Ria Formosa meet Ramsar criteria 5 and 6. These sites are already designated as Ramsar sites. Additionally, Albufeira da Bolarina meets Ramsar Criterion 6.

Portugal hosts populations of international importance for 8 species, namely the Ferruginous Duck, the Kentish Plover, the Eurasian Spoonbill, the Glossy Ibis, the Northern Pintail, the Greater Flamingo, the Grey Plover, and the Northern Shoveler.

Glossy Ibis (*Plegadis falcinellus*)
© F. Cahez

FOCUS ON A COUNTRY'S FLAGSHIP SPECIES: PORTUGAL'S CRUCIAL ROLE IN THE JOURNEY OF THE BLACK-TAILED GODWIT (*LIMOSA LIMOSA*)

The Black-tailed Godwit, a migratory wader, faces significant challenges in Portugal, which has key wintering grounds and stopover areas for its migratory journey between breeding grounds in northern Europe and Iceland and wintering sites in West Africa. As a "Near Threatened" species, it relies on key Portuguese wetlands, especially the Tagus Estuary, making the conservation of these sites critical to its survival during the non-breeding season.

The **Black-tailed Godwit** uses Portugal's coastal wetlands, especially estuaries, mudflats, and expansive rice fields as critical stopover and overwintering sites. For both the *Limosa limosa limosa* subspecies, which breeds in Western Europe, and the *Limosa limosa* islandica subspecies, breeding in Iceland, Portuguese wetlands serve as indispensable non-breeding grounds.

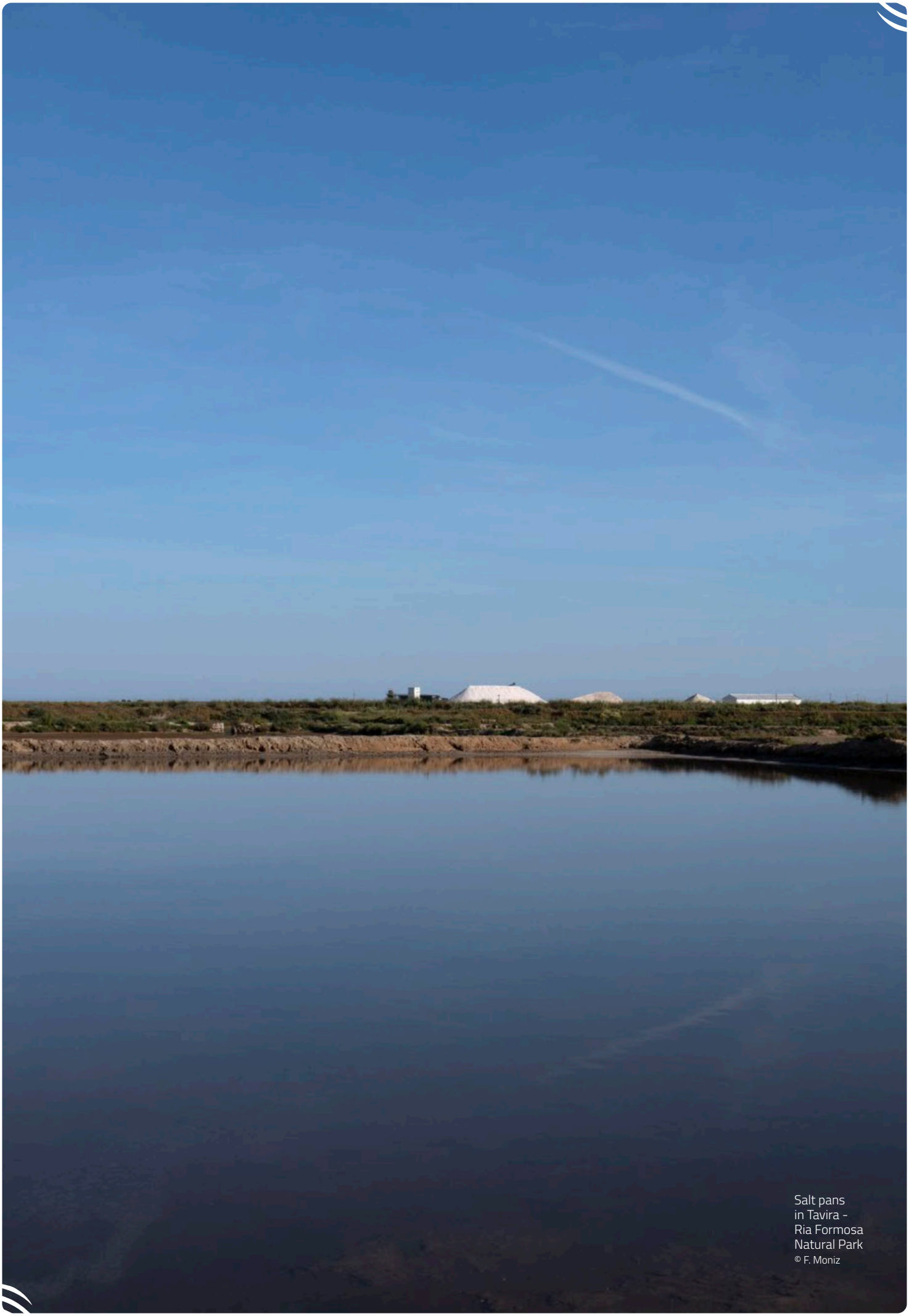
Yet, despite its resilience and adaptability, the Black-tailed Godwit faces an array of mounting challenges in this region that threaten its survival (Verhoeven 2024).

One of the most pressing issues is the increasing pressure of anthropogenic development, especially in one of the major staging wetlands for this species, the **Tagus Estuary** (Beal 2025). This key area is under pressure from infrastructure projects, tourism developments, and expanding urban centers. The construction of the new Lisbon international airport in the vicinity will further increase the anthropogenic pressure in this area.

Similarly, the management of agricultural fields, which may involve the conversion of traditional rice fields—key foraging grounds for the godwits—into more intensive, less bird-friendly agricultural systems may reduce the availability of suitable feeding habitats in the future.

Therefore, the conservation of Portuguese wetlands plays a pivotal role in the maintenance of the migratory flyway of this species, listed as Near Threatened by the IUCN.

Black-tailed godwit (*Limosa limosa*)
© F. Moniz



Salt pans
in Tavira -
Ria Formosa
Natural Park
© F. Moniz

GUARDIANS OF THE FLYWAY: SAVING PORTUGAL'S WETLANDS THROUGH COMMUNITY AND CONSERVATION

Portugal's wetlands, vital for wintering and migratory aquatic birds, face growing challenges. Declining monitoring, especially in key areas such as the Ria de Aveiro, and insufficient observers threaten data quality. Human pressures, like urbanization and tourism, stress key sites such as the Tagus Estuary and Ria Formosa. Yet, thriving bird populations, conservation projects like the LIFE Godwit Flyway, and a rising birdwatcher community offer hope. Engaging volunteers and leveraging new reservoirs could enhance conservation efforts.

Castro Marim Salt Marsh Nature Reserve ©F. Moniz

Portugal serves as a critical wintering ground for numerous migratory aquatic bird species, supporting rich biodiversity during winter and migrations. Notable growth in populations of key species, such as some waterbird species, **spoonbills**, **ibises**, and **flamingos**, indicates healthy ecosystems in certain areas. A growing community of birdwatchers offers a valuable pool of potential volunteers for waterbird monitoring programs. Additionally, conservation efforts, like the LIFE Godwit Flyway, actively contribute to the protection of aquatic species.

Nonetheless, monitoring efforts have declined, particularly in Ria de Aveiro, which jeopardizes the quality and reliability of wetland data. The current number of observers is still insufficient to effectively cover the increasing number of wetland sites. Furthermore, pressure is present on critical wintering habitats, such as the mudflats impacted by shellfish gatherers in the **Tagus Estuary**, and also the high-tide roosting areas that face growing disturbances from leisure activities and tourism in areas such as **Ria Formosa**.

There are opportunities to engage the growing birdwatcher community through targeted training programs, activities, regular meetings, and motivation strategies, that could significantly expand and sustain volunteer participation in monitoring efforts. The recent expansion of small inland reservoirs following the construction of the **Alqueva reservoir** presents opportunities to enhance wetland habitats and improve monitoring capacity.

Key threats are still present and may increase in the future for key wetlands, including **Tagus**, **Sado**, and **Ria Formosa**, which face escalating pressures from human activities, such as urbanization, rising tourism in Ria Formosa, and infrastructure development, particularly with the planned Lisbon Airport. These developments are likely to intensify urbanization and further stress wetland ecosystems.

Additionally, increased tourism, leisure activities, and nature photography continue to disrupt critical feeding and resting areas for waterbirds, posing significant challenges to conservation efforts.

Castro Marim Salt Marsh Nature Reserve
©F. Moniz

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Ria Formosa Natural Park ©F. Moniz

Minho River Estuary
©R.J. Lopes

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