

PRESS RELEASE

ICTS-Doñana opens 50 years of waterbird census data through a new open portal

- The new website allows anyone to explore, compare, and download historical data on the abundance and distribution of waterbirds in the Guadalquivir marshes
- The data can be used for scientific, management, or outreach purposes, facilitating population trend analyses and improving understanding of changes in Europe's largest wetland.



Bando de flamencos comunes volando en el Espacio Natural de Doñana (Foto: Alejandro Muñoz).

Sevilla, 26 de marzo de 2026. ICTS-Doñana, a scientific infrastructure dependent to the Doñana Biological Station (EBD-CSIC), today launched a **new web portal dedicated to waterbird censuses in the Guadalquivir marshes** in Southwestern Spain. This tool makes half a century of data—collected using a range of sampling protocols—freely available to the public. For the first time, users can access an integrated view of **how waterbird populations have evolved in one of Europe’s most important wetlands**. The platform enables time-series analyses, comparisons across species, and data downloads for research, management, or outreach purposes.

The “waterbird censuses” actually encompass a set of **complementary methodologies** used to estimate changes in bird abundance and spatial distribution in Doñana’s wetlands. While traditionally referred to as “censuses,” the program brings together different counting **protocols developed since the 1970s**, forming one of the most comprehensive and continuous long-term datasets in Europe.

A unique repository spanning five decades of continuous monitoring

The new portal compiles data from three main types of surveys, systematically carried out by highly experienced field technicians. **Aerial surveys**, initiated in the 1970s, are conducted from a high-wing aircraft that covers the entire Guadalquivir marsh system in just a few hours. **Ground surveys**, gradually introduced in later decades, are conducted from multiple observation points over several days. Finally, **coastal surveys** consist of vehicle-based transects to count seabirds along the shoreline.

Each method is tailored to the ecological characteristics of different species, which cannot be effectively surveyed using a single approach due to differences in behaviour and habitat structure.

The dataset spans **more than 50 years of continuous monitoring**, with monthly frequency for aerial surveys. This makes it an exceptional resource for analysing population trends, species phenology, spatial use, and responses to environmental and climatic changes in the wetland.

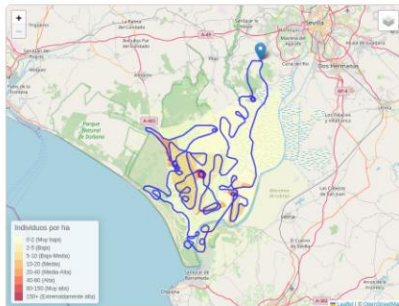
A key historical data resource for research and management

The platform allows users to **explore data in a flexible and intuitive way**. Users can browse available surveys, visualize counts by species and location, examine temporal trends for individual populations, or compare species over time.

The portal also enables users to download data for one or multiple species and survey types, along with associated metadata (including dates, observers, methodologies, and weather conditions), ensuring transparency and proper interpretation.

“This new portal represents an **unprecedented historical archive of waterbird populations** in the Guadalquivir marshes,” said **Javier Bustamante**, Deputy Director of ICTS-Doñana. “These data allow us to analyze long-term population trends, study species phenology—such as migration timing—and better understand spatial distribution patterns and habitat use.”

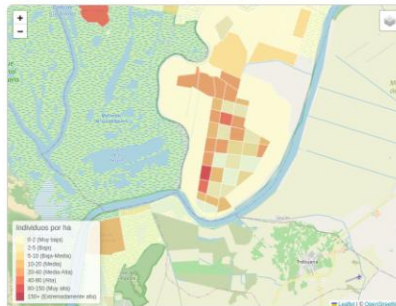
“This information is essential both for the **scientific community and for wetland managers**, who can assess the impact of management actions and design evidence-based conservation strategies,” he added.



Censos aéreos

Base online: Censo aéreo de aves acuáticas en las marismas del Guadalquivir

[Ver repositorio](#)



Censos terrestres

Base online: Censo terrestre de aves acuáticas en las marismas del Guadalquivir

[Ver repositorio](#)



Censos costeros

Base online: Censo costero de aves acuáticas en las marismas del Guadalquivir

[Ver repositorio](#)

Financiación:



Interfaz del nuevo portal web dedicado a los censos de aves acuáticas en las marismas del Guadalquivir.

A data infrastructure supporting open access

The collection and maintenance of these long-term datasets have been made possible through research projects, institutional funding from CSIC and the Doñana Biological Station, and agreements with various public institutions, including Spanish ministries, departments of the Andalusian regional government, the National Parks Autonomous Agency, and the Guadalquivir River Basin Authority.

More recently, Spain's Ministry of Science, Innovation and Universities, through its Subdirectorate-General for Large Scientific-Technical Facilities, has funded the PENELOPE project under the NextGenerationEU program and Spain's Recovery, Transformation and Resilience Plan. This initiative has enabled the development of the new digital infrastructure and the valorisation of these historical datasets.

In addition, ICTS-Doñana's current environmental monitoring program forms part of the measures for monitoring, evaluation, and scientific knowledge improvement under the Doñana Action Framework, coordinated by the Office of the Commissioner for the Water Cycle and Ecosystem Restoration at the Spain's Ministry for Ecological Transition and the Demographic Challenge (MITECO).

The portal is open access and **provides data under a Creative Commons CC BY-SA 4.0 license**, in line with CSIC's open science policy. Making these data publicly available responds to the need for accessible

environmental information for researchers, managers, and citizens, while adhering to FAIR principles (Findable, Accessible, Interoperable, Reusable) promoted by European institutions.

All information has been processed in compliance with data protection regulations and excludes sensitive location data for threatened species.

About ICTS-Doñana

ICTS-Doñana, part of the Doñana Biological Station (CSIC), is Europe's largest field laboratory and a leading center for research on biodiversity, ecology, and global change. It supports the scientific community by providing accommodation, specialized equipment, laboratories, and technical and logistical assistance.

Access

The data are now available online.

Main access point:

<https://aves-acuaticas.icts-donana.es/>

Direct links to specific portals:

Aerial censuses: <https://censos-aereos.icts-donana.es/>

Ground censuses: <https://censos-terrestres.icts-donana.es/>

Coastal censuses: <https://censos-costeros.icts-donana.es/>