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Waterbirds around the world

A global overview of the conservation,
management and research of the
world's waterbird flyways

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Cover photography: Whooper Swans *Cygnus cygnus* arriving at Martin Mere, England. Photo: Paul Marshall.
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Part 3.

Geographical regions





Sections

3.1 The Arctic: source of flyways

3.2 Waterbirds in the Neotropics

3.3 Flyway conservation in North America

3.4 Intra-African migration

3.5 Flyway conservation in the Central Asian Flyway

3.6 East Asia - Pacific Flyway

3.7 Sustainable use of natural resources in the African-Eurasian Flyway

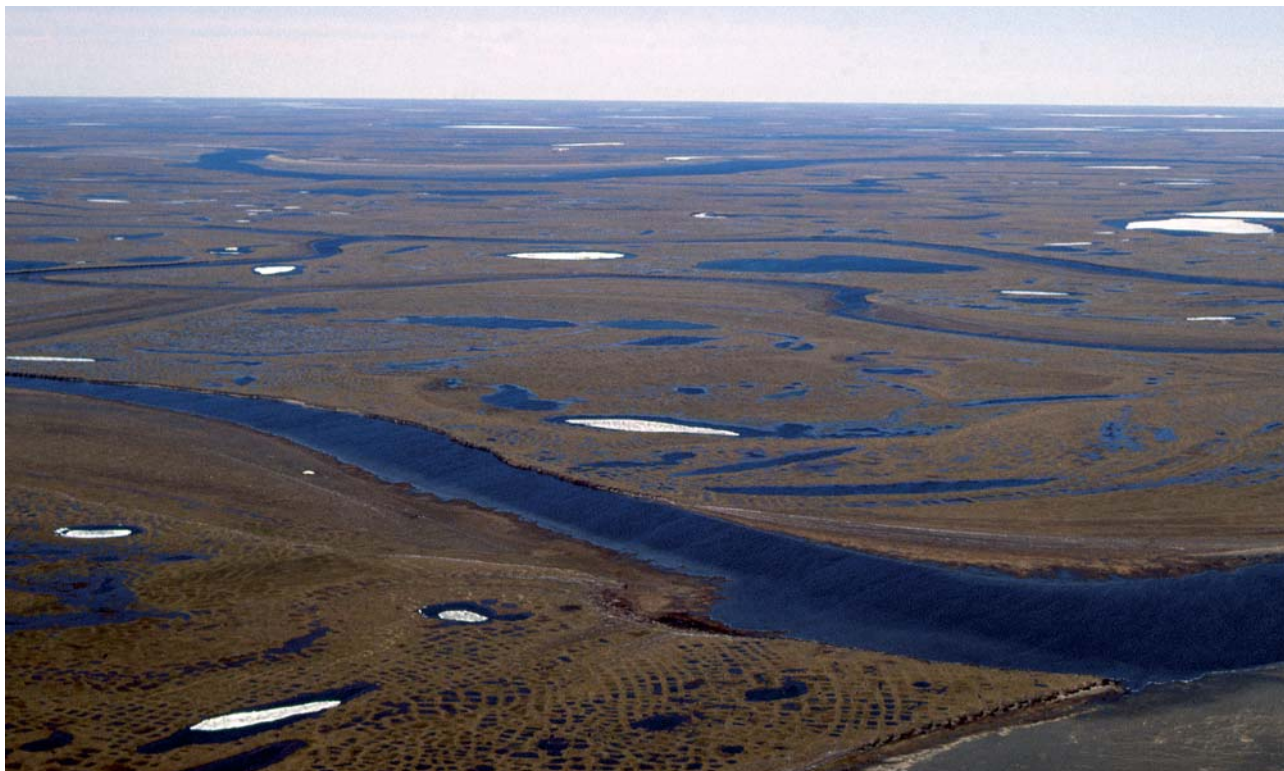


3.1 The Arctic: source of flyways. Workshop Introduction

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The immense tundra wetlands in the delta of the Lena river, northern Yakutia are the breeding grounds for millions of waterbirds. Whilst human densities are low, these areas are predicted to be widely impacted by changing global climates. Photo: Gerard Boere.

The arctic is the breeding ground for millions of waterbird connected to all global flyways. Environmental and climatic conditions in the arctic are critical for long term flyway conservation and management. The workshop reviewed recent developments in the arctic in relation to local and global changes, legislation and conservation issues, highlighting their importance for the long-term maintenance of the favourable status of migratory waterbirds.

Recent years have seen the active development of much organisational and institutional activity in the arctic, together with the progressive development of a range of multinational agreements and other international treaties (for example the Conservation of Arctic Flora & Fauna – CAFF – a working group of the Arctic Council). These all indicate greatly increased interest in the region.

Ornithological research in various regions of the arctic have focussed on studies of the factors influencing waterbird breeding success, as productivity can strongly vary between years. Soloviev *et al.* report on the development of an international programme to collate information on such between-year changes of productivity. Such fluctuations can also be measured on migration if trapping methods are carried out in a consistent manner as reported by Harebottle using the example of wader

productivity as assessed in South Africa – the far migratory terminus of the species' concerned.

Engelmoer *et al.* summarise the long-term and differential population trends of arctic breeding waders as monitored in temperate wintering areas (the Dutch Wadden Sea). The need to standardise much of the monitoring of arctic breeding waders has lead to the establishment of a Committee for Holarctic Shorebird Monitoring (CHASM). Lanctot, on behalf of the Committee, summarises the issues that led to its development and plans for the implementation and development of this important initiative.

In recent years, much more attention, both on the breeding and wintering areas, has been given to endangered arctic waders such as the Spoon-billed Sandpiper *Eurynorhynchus pygmeus*. The reasons for the decline of this species are still unknown. A range of new techniques such as stable isotope analysis have been invaluable in determining the breeding and wintering areas of such rare and threatened species, as reported by Zöckler *et al.*

With climate change predicted to impact more rapidly on the arctic more than on other regions (see the section on the implications of climate change for waterbirds elsewhere in this volume), the need for increased research and conservation effort is strongly stressed.