

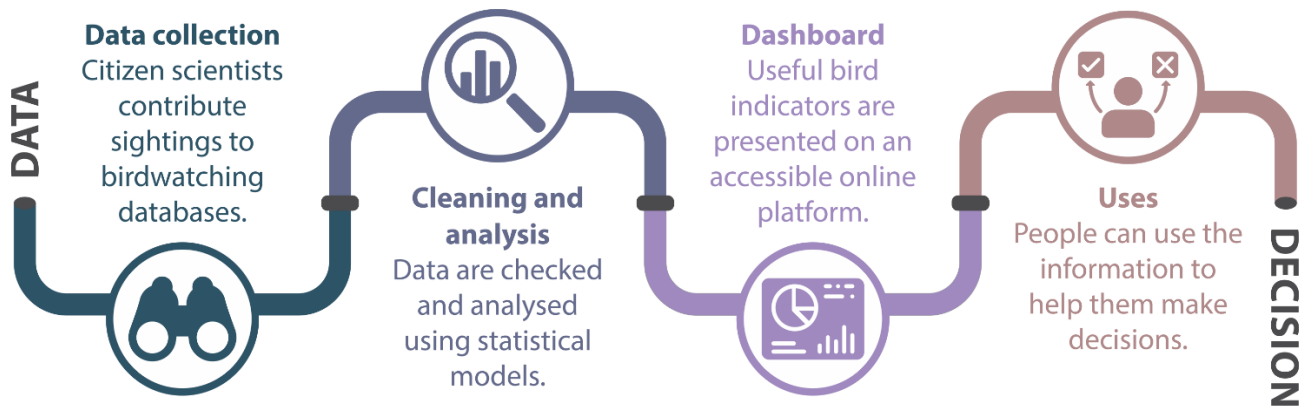


BIRDIE

and wetlands

About BIRDIE

The **BIRDIE platform** gathers and interprets data about wetlands and waterbirds to provide information that is useful for decision making. It sources data from citizen science databases, which are checked and analysed using statistical models. An online dashboard allows users to access up-to-date indicators about bird distribution, abundance and richness at wetland sites. The information can be used for reporting, management, research and as a resource for birders.



<https://birdie.sanbi.org.za/>

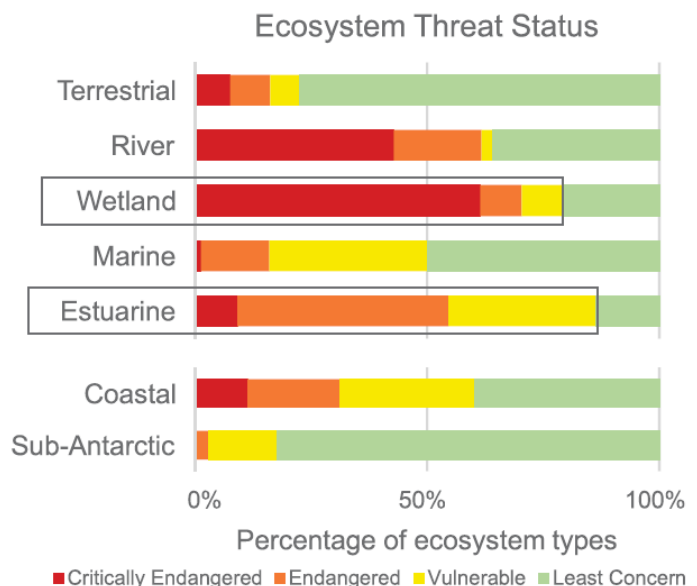




About wetlands

Wetlands, according to the National Water Act (Act 36 of 1998), are areas that are transitional between terrestrial and aquatic systems. The water table is usually at or near the surface, or the land is periodically covered with shallow water. Wetlands support vegetation that is typically adapted to life in saturated soil.

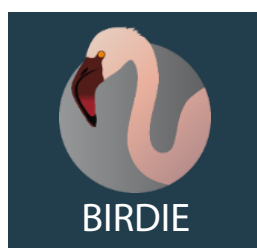
There are thousands of different wetlands across South Africa, although they typically cover only a small portion of the country's area. Despite their small size, wetlands are vitally important. They extract pollutants from water so people have fresh, clean water to use. They also soak up flood waters to protect people from the impacts of floods. However, estuaries and wetlands are the most threatened and least protected ecosystem types in South Africa. The National Biodiversity Assessment 2018 showed that as much as 88% of wetland area in South Africa is threatened. Only 2% of their extent is well protected. Wetlands provide habitat for a wide diversity of specially adapted plants and animals. Species associated with aquatic ecosystems, like freshwater fish, are also highly threatened.



BIRDIE links waterbird data to information about wetlands:



Wetlands



Waterbirds

BIRDIE gathers information about wetland sites

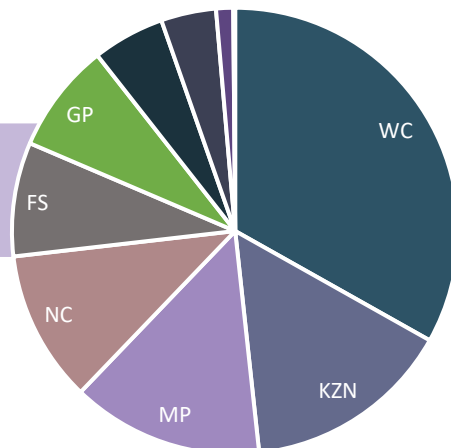
BIRDIE has information about more than [700 wetland sites](#) in South Africa. The sites listed are those that are regularly monitored by the Coordinated Waterbird Counts, or CWAC. CWAC is a valuable initiative that has been ongoing since 1992 where dedicated professionals and volunteers count the numbers of waterbirds at certain wetland sites twice each year. BIRDIE has developed a site master list, which gathers together a whole range of information about the sites.

Ramsar: Ramsar recognises wetland sites that are of international importance. South Africa currently (2024) has 30 Ramsar sites, which are listed on BIRDIE.

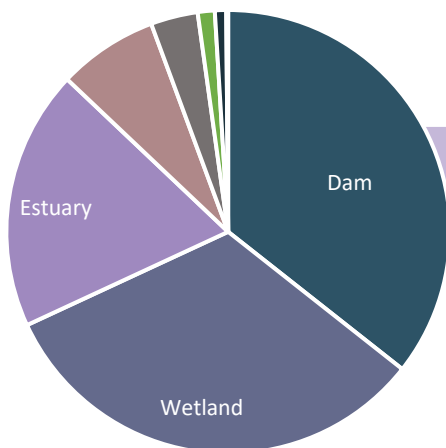
Province: The province the site is in. Most of the CWAC sites are in the Western Cape (33%), followed by KwaZulu-Natal (15%) and Mpumalanga (14%).

Important Bird and Biodiversity Area (IBA): BirdLife International identifies sites known as IBAs, which are globally important for conservation of birds. There are 65 sites listed as IBAs on BIRDIE.

Management: The entity in charge of managing the site, ranging from provincial conservation agencies, to local municipalities, companies, private landowners and local bird clubs. Managers have to make practical decisions on the conservation of these wetland sites. BIRDIE can assist them by providing information about how waterbird populations are changing.



Protection: Whether the site has any formal protection. Currently, only 19% of the sites listed are protected. When a site is protected, the type of protected area is noted.



Type: The general type of wetland: a dam, wetland, estuary, coastal area, river, waste-water treatment plant, or salt pan. Most of the sites listed are dams (35%), wetlands (32%) or estuaries (19%).

Wetland ecosystem type: The type according to South Africa's wetland classification system. The hydrogeomorphic type takes into account the landform and hydrology. The most common type in the BIRDIE list are depression wetlands (22%).

Fresh or saline: Whether the site is freshwater or saline.

Hydroperiod: Information about the hydroperiod of the wetland, basically, how long it stays wet. Hydroperiod determines the ecosystem functioning and the types of plants and animals that can be supported. Most are either periodically inundated (29%) or seasonally inundated (26%).

Pressures: Lists the main pressures to the wetland site, including a wide range of pressures like overuse, erosion, livestock, urban development, pollution and invasive plants.



BIRDIE links waterbird data to information about wetlands



Sites and Species summaries and trends

On the [Site pages](#) it's possible to select a specific site from the drop-down list. On the site pages you will find:

Site information: General information about the site, like what province it's in, whether it's a Ramsar site, whether it's protected, who manages it and an interactive map of the site. Further information about the wetland at the site, such as size, type, condition and hydroperiod.



Bird information: All the waterbird species observed at the site are listed in a table, with information about their habits and habitats. You can filter the table to show threatened species. The table also shows rate of change for bird populations – whether they are increasing or decreasing over a five and ten-year period.

BIRDIE tables are downloadable as .csv files.

What waterbird species are found at the site?



Exploration Map interactive map viewer

The [Exploration Map](#) includes ways to explore, interact with and filter bird indicators and ancillary data layers on a map. All maps and graphs can be saved as image files.

Distribution: Where each species is found across South Africa, based on occurrence models.

Abundance: The number of individuals of a species estimated to be present at each site. Selecting a site shows a graph of abundance trends over time.

How are waterbird populations changing at the site?

Species richness: The estimated number of waterbird species across South Africa.

Ancillary data: Additional data about temperatures, precipitation, water levels, vegetation greenness (NDVI) and more can help to provide clues for why population numbers are changing.

Access underlying data from BIRDIE



Web Services OpenAPI

You can use BIRDIE's [OpenAPI](#) to download the underlying data, perform your own analyses and build your own summaries.

For more information view the [FAQ](https://birdie.sanbi.org.za/) on the BIRDIE website: <https://birdie.sanbi.org.za/>

Photos credits: Doug Harebottle, Deon Oosthuizen, Nancy Job, Derek Keats via Wikimedia Commons.
Icon credits: Luis Prado, Brand Mania via the Noun Project.

Citation: SANBI. 2024. BIRDIE and wetlands. User guide. South African National Biodiversity Institute, Pretoria.