

**UNSW**  
A U S T R A L I A

# **Eastern Australian Wetlands Survey ANNUAL SUMMARY REPORT**

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**2016**



# The Eastern Australian Wetlands Survey

Every October for the past 34 years, since 1983, researchers from the Centre for Ecosystem Science have surveyed wetlands and waterbirds across Eastern Australia.

These surveys have built up one of the country's most important long-term data sets on the health and biodiversity of our river and wetland environments.

Every year we survey up to 2,000 wetlands and rivers observing up to 50 different waterbird species, including several threatened species.

To obtain a representative sample of waterbirds, we survey ten 30 km wide bands across Eastern Australia (Figure 1).

Small aircraft are flown at a height of 30–46 m, within 150 m of a wetland's shoreline and observers on each side of the plane estimate numbers of waterbirds using digital audio recorders.

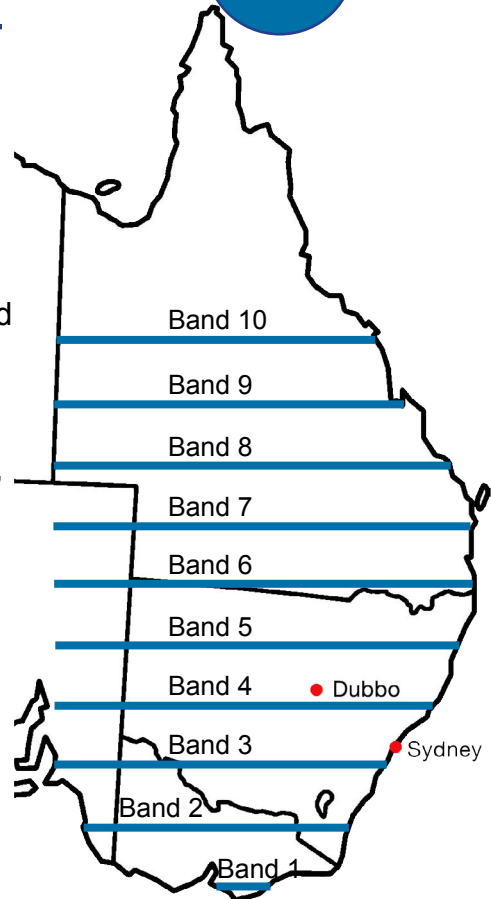


Figure 1. We survey ten 30 km wide bands across Eastern Australia.



May to September 2016 was one of the wettest on record. Despite this there has been a long term (34 years) decline in overall wetland area. The October 2016 wetland area index was slightly below the 34 year average (Figure 3). There were many full wetland areas in the southern Murray-Darling Basin but others in western Queensland only partially full or dry (Figure 2).

Parts of Queensland remained drought declared despite heavy rainfall in the south east. This is largely due to extended dry periods persisting in northern Queensland

Our survey showed that Lake Eyre and Cooper Creek wetlands in central Australia had small amounts of water that were drying rapidly. Other major wetlands in the Lake Eyre Basin including those in the Georgina-Diamantina catchment Lakes Torquinnie and Mumbleberry, were partially full. Also Lake Galilee, one of the more important wetlands in the Cooper Creek catchment, was only partially full.

In the Murray-Darling Basin, the Macquarie Marshes in western NSW and Lowbidgee wetlands in south-west NSW were extensively wetted.

The majority of rivers in the southern Murray-Darling Basin were flowing with partial filling of floodplain habitat. Most of the large lakes in the Menindee Lakes (western NSW) were partially full and the Talywalka lakes (western NSW) system was dry.

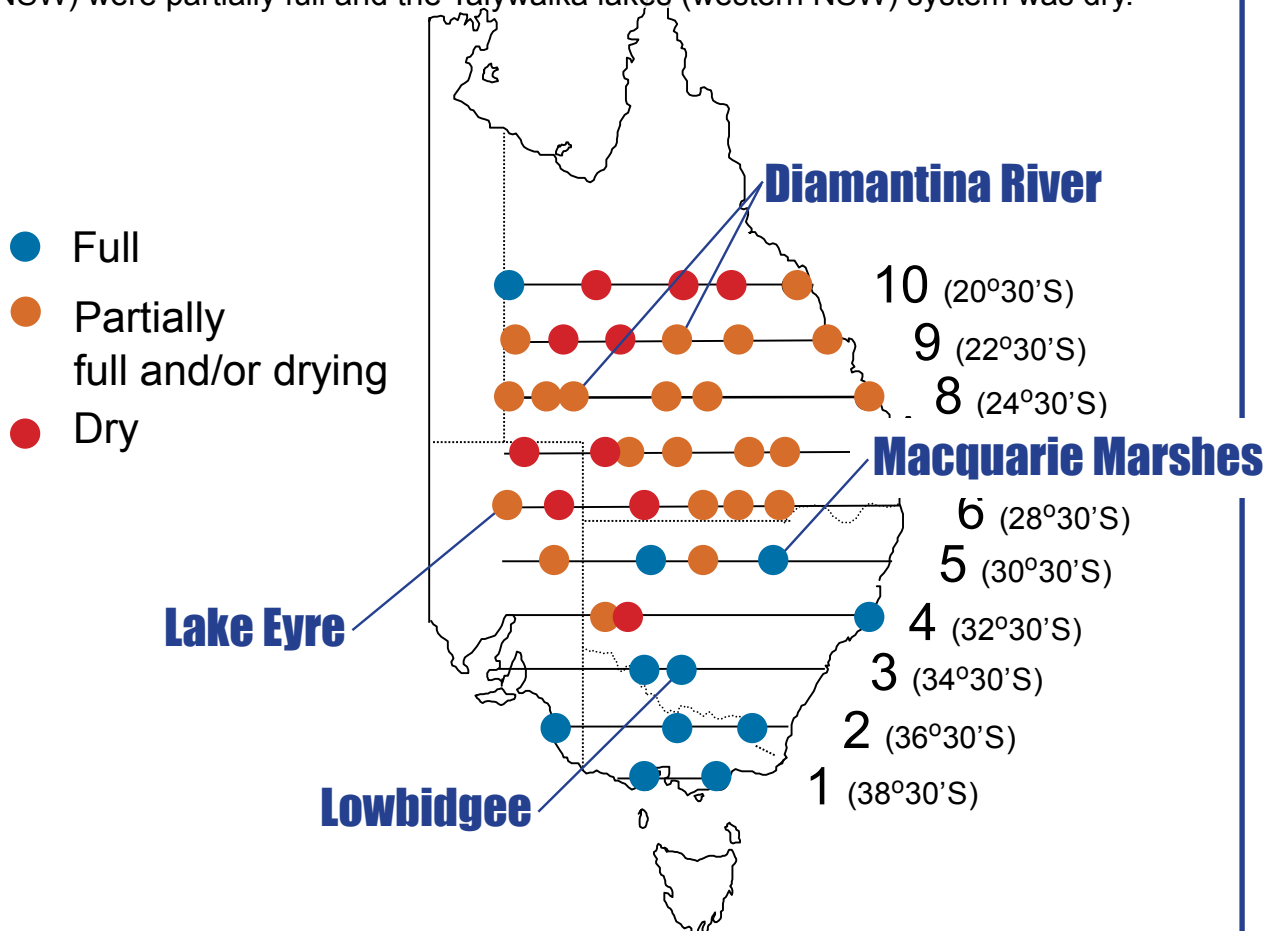


Figure 2. Many areas of the Murray-Darling Basin were partially full or dry.

# Wetland Area cont'd

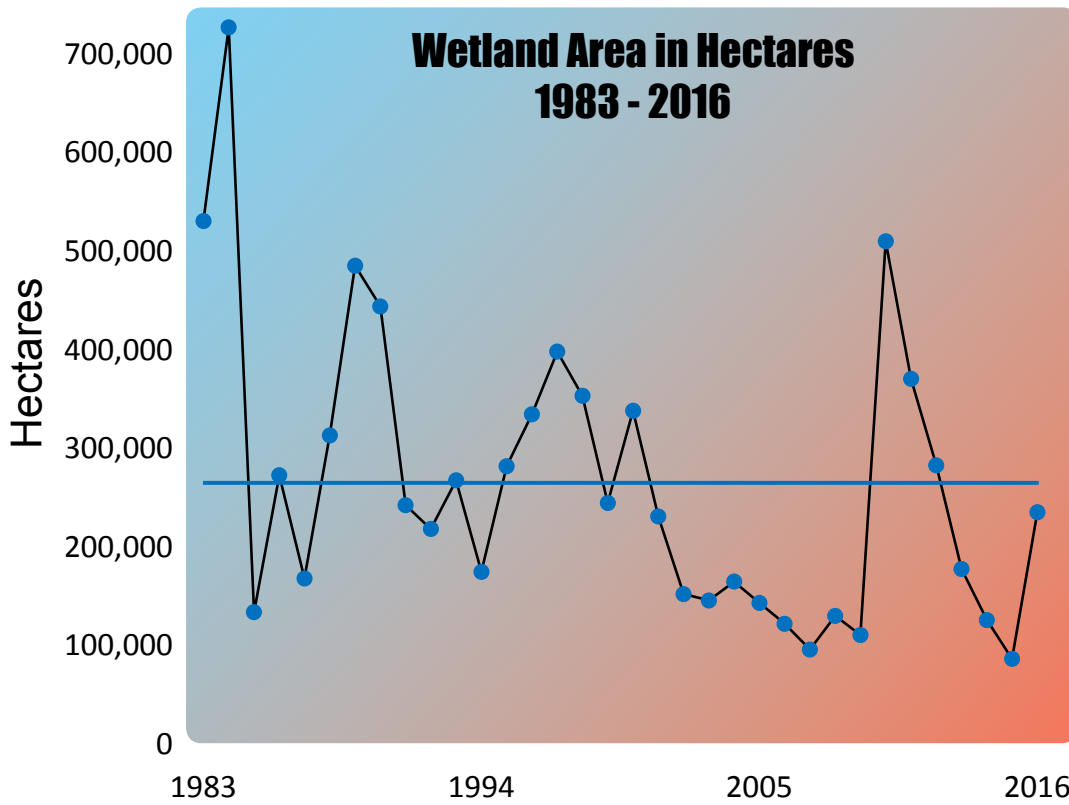


Figure 3. There was an overall decline in wetland area and 2016 was below average.



[Link to YouTube. Aerial Survey of Bulloo Lake in south-west Queensland.](#)

## Waterbird Abundance

Total waterbird abundance was the lowest on record (34 years), with few waterbirds widely dispersed over extensive areas of wetland habitat (Figure 4). Relative to some years, low numbers of waterbirds were observed on key wetland systems including Cooper Creek, Menindee Lakes, Paroo Overflow and the Coorong.

In the Lake Eyre Basin, wetlands (e.g. Lakes Galilee, Torquinnie and Mumbleberry) had low to moderate numbers of waterbirds compared to usual. Large concentrations of waterbirds were observed in relatively few sites; only two wetlands along the survey bands held more than 5,000 waterbirds, both within the Lowbidgee system. These two wetlands held almost 50% of the total number of waterbirds counted in the survey, but had low species diversity with only five species present.

There were continued long term declines in total waterbird abundance (Figure 4) and number of different species breeding, despite some increases compared to 2015 data (Figure 5).

A long term decline in the abundance of a majority of species was also observed (Figure 6). Straw-necked Ibis numbers continued to decline, despite large numbers breeding in the Lowbidgee.

Game species' abundance was well below long term average, in many cases by an order of magnitude.

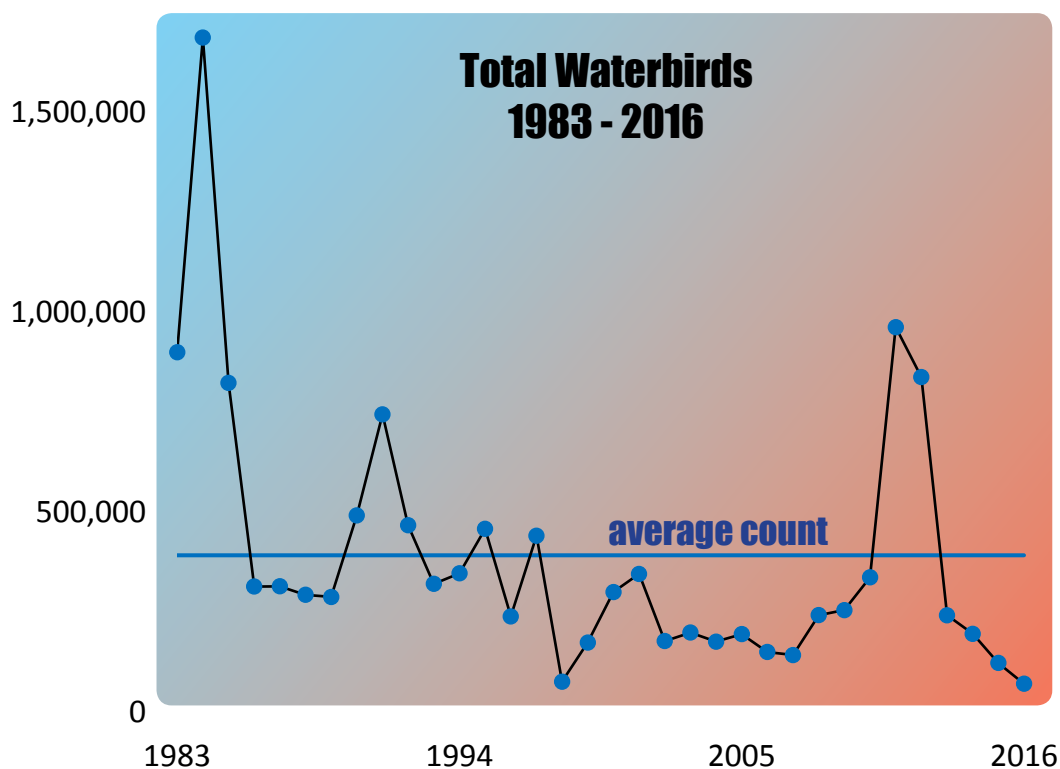


Figure 4. There were continued long term declines in total waterbird abundance.

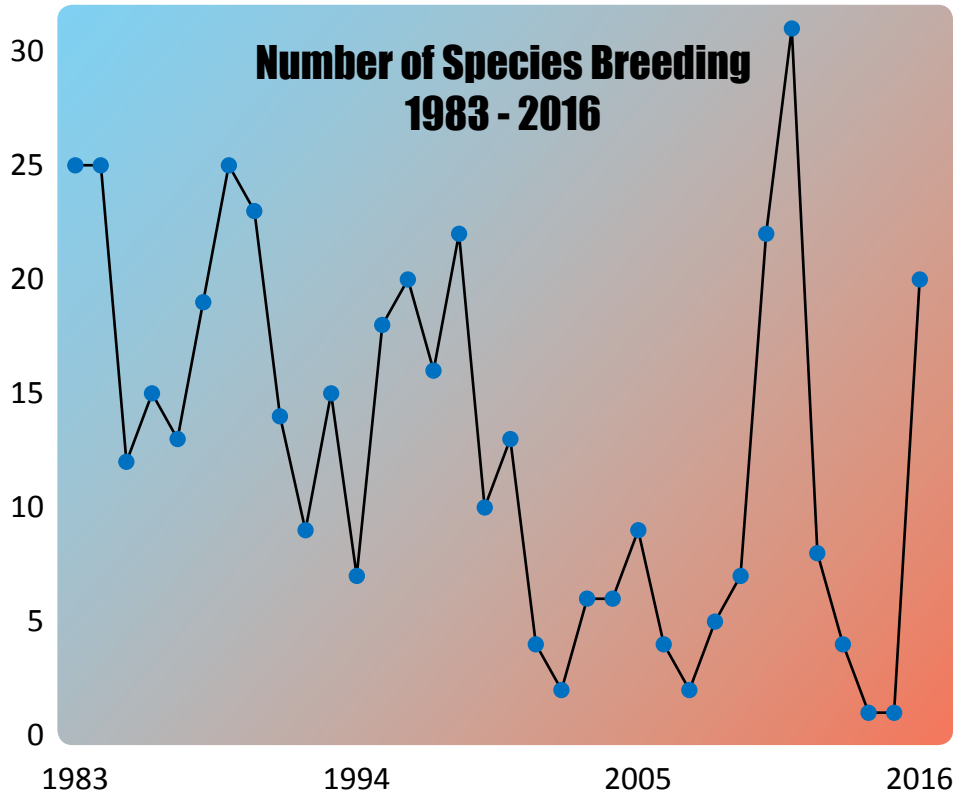


Figure 5. There were continued long term declines in breeding species richness.



For over 30 years, Prof Richard Kingsford from UNSW's Centre for Ecosystem Science has surveyed waterbirds across the country.

**Species Status**

**Declining**

**Stable**

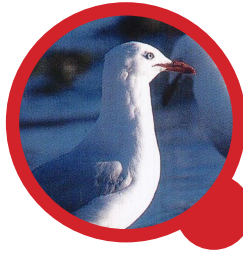
**Increasing**

**2016**

**EAWS**



**Black Swan**



**Silver Gull**



**Pink-Eared Duck**



**Pacific Black Duck**



**Straw-necked Ibis**



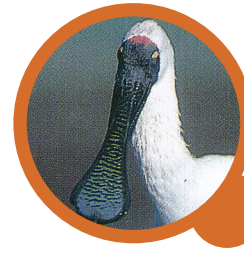
**Plumed Whistling-Duck**



**Australasian Shoveler**



**White Ibis**



**Royal Spoonbill**



**Chestnut Teal**



**Yellow-billed Spoonbill**



**Hardhead**



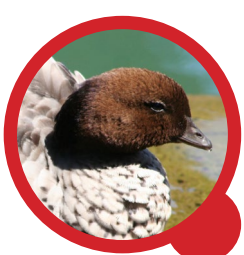
**Grey Teal**



**Small Waders**



**Large Waders**



**Australian Wood Duck**



**Freckled Duck**



**Cape Barren Geese**

Figure 6. There was a long term decline in the abundance of a majority of species.



[Link to YouTube. Aerial Survey of The Macquarie Marshes in central NSW.](#)



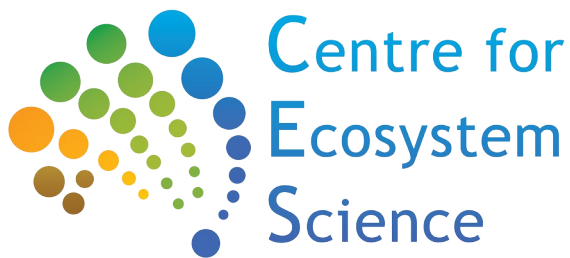
[Link to YouTube. Aerial Survey of Yantabulla Swamp in north-west NSW.](#)



## Acknowledgements

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