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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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Monitoring needs and landscape level planning for conservation of waterbirds in Abu Dhabi, United Arab Emirates

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The mudflats of the southern Gulf support several million waterbirds during spring and autumn migration and an estimated 250 000 shorebirds use the vast inter-tidal zone of the United Arab Emirates (UAE) at peak periods (Evans 1994, Butler *et al.* 2001). The Emirate of Abu Dhabi, with nearly 70% of the total land area of the Emirates, a 340 km coastline and nearly 40 big and small islands, supports a rich assemblage of birds, particularly waterbirds and nationally and regionally important breeding colonies of seabirds. Nearly 40% of all bird species recorded in the Emirate are waterbirds.

On several islands in the Emirate breeding colonies of the regionally endemic, and globally threatened, Socotra Cormorant *Phalacrocorax nigrogularis* are of global significance. Breeding colonies of Crab Plover *Dromas ardeola*, restricted to only two islands, are internationally important. Important breeding populations of White-cheeked Tern *Sterna repressa* and four other terns *Sterna* spp., Sooty Gull *Larus hemprichii* and Red-billed Tropicbird *Phaethon aethereus* are also found in the Emirate (Aspinall 1995, Aspinall 1996). Fifteen key islands in the Emirate contain 85% of all the IBAs, 85% of all tern colonies in the UAE, almost the entire breeding populations of five terns (*Sterna* spp.), nearly 80% of the Socotra Cormorant breeding population and all the breeding population and colonies of Crab Plover and Red-billed Tropicbird in the UAE (Javed & Khan 2003). Fifteen globally, and several regionally, threatened species are found in the country (BirdLife International 2005, Hornby & Aspinall 1996).

Rapid urban and industrial infrastructure development in the country, mostly along the coast and islands, has put many breeding colonies under threat (Evans 1994). Between 1995 and 2002 numbers of Socotra Cormorant breeding colonies have declined by more than 50%, from 13 colonies in 1995 to only six by 2002 (Aspinall 1996, Javed & Khan 2004). However, inconsistencies in methods, timings and data gaps do not allow any meaningful comparison of trends in overall breeding seabird numbers.

Conservation of waterbirds in the Emirate has three inherent weaknesses. First, information on waterbird populations is inconsistent and sporadic. Second, the network of protected coastal and island sites is inadequate. Third, the coastline and many islands are under severe developmental pressure and are being altered rapidly due to the absence of any policy or Coastal Zone Management Plan.

Systematic, long-term population monitoring is fundamental to acquire information on important bird populations, both to monitor changes and recommend actions. Abu Dhabi's Environment Agency (EAD) waterbird programme is a step in that direction. Such monitoring programmes, initiated locally,

should also develop into bigger programmes for the entire region. The Middle East is, and will remain, a political hotspot because of strategic oil reserves and increasing global energy demands, and will pose threats to waterbirds from oil spills and conflicts such as the Gulf War (Evans & Keijl 1993, Symens & Suhaibaini 1993). A regional waterbird monitoring programme with networks of individuals and organisations will be important for capacity building, monitoring and rapid response to oil spills and other events.

The long-term future of species and sites cannot be guaranteed without protection. Important islands for waterbirds should be declared as protected immediately (Javed & Khan 2003), to add to the existing protected areas under the Morrawah Marine Protected Area (MMPA) which currently has nine islands with an area of 4 225 km². IBAs or areas listed in the Directory of wetlands in the Middle East (Scott 1995) do not guarantee protection for sites, but they do provide international recognition to sites and it is imperative to further protect them.

Landscape patterns influence bird assemblages, and the understanding of such patterns provides opportunities and challenges (Clark *et al.* 2004). As migratory waterbirds use large geographical areas and move across them, a landscape based approach to monitor and conserve the wintering, staging and breeding waterbirds and their habitat is essential. However, management of areas along the coast is not only very difficult, but also extremely challenging due to such areas often being of high economic value for property development, tourism and industry. A landscape-scale management approach is needed to secure the conservation of waterbirds while enabling the UAE, and the Emirate in particular, to develop sustainably through maintaining natural ecosystem processes and the integrity and well being of coastal and inland ecosystems.

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The United Arab Emirates hold an important breeding population of Red-billed Tropicbird *Phaethon aethereus*. Photo: Simon Stirrup.