

Reviews

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Meininger, P.L., Berrevoets, C.M. & Strucker, R.C.W. 1995. *Watervogels in de Zoute Delta 1991-94*.

Rijksinstituut voor Kusten Zee rapport RIKZ-95.025, NIOO-CEMO, Middelburg/Yerseke. ISBN 90-369-0315-7.

Meininger, P.L., C.M. Berrevoets & R.C.W. Strucker. 1996. *Watervogels in de Zoute Delta 1994/95*.

Rijksinstituut voor Kusten Zee rapport RIKZ-96.009, NIOO-CEMO, Middelburg/Yerseke. ISBN 90-369-0375-0.

Meininger, P.L., C.M. Berrevoets & R.C.W. Strucker. 1997. *Watervogels in de Zoute Delta 1995/96*.

Rijksinstituut voor Kusten Zee rapport RIKZ-97.001, NIOO-CEMO, Middelburg/Yerseke. ISBN 90-369-0485-4.

These reports present the results of monthly counts of waterbirds in the salt waters of the Delta area, south-west-Netherlands, in the years 1991 to 1995.

The large saltwater Delta areas in the south-west of the Netherlands have since long attracted waterbirds. Large numbers of many different species of bird breed or winter here, or migrate through, making this area an important link in the chain of wetlands along the East Atlantic Flyway. To gain insight into the significance of different parts of the Delta as foraging grounds for birds, standardized counts of waterbirds have been carried out regularly since 1975. These counts enable us to follow the changes over the last 20 years in the numbers of birds present.

This is particularly interesting if you know that this saltwater estuary has been subject to large changes since the mid-eighties. After the stormflood disaster in 1953, the Dutch took drastic measures in another attempt to conquer the sea and save the land and its people from future floods (an attempt in which originally even the Waddensea was to be included at some point!). A storm-surge barrier and several large dams were built in the Delta. With these barriers the ecosystem of the Delta changed completely: tidal influences were diminished or became absent, the salinity changed, some areas turned into salt or fresh water lakes, and erosion changed the surface of the estuary.

Since waterbirds are at the end of the food chain, they reflect all kinds of changes in the ecosystem. Thus, the birds fulfill an important signalling function: from the system through the researcher to management and politics. Particularly because of all the changes in the ecosystem of the Delta over the last 20 years, it is important to follow the bird populations and relate them to the management of the area.

These three reports present the results of monthly counts of waterbirds in the Delta during the periods 1991-94, 1994/95 and 1995/96. They should be considered as an addition to previous publications, listed below, in which counts from 1975 to 1991 are presented. The reports are written in Dutch, but an English summary is given, and legends to figures and tables are also in English. The names of the bird species listed in the tables are given in Dutch, but a list with Dutch and scientific names is added to the 1994/95 and 1995/96 reports. In order to make the results available for general use, all counts are presented in large tables, showing the number of each species counted every month. The data are grouped per area, thus showing differences in importance between areas for foraging birds. Furthermore, the reports give a description of the different areas, along with a summary of noted changes in bird numbers. The relevance of the different areas for birds is indicated in figures, showing the monthly numbers of

birds that are present, clustered in groups (waders, ducks, fish-eating birds and others). The importance of the area on an international scale is given by 1% levels.

In the 1994-95 report, population changes of a few species (e.g. Oystercatcher *Haematopus ostralegus* and Sanderling *Calidris alba*) have been discussed in more detail, indicating relationships between management of the area, food abundance and presence of birds. In the 1995/96 report special attention is paid to winter mortality, in response to the severe winter we had that year. In each report a few species are discussed in more detail, describing recent situations or remarkable changes.

Karen Krijgsveld

Further reading

Meininger, P.L., Baptist, H.J.M. & Slob, G.J. 1984. *Vogeltellingen in het Deltagebied in 1975/76-1979/80*. Rijkswaterstaat Deltadienst nota DDMI-84.23/Staatsbosbeheer Zeeland, Middelburg/Goes.

Meininger, P.L., Baptist, H.J.M. & Slob, G.J. 1985. *Vogeltellingen in het zuidelijk Deltagebied in 1980/81-1983/84*. Rijkswaterstaat Dienst Getijdewateren nota DGWM 85.001/Staatsbosbeheer Zeeland, Middelburg/Goes.

Meininger, P.L. & van Haperen, A.M.M. 1988. *Vogeltellingen in het zuidelijk Deltagebied 1984/85-1986/87*. Rijkswaterstaat Dienst Getijdewateren nota GWAO-88.1010/NMF, Middelburg/Goes.

Meininger, P.L., Berrevoets, C.M. & Strucker, R.C.W. 1994. *Watervogeltellingen in het zuidelijk Deltagebied, 1987-91*. Rijksinstituut voor Kust en Zee rapport RIKZ-94.005, NIOO-CEMO, Middelburg/Yerseke.