



Monitoring conservation values of a Ramsar wetland: Vasse-Wonnerup wetlands system, Busselton

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Background

The 'Ramsar' Convention on Wetlands is a global inter-governmental treaty aimed at the conservation of wetlands of international importance and the wise use of wetlands generally. It was first signed at a meeting of national delegates in the Iranian city of Ramsar in 1971 and came into force in Australia in 1975. By December 2008, 158 countries were Contracting Parties to the Convention.

When joining the Convention, countries undertake to designate wetlands for inclusion on a List of Wetlands of International Importance. These wetlands are selected on the basis of their international significance in terms of ecology, botany, zoology, limnology or hydrology and a number of formal Ramsar Criteria have been developed for this purpose.

In 1990 the Government of Western Australia nominated nine wetland systems for inclusion on the Ramsar List. One of these was the Vasse-Wonnerup System, near Busselton. This 1 115 ha site satisfied two Criteria for listing. Bird counts in the 1980s had shown that it regularly supported more than 20 000 waterbirds (Criterion 5) and more than 1% of the population of at least one waterbird species (Criterion 6).

Under the Convention there is an expectation that Contracting Parties will at least maintain, and where appropriate enhance, the values for which wetlands have been Listed. In order to determine whether or not this is being achieved, it is necessary for values to be monitored.

The scope and frequency of monitoring are determined by a number of factors including perceived levels of threat to values and availability of resources for monitoring. In the case of Vasse-Wonnerup a decision was made to undertake monitoring, in this case waterbird censuses, during the summer-autumn dry seasons of 1998-2000. Previous surveys had shown that summer-autumn was when waterbird numbers peaked each year at this site.

In making the case for Ramsar-listing of Vasse-Wonnerup, the 1990 nomination document referred to 33 000 waterbirds having been counted in January 1986, with 10 056 ducks and swans in 1984-85 and over 12 000 in 1985-86.



Photo by Roger Paine

Of particular note were 3 460 black swans, 7 000 grey teal, 2 768 black duck, 1 873 shelduck, 750 pelicans, 237 great egret, 4 000 coot, 5 000 black-winged stilt, 4 000 avocet, 2 300+ sharp-tailed sandpiper, 1 200 curlew sandpiper, 61 wood sandpiper and 44 long-toed stint. Sixty-eight species of waterbirds had been recorded by the time of site nomination and two of these, black-winged stilt and avocet, were in numbers greater than 1% of their Australian populations.

Findings

During the monitoring surveys of 1998-2000, the peak waterbird count was 37 000, this being 4 000 more than in January 1986. Highest counts in 1998-2000 of each of the species specifically mentioned in the 1990 nomination document were 3 013 swans, 9 500 grey teal, 4 750 black duck, 4 000 shelduck, 354 pelicans, 108 great egret, 3 570 coot, 3 500 black-winged stilt, 2 000 avocet, 800 sharp-tailed sandpiper, 278 curlew sandpiper, 7 wood sandpiper and 1+ long-toed stint. Sixty-one waterbird species were recorded during systematic surveys, but another seven species were recorded at other times during 1998-2000, bringing the total to 68, the same as recorded in all years to 1990. In 1998-2000 four species (black-winged stilt, avocet, shelduck and shoveler) were in numbers greater than their '1% of population' levels, the latter two being species for which population estimates were not available in 1990.

It can be seen from the above that, while the total number of waterbirds and species did not decline from the 1980s to 1998-2000, peak numbers of some species were substantially lower in the latter period. On the other hand, some species not highlighted in the 1990 nomination document, such as hoary-headed grebe, little black cormorant, white-faced heron, little egret, white ibis, greenshank, banded stilt and golden plover, were recorded in substantially greater numbers in 1998-2000 than in the 1980s.

Management Implications

Changes in numbers counted from one survey period to another can be due to a number of factors including natural variation in regional or wider populations, long term trends in populations, changes in carrying capacity of the wetland being monitored and differences in census techniques.

Several of the species that were counted in lower numbers in 1998-2000 are of concern. Prominent among these are blue-billed duck, great egret, great cormorant and curlew sandpiper. All four are thought to have declined locally or regionally in numbers due to loss or degradation of habitats and possibly other factors, such as declining rainfall, altered food supply or disturbance. Species such as sharp-tailed sandpiper, wood sandpiper and long-toed stint warrant further surveys to determine whether the declines in numbers counted on Vasse-Wonnerup in 1998-2000 reflect real and long term changes in numbers supported by this site.

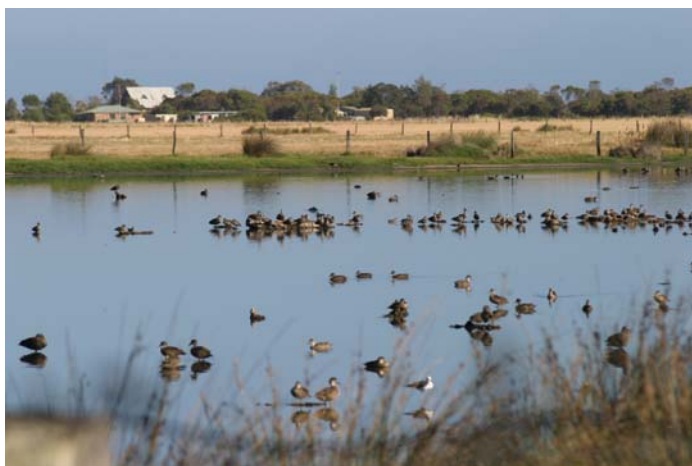


Photo by Roger Paine

While monitoring in 1998-2000 showed that the Vasse-Wonnerup Wetland System continued to meet the Ramsar Criteria under which it was Listed in 1990 as a Wetland of International Importance, it also added to concerns that populations of some waterbird species are in local or wider decline. These species warrant increased attention to determine their regional status, the specific threats they face and remedial actions needed. The status of several other species on Vasse-Wonnerup is uncertain and further surveys aimed specifically at these are also warranted.

Lane, J.A.K., Clarke, A.C., Pearson, G.B. & Winchcombe, Y.C. (2008). Waterbirds of the Vasse-Wonnerup wetlands in 1998-2000, including Ramsar status and comparisons with earlier data. Department of Environment and Conservation report.