

UNITED ARAB EMIRATES***Country Report for the Central Asian Flyway Overview*****A. Brief Introduction**

The United Arab Emirates (UAE), located at the south-east end of the Arabian Gulf. Saudi Arabia lies to the south & west, Sultanate of Oman in the north and east and Qatar in the west. Nearly four-fifths of the country is desert (UAE Yearbook, 2005). From extensive sand dunes to mountains, valleys, plains, extensive coastline, inter-tidal flats and islands the country has a mosaic of landscape types. The earliest evidence of human life is from 5500 BC (Late Stone Age) when the climate was wetter and more humid.

The UAE is a confederation of seven emirates, established in 1971. The seven emirates, prior to 1971 were known as Trucial States, following a treaty with the British. The establishment of Federation and discovery of oil nearly four decades back, started new era of development in the country. The high oil prices and development in other areas, particularly trading and tourism has contributed significantly to the growing economy of the country. The total population of country has grown from nearly 1 million in 1980 to an estimated 4.3 millions in 2004 (UAE Yearbook, 2005). The rapid rate of development in the country is fast transforming countries coastline, islands and even remote desert areas and is likely to have considerable impact on the natural resources. Development is particularly more intensive along the coast and therefore pose bigger threat to conservation of waterbirds than to land birds in general, especially shorebirds which use the extensive coastline of the country. However, increasing level of awareness, educational programme combined with implementation of legislation, new regulations and standards, including Environmental Impact Assessment procedures are significant steps taken to protect the natural resources of the country.

The UAE, though relatively small in terms of geographical area (83,000 km²) has a rich bird life. Considering the fact that a sizeable portion of the country's landscape is desert with low species diversity and abundance, the avifauna of UAE is relatively rich and is of regional and global importance (Javed, unpublished book chapter). An estimated 250,000 waders use the vast inter-tidal areas and during the course of a year a turnover of several million individuals of shorebirds is estimated (Evans, 1994). Such a high turnover of waterbirds in the country is due to the strategic location in the centre of the Eurasian and Central Asian flyways and also possibly because of the higher primary productivity of the coastal zone of the Arabian Gulf (Butler et al. 2001). There are 20 IBAs in the country (Evans 1994), thirteen of these are mostly for the seabird colonies (Aspinall, 1997). Five new IBA's (four based on the waterbirds) have recently been identified in the Abu Dhabi emirate using the existing IBA criteria (Javed & Khan, 2003). There are at least eight species of internationally important breeding colonies of waterbirds in the UAE.

Socotra cormorant *Phalacrocorax nigrogularis* is globally threatened and is the only regional endemic (Aspinall, 1997) and has 6 of the 14 known breeding colonies of the world in the UAE.

Regionally important breeding colonies of five species of terns (Appendix 1); Crab Plover *Dromas ardeola*, Red-billed Tropicbird *Phaethon aethereus* are found in the UAE, some of which are well protected.

The Morrawah Marine Protected Area (MPA) covering nearly 8 island protects several important islands, both for breeding and migrant waterbirds (Appendix II). ERWDA is currently engaged in surveying areas, both along the coast and on the islands to be brought up under the protected area network. Several islands were assessed largely for waterbirds to identify key sites for protection on (Javed & Khan, 2003). Work is in progress to update a coastal resource / sensitivity atlas for the Abu Dhabi emirate to begin with and to prepare an Integrated Coastal Zone Management Plan. These are significant positive steps taken to conserve the biodiversity of the country in general and will contribute enormously to the conservation of waterbirds.

B. National administrative structures for migratory waterbirds and wetlands

This section provides a brief overview of the national and sub-national (provincial/state) administrative agencies and structures that are responsible for migratory waterbird and wetland management and conservation.

As UAE is a federation of seven emirates, each of the emirates may differ in implementing activities related to different sectors. At the Federal Level, the Federal Environment Agency (FEA) is the main environmental body responsible for environmental protection through competent authorities in each emirate i.e. law enforcement, regulations and policy development and implementation of CBD and Federal Law No. 24. The FEA is an autonomous body with the board headed by the Minister of Health.

The Ministry of Agriculture and Fisheries (MAF) is responsible for Federal Law 23 for the protection of marine environment. MAF although has no specific programme for the protection of waterbirds, it indirectly through regulation and management of commercial coastal and marine fisheries, helps in the conservation of waterbirds.

Other than the above mentioned national bodies, environmental issues are dealt locally by each emirate. In the Emirate of Abu Dhabi, the Environmental Research & Wildlife Development Agency (ERWDA) an Abu Dhabi government body is responsible for all the issues related to waterbirds and wetland protection, which includes monitoring of waterbirds, management of an existing wetland reserve, identification and designation of coastal and marine protected areas for the conservation of waterbirds and overall biodiversity.

The emirate of Sharjah through its Department of Environment and Protected Areas (DEPA) runs the Desert Park and endangered Arabian Wildlife Centre. DEPA is responsible for the designation of reserves in the emirate. In Dubai, the Environment Department of the Dubai Municipality looks after the environment issues. Emirates of Ajman, Ras Al Khaimah, Umm Al Quawain and Fujairah do not have a well defined structure for the protection of wildlife in general and waterbirds in particular however, the local municipalities in each of these emirates is responsible for maintenance and management of parks and zoos in addition to the regular civic responsibilities.

Table 1: National administrative structures responsible for managing migratory waterbirds and wetlands

Name of Agency (with contact details)	Geographic scope	Thematic Focus	Principle outputs on waterbirds and wetlands
FEA	Entire Country	Regulations, conventions, Law 24 and Law 11	Environmental regulations leading to protection of birds and their habitats
Ministry of Agriculture & Fisheries	Entire Country	Marine & Terrestrial wildlife, implementation of Law No. 23 on Marine Environment	Protection of coastal and marine habitats important for waterbirds through Law 23.
ERWDA	Abu Dhabi Emirate	Environment & Wildlife conservation	Island and coastal waterbirds project. Monitoring & management of an important wetland reserve. Collaborative research on Kentish Plover and programmes for studying movement & migration of waterbirds
Department of Environment & Protected Areas	Sharjah Emirate	Designation of parks, captive breeding centre	Not direct
Municipalities	All emirates	Designation and management of parks and zoo	Declaration of Ras Al Khor sanctuary, a key wintering area for waterbirds in the emirate

C. National policy and legislation relating to migratory waterbirds and wetlands

This section provides a brief overview of the national and sub-national policies and legislation that relate to migratory waterbird and wetlands. A list of regulations that relate to hunting or take of migratory species should be provided.

The country has made sincere efforts to protect its biological diversity. Internationally its intent is shown by signing several international conventions and complemented by domestic legislation. UAE is signatory to nearly 16 international and two regional conventions besides 6 protocols related to environment and wildlife including the Convention on Biological Diversity (CBD), the Convention on International Trades in Endangered Species (CITES) and the Regional convention on Protection of the Marine Environment (ROPME).

However as international conventions are not binding laws and need complementary national laws, to implement these conventions and fulfil the obligations as a signatory, the country has several important environmental legislations which very effectively protect country natural resources.

The two most important laws, Federal Law No. 24 and Federal Law No 23 deal with the environment and wildlife conservation. The Federal Law 24 of 1999 for the “Protection and development of environment” covers most aspects of the country’s natural environment with Federal Environmental Agency (FEA) as the implementing agency. Local authorities in each emirate are the competent authorities. The first six chapters state the law, while chapter VII (Articles 69-72) has provision for liabilities and compensation for environmental damages. Provisions for penalties are dealt in Chapter VIII (Articles 73-90). Articles 63-68 under chapter VI

deal with the 'Natural Reserve' and prohibit hunting, transportation or killing of animals and birds, besides encouraging studies and monitoring, leading to establishment of reserves, protection and monitoring of the biodiversity.

A Federal decree (Law No. 9) of 1983 'Regulating the Hunting of Birds and Animals' is another piece of legislation to protect migratory and resident birds. As per Article 1 of the law 'hunting, gathering or destruction of eggs' of land and seabirds is banned except for cormorants. Provisions for the protection of the country's marine environment are made in Federal Law No. 23 of 1999, regulating the exploitation, protection and development of marine biological resources, which indirectly also protect birds and in particular shorebirds and breeding seabirds. The Federal Law No. 11 of 2002 deals with the regulation and control of international trade in endangered species.

List of relevant National Legislations which directly or indirectly protect migratory waterbirds

- Law No. 9 (Federal decree) of 1983 - Regulates hunting, gathering or taking of birds and their eggs'
- The Federal Law 23 of 1999 - for regulating the exploitation, protection and development of marine biological resources
- The Federal Law 24 of 1999 - makes provision for the protection of environment and establishment/role of agencies to oversee such developments:
- The Federal Law No. 11 of 2002 deals with the regulation and control of international trade in endangered species

D.National government institutions involved in migratory waterbirds and wetlands research/management

This section provides a brief overview of the government institutions whose scope includes research, management, awareness-raising and conservation of migratory waterbirds and wetlands. This information will provide the basis for identification of institutions that could lead or be involved in cooperative projects.

At the national level the Federal Environmental Agency (FEA) is the main national level agency dealing with environmental legislation and management authority for CITES in the country. At the emirate level it works closely with various local government agencies which are designated scientific authorities on the subject matter, such as Environmental Research & Wildlife Development Agency (ERWDA) in the emirate of Abu Dhabi. ERWDA is the only such agency in the entire country; however in other Emirates either municipality or relevant environmental bodies undertake some of the responsibilities of environmental protection and implementation of environmental legislation, which is a federal law.

ERWDA is an Abu Dhabi Government environmental agency responsible for conducting research on various aspects of natural resources of the Emirate. Its main research centres include Terrestrial Environment Research Centre (TERC) responsible for undertaking research and conservation of the terrestrial environment, including those on the islands also; the Marine Environment Research Centre (MERC) responsible for all aspects of marine biodiversity research and management and the National Avian Research Centre (NARC) responsible for the research, conservation and

captive breeding of Houbara. ERWDA is also responsible for permitting, regulation for industrial establishments, fishing licenses etc. The Environmental Education and Awareness Department of ERWDA look after all the environmental issues in the emirate, besides partnering with other local government and NGO's in other emirates to spread awareness.

As Abu Dhabi Emirate is approximately 80% of the total geographical areas, has much of the coastline, almost all the important islands, particularly for breeding seabirds, conservation effort and role of ERWDA is highly significant at the overall country level and in a way compensates for other equivalent bodies in other emirates.

Table 2: National government institutions involved in migratory waterbirds and wetlands research/management

Name of Institution (with contact details)	Geographic scope	Thematic Focus or programmes	Principle outputs on waterbirds and wetlands
Ministry of Agriculture & Fisheries	Entire country	Fisheries / Coastal and Marine areas	Undertakes research through its fisheries Department on marine and coastal issues of economic importance
FEA	Entire Country	Regulations and management	Indirectly through various scientific authorities such as ERWDA
Rulers offices	Respective emirates	General / island sites	Protection of sites
Municipalities	For each Emirate	Overall maintenance of sites	Sites not under any ownership are under the control of municipalities and provide basic support for the protection.
ERWDA	Abu Dhabi (80% of the country)	Wildlife Research, protection and management	Management of a wetland reserve important for migratory waterbirds, survey & monitoring of breeding seabirds and other waterbirds

E. Main non-government organizations and academic institutions involved in migratory waterbirds and wetlands research/management

This section provides a brief overview of the non-government organizations and academic bodies involved in research, management, awareness-raising and conservation of migratory waterbirds and wetlands. This information will provide the basis for identification of organizations that could lead or be involved in cooperative projects.

There are four main non-governmental organisations related to the environment and wildlife conservation in the country. The Emirates Natural History Group is the oldest with Abu Dhabi, Dubai and Al Ain chapters and the primary focus is on birds. Weekly bird counts at several key sites are conducted by the members, which later form the basis of Emirates Bird Report. WWF-Emirates Wildlife Society (EWS) indirectly contribute to conservation of waterbirds, through education and awareness programmes on key aspects of coastal and inland wetlands. WWF-UAE is also involved in the development of on site education and awareness facilities at the Ras Al Khor Wildlife Sanctuary in Dubai, which is also an IBA.

Table 3: Main non-government organizations and academic institutions involved in migratory waterbirds and wetlands research/management

Name of non-government organization/ University (with contact details)	Geographic scope	Thematic Focus or programmes	Principle outputs on waterbirds and wetlands
Emirates Natural History Group (ENHG)	Entire country	Birds, natural history	Mid-winter Waterbirds count / Emirates Bird Report Publishes a weekly Twitcher's Guide
World Wildlife Fund for Nature (WWF) & Emirates Wildlife Society	Entire Country	Natural Environment	Ras Al Khor IBA and wildlife sanctuary
Commission of Environmental Research (CER)	Entire country	Biodiversity/Environment	Not specific
Emirate Environmental Group (EEG)	Entire country	Environmental Education/ Action Programmes & community involvement	Not specific
Environment Friends Society (EFS)	Entire country	Environmental Education/ Awareness	-

F. International Instruments

This discussion and table will highlight those international (Treaties/Agreements) that are relevant to your country's list of breeding waterbirds documented in Table 6. It is envisioned that bilateral and multilateral bird treaties and informal agreements would be described. As indicated in the Table 4, the scope, bird themes or focuses, and whether there is an implementing Action Plan associated with the instrument will be reported.

UAE is not yet a signatory to the CMS; however by being a signatory to the Convention on Biological Diversity (CBD), an overarching biodiversity conservation convention, the country is obligated to protect its biodiversity, including waterbirds, which constitute an important element of UAE biological diversity.

UAE is signatory to the Regional Convention for Cooperation on the Protection of Marine Environment (ROPME), signed in 1979 along with its protocol concerning regional Cooperation in Combating Pollution by Oil and other Harmful substance in case of Emergency (1978) is also an important regional agreement which indirectly help protection of waterbirds, both wintering shorebirds and breeding seabirds from the risk of oil pollution.

The Convention of Conservation of Wildlife and its Natural Habitat in the GCC countries is another significant regional convention signed in 2003 which also protects waterbirds in the country. Besides these, there are other conventions and protocols to which UAE is signatory or party to, which directly or indirectly help protect waterbirds in the country. UAE is also signatory to the Convention on International Trade in Endangered Species (CITES) and ERWDA is the scientific authority for CITES in the UAE.

Table 4: Main International Instruments (Treaties/Agreements) that are relevant to the migratory waterbirds and wetlands of the country

Instruments – formal	Geographic scope	Thematic Focus	Implementing Strategy or Action Plan
Convention on Biodiversity (CBD)	Entire country	Biodiversity	Not yet
Convention on International Trade in Endangered Species (CITES)	Entire country	Trade in Endangered species	
Regional Convention for the Protection of Marine Environment (ROPME)	Entire country	Protection of marine environment	Kuwait Action Plan to establish standards and monitoring programmes
Convention on Conservation of Wildlife and its Natural Habitats in the GCC countries, 2001	Entire country	Wildlife and Habitats	

G. International Programs and Activities

This discussion and table highlights each country's international waterbird program/activities/ actions/projects. It should indicate the applicable geographic region; cooperating country, instrument and partners, and whether there are reports available (See Table 5).

In the past several studies have been undertaken in the country, however, most of them were not part of a cooperative international and regional programmes or activities. Several short-term and independent studies by students have been undertaken on waterbirds. Currently ERWDA is conducting a collaborative research programme with the University of Bath on the Kentish Plovers at Al Wathba Wetland Reserve in the emirate of Abu Dhabi.

Table 5: International activities involving the countries migratory waterbirds (initiated in or since 2000, earlier programmes may also be included)

Activity	Waterbird Group	International partners	Principle outputs
Monitoring of breeding seabirds and other waterbirds	ERWDA	None	Monitoring Reports on waterbirds and, breeding seabird colonies. Management guidelines for waterbirds and flamingos at Al Wathba wetland reserve.
Ecological study on Kentish Plover	ERWDA	University of Bath	Ongoing work on reproductive success and post-breeding dispersal in Kentish plovers
Mid-winter waterbird count	ENHG/ ERWDA	Wetlands International	Asian Waterbird Counts

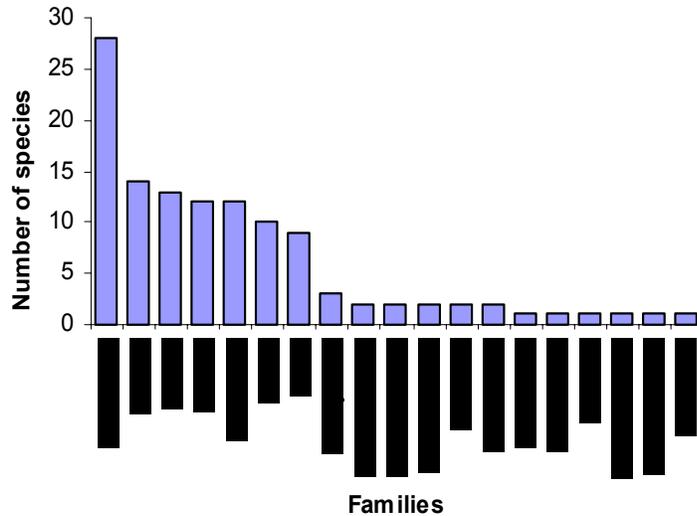
H. List of Regular Breeding and Migratory Waterbirds

To accomplish this section, each country's author needs to compile a table of regular waterbird breeders (not vagrants) that migrate outside the legal jurisdiction of the country. In addition, the table will need to specify regular migratory waterbird species (not vagrants) that visit the country. The information in these tables should be summarized in a short narrative. This table will form the foundation of the report. A master reference list of CAF migratory waterbirds and their population estimates will be provided by Wetlands International.

Nearly 117 species of waterbirds occur as regular breeding and migrant species in the United Arab Emirates (Appendix 1). This is nearly 65% of all the waterbirds listed in the Central Asian Flyway Action Plan. Of the 117 species, around 15% (17 species) are regular breeders while the rest 85% (100 species) are regular migrants, either as winter, passage or summer migrants.

Fig.1 Representative families of regular breeding and migrant waterbirds in the UAE

The 117 waterbird species are representative of 19 families (Fig.1). The most dominant is Scolopacidae with 28 species. Other families such as Sternidae (14), Anatidae (13) Ardeidae and Charadriidae, with 12 species contribute significantly to the



overall number of species of waterbirds. However this is no indication of importance of the families, as other families such as Phalacrocoracidae, represented by the Globally Threatened (BirdLife International, 2004) Socotra Cormorant *Phalacrocorax nigrogularis* and Dromadidae represented by a single species, Crab Plover *Dromas ardeola* (nationally important), with just three know breeding sites in the country) are much more important at global /regional or national levels.

I. Migration Routes, Staging Sites, and Non-breeding Areas

This section is a description and table of the key breeding areas, key staging areas and non-breeding areas of the country's waterbirds. Where specific information on the migration routes of waterbirds is available, a brief description may be provided, supported by references to published or unpublished literature and maps.

This information would provide a basis to highlight those regions/countries that your country needs to communicate/coordinate/collaborate with to ensure their conservation. With this information it will be possible to indicate those non-breeding regions/countries that are of highest priority. It also serves to connect with the discussion concerning International instruments.

The entire Arabian Gulf is important staging and wintering area on the major Eurasian-African flyways for shorebirds (Scott 1995) and also for birds using the Central Asian Flyway. Extensive coastline of the UAE is extremely important for wintering and staging waterbirds. The vast mud flats in the inter-tidal zone support several million shorebirds during the entire year (Evans 1994).

Mud-flats in particular for shorebirds and islands for breeding waterbirds are key areas for wintering and breeding waterbirds. A list of important sites for waterbirds is provided in Appendix (II). There are about 32 sites which are largely important for wintering or breeding waterbirds in the

country. The list is preliminary and there may be few more sites, particularly in other emirates which are also important for water and which can be added, possibly at a later stage.

Nearly 78% of all the sites important for waterbirds are located in the emirate of Abu Dhabi, making it one of the key areas for focussing conservation attention. Nearly 60% of all the important waterbird sites are designated IBAs; 14 identified by Evans (1994) and five new sites in the emirate of Abu Dhabi by Javed & Khan (2003). Except for one, all the other IBAs are identified on the basis of the breeding and wintering waterbirds.

Islands in particular are very important for waterbirds, as 75% of all the sites important for waterbirds are islands (Appendix II). Many of the near-shore and offshore islands host nationally and globally important breeding colonies, besides numerous wintering waterbirds in the surrounding mudflats. The breeding colony of Socotra cormorant, Red-billed Tropicbird, Crested Tern, Lesser Crested Tern, White-cheeked Tern, Bridled Tern and Sooty Gull are of international importance (Scott 1995); Javed & Khan 2003; Javed et al. 2005).

Of all the important wintering and breeding sites for waterbirds in the country, as listed in Appendix II, 25% have formal protection as protected areas; seven are island sites and are part of the Morrawah Marine Protected Area (MMPA) while only one, the Al Wathba Wetland Reserve is an inland wetland. All these sites are in the emirate of Abu Dhabi. Many other sites, particularly, islands, are either privately owned or are under the control of oil companies with varying levels of protection. Sites which are IBA don't have any formal protection however; more sites are likely to be brought under the protected area network in future which will increase the level of protection of wintering and breeding waterbirds in the country.

J. Waterbirds of CAF Conservation Concern (WCC)

This section will provide an opportunity to recognize those waterbird species that are of the highest priority in the country. Criteria to make that determination will be developed and used by each country. If a country has already done this exercise it is not recommended to invent a new list just for this report. Suggested criteria will be: breeding distribution; non-breeding distribution; relative abundance; population trends; threats on the breeding and non-breeding grounds; and country or area importance to the species (percentage of the breeding population in your country). Each country should describe, in adequate detail, how the WCC list was developed.

The next step will be to develop a list of priority species called the "Waterbirds of CAF Conservation Concern" on criteria that will be discussed at the CAF meeting.

A tentative list of 35 waterbird species is recognised as high priority for conservation in the country (Appendix 3). The importance or priority ranking is based on the six attributes i.e. internationally important breeding population; internationally important non-breeding population (Scott 1995; Evans 1994). Nationally important breeding population and nationally important non-breeding population; Rare UAE breeder (Hornby & Aspinall 1996) and IUCN threat status. This list is preliminary and needs modification and refinement, even the attributes used to identify the list. The list includes mainly those species which regularly winter or breed in the country.

K. Recommendations to Improve International Migratory Waterbird Conservation

The section will include a discussion summarizing the key information in the tables and discussions; and then list the recommended improvements (new instruments/projects/working groups) needed to improve the conservation of migratory waterbirds in the country and flyway.

UAE is an important area for the wintering, breeding and staging waterbirds and conservation of the waterbirds and their habitats is an important element in the conservation of overall biodiversity of the country. With nearly 50% of all the bird species on the Central Asian Flyway and covered under the Central Asian Action Plan, found in the UAE, the country assumes much greater significance to conserve waterbirds and their habitats. Past and ongoing work on waterbirds has documented important sites for the conservation. Some of the sites are already protected whereas some other sites, important for breeding and wintering waterbirds, need to be protected immediately. Recommendations for some such sites have already been made, at least for the emirate of Abu Dhabi.

Continued monitoring and research work is essential to document the state of migratory waterbirds so that appropriate conservation actions can be taken as and when needed. Hopefully the ongoing work on waterbirds, implemented by ERWDA will likely to continue and will cover both, the monitoring of waterbirds as well as focussed studies on key species. However, similar efforts are needed for other emirates too.

In country monitoring and studies are not enough unless countries in the region, particularly in the gulf and also other countries in the CAF Action Plan take lead in setting up regional framework for waterbird monitoring. Countries in the Arabian Gulf region such as Saudi Arabia, UAE, Iran to mention a few have expertise and resources to mobilise for setting up a cooperative waterbird monitoring programme, with a centralised database accessible to all the participating countries. Such programmes and databases can be linked to Wetlands Internationals for regular assessment and update on the trends and status of waterbirds.

Training programmes directed at developing capacity for conducting waterbird surveys and monitoring is a key requirement for the region. Development of such training programmes along with training manuals can be effectively done for the entire Gulf region. This will not only develop capacity in the CAF countries in the Gulf and may be other countries in the CAF region. This will also be important in developing partnerships and creating a working network, so central to the long-term conservation of waterbirds, both within the country and within the CAF region.

L. References

- Anonymous (2005). *UAE Yearbook*. Ministry of Information and Culture. Trident Press Ltd, London.
- Aspinall, S and Hirschfeld, E. (1993). The first breeding of the Greater Flamingo *Phoenicopterus ruber* in the UAE. *Tribulus* 3.2: 5-6.
- Aspinall, S. (1996). *The breeding birds of the United Arab Emirates*. Hobby Publications, UK.
- BirdLife International (2000). *Threatened birds of the World*. Barcelona and Cambridge, UK. Lynx Edicions and BirdLife International, pp 852.
- Boer, B and Griggs, A. (1994). Impact of the oil spill on inter-tidal areas along the east coast of the United Arab Emirates in April 1994. *Tribulus* 4.2:20-23.
- Butler, R.W., Davidson, N.C and Morrison, R.I.G (2001). Global-scale shorebird distribution in relation to productivity of near-shore ocean waters. *Waterbirds* 24(2):224-232.
- Evans, M (1994). *Important Bird Areas in the Middle East*. BirdLife International, UK.
- Evans, M. I and Keijl, G.O. (1993). Impact of Gulf War oil spills on the wader populations of the Saudi Arabian Gulf Coast. *Sandgrouse* 15: 85-105.
- Hornby, R and Aspinall, S. (1996). Red Data List for Birds of the United Arab Emirates. *Tribulus* 6.2:13-17.
- Javed, S and Khan, S.B (2003). Important Islands for bird conservation in the Abu Dhabi Emirate. Unpublished Report. Environmental Research and Wildlife Development Agency, Abu Dhabi.
- Javed, S., Khan, S.B., Launay, F., Tourenq, C. & Newby, J. (2005). Nest site selection by sooty gulls on Jarnein Island, United Arab emirates. *Waterbirds* 28: 245-248.
- Pilcher, C. W.T. and Sexton, D.B. (1993). Effects of the Gulf War oil spills and well-head fires on the avifauna and environment of Kuwait. *Sandgrouse* 15: 6-17.
- Richardson, C (1990). *The birds of the United Arab Emirates*. Hobby publications, Dubai and Warrington.
- Richardson, C (ed.) (2003). *The Emirates Bird Report No. 20*. Emirates Bird Records Committee.
- Scott, D.A (ed.) (1995). *A Directory of the wetlands in the Middle East*. Gland, Switzerland, IUCN and IWRB Slimbridge, UK.
- Symens, P and Evans, M.I. (1993). Impact of Gulf War oil spills on Saudi Arabian breeding populations of terns *Sterna* in the Arabian Gulf, 1991. *Sandgrouse* 15: 18-36.
- Symens, P and Suhaibaini, A. (1993). Impact of Gulf War oil spills on the wintering seabird populations along the northern Arabian Gulf coast of Saudi Arabian, 1991. *Sandgrouse* 15: 37-43.

Appendix 1
List of regular wintering and breeding waterbirds in the United Arab Emirates

Sn	Species	Scientific name	Family	Status	Remarks
1	Little Grebe	<i>Tachybaptus ruficollis</i>	Podicipedidae	Breeder	Resident breeding species
2	Great Crested Grebe	<i>Podiceps cristatus</i>	Podicipedidae	Migrant	Rare Migrant
3	Black-necked Grebe	<i>Podiceps nigricollis</i>	Podicipedidae	Migrant	Winter Migrant, Occasional breeder
4	Wilson's Storm Petrel	<i>Oceanites oceanicus</i>	Hydrobatidae	Migrant	Summer & Winter visitor
5	Red-billed Tropicbird	<i>Phaethon aethereus</i>	Phaethontidae	Breeder	Localised breeder; post-breeding dispersal
6	Socotra Cormorant	<i>Phalacrocorax nigrogularis</i>	Phalacrocoracidae	Breeder	Post breeding dispersal
7	Great Cormorant	<i>Phalacrocorax carbo</i>	Phalacrocoracidae	Migrant	Common winter migrant
8	Night Heron	<i>Nycticorax nycticorax</i>	Ardeidae	Migrant	Passage / winter migrant; occasional breeding
9	Striated Heron	<i>Butorides striatus</i>	Ardeidae	Breeder	Resident
10	Western Reef Heron	<i>Egretta gularis</i>	Ardeidae	Breeder	A common resident breeding species
11	Little Bittern	<i>Ixobrychus minutus</i>	Ardeidae	Migrant	Regular migrant
12	Bittern	<i>Botaurus stellaris</i>	Ardeidae	Migrant	Uncommon winter migrant
13	Squacco Heron	<i>Ardeola ralloides</i>	Ardeidae	Migrant	Regular passage migrant
14	Indian Pond Heron	<i>Ardeola grayii</i>	Ardeidae	Migrant	Regular non-breeding migrant
15	Cattle Egret	<i>Bubulcus ibis</i>	Ardeidae	Migrant	Common winter migrant
16	Little Egret	<i>Egretta garzetta</i>	Ardeidae	Migrant	Common passage migrant
17	Great Egret	<i>Egretta alba</i>	Ardeidae	Migrant	Uncommon passage migrant
18	Grey Heron	<i>Ardea cinerea</i>	Ardeidae	Migrant	Common winter migrant
19	Purple Heron	<i>Ardea purpurea</i>	Ardeidae	Migrant	Common passage migrant
20	White Stork	<i>Ciconia ciconia</i>	Ciconiidae	Migrant	Uncommon passage migrant
21	Glossy Ibis	<i>Plegadis falcinellus</i>	Threskiornithidae	Migrant	Uncommon passage migrant
22	Spoonbill	<i>Platalea leucorodia</i>	Threskiornithidae	Migrant	Winter migrant
23	Greater Flamingo	<i>Phoenicopterus ruber</i>	Phoenicopteridae	Migrant	Passage and winter migrant with some resident birds
24	Mallard	<i>Anas platyrhynchos</i>	Anatidae	Migrant	Common winter migrant
25	Greylag Goose	<i>Anser anser</i>	Anatidae	Migrant	Uncommon winter migrant
26	Ruddy Shelduck	<i>Tadorna ferruginea</i>	Anatidae	Migrant	Uncommon winter migrant
27	Shelduck	<i>Tadorna tadorna</i>	Anatidae	Migrant	Winter migrant, localised
28	Wigeon	<i>Anas penelope</i>	Anatidae	Migrant	Regular winter migrant
29	Gadwall	<i>Anas strepera</i>	Anatidae	Migrant	Uncommon winter migrant
30	Teal	<i>Anas crecca</i>	Anatidae	Migrant	Common winter migrant
31	Pintail	<i>Anas acuta</i>	Anatidae	Migrant	Common winter migrant
32	Garganey	<i>Anas querquedula</i>	Anatidae	Migrant	Common passage migrant
33	Shoveler	<i>Anas clypeata</i>	Anatidae	Migrant	Common winter migrant
34	Pochard	<i>Aythya ferina</i>	Anatidae	Migrant	Localised winter migrant
35	Ferruginous Duck	<i>Aythya nyroca</i>	Anatidae	Migrant	Scarce winter migrant

36	Tufted Duck	<i>Aythya fuligula</i>	Anatidae	Migrant	Uncommon
37	Moorhen	<i>Gallinula chloropus</i>	Rallidae	Migrant	Migrant with some resident breeding birds
38	Spotted Crake	<i>Porzana porzana</i>	Rallidae	Migrant	Regular passage migrant
39	Little Crake	<i>Porzana parva</i>	Rallidae	Migrant	Rare passage migrant
40	Baillon's Crake	<i>Porzana pusilla</i>	Rallidae	Migrant	Rare passage migrant
41	Corn Crake	<i>Crex crex</i>	Rallidae	Migrant	Rare passage migrant
42	White-breasted Waterhen	<i>Amuarornis phoenicurus</i>	Rallidae	Migrant	Rare winter migrant
43	Purple Gallinule	<i>Porphyrio porphyrio</i>	Rallidae	Migrant	Rare winter migrant
44	Coot	<i>Fulica atra</i>	Rallidae	Migrant	Localised winter migrant
45	Red-knobbed Coot	<i>Fulica cristata</i>	Rallidae	Migrant	Rare winter migrant
46	Water Rail	<i>Rallus aquaticus</i>	Rallidae	Migrant	Scarce winter migrant
47	Black winged Stilt	<i>Himantopus himantopus</i>	Recurvirostridae	Breeder	Common resident, some local movement
48	Avocet	<i>Recurvirostra avosetta</i>	Recurvirostridae	Migrant	Irregular migrant with some breeding birds
49	Oystercatcher	<i>Haematopus ostralegus</i>	Haematopodidae	Migrant	Common winter migrant
50	Crab Plover	<i>Dromas ardeola</i>	Dromadidae	Breeder	Resident, post breeding dispersal and winter influx
51	Collared Pratincole	<i>Glareola pratincola</i>	Glareolidae	Migrant	Regular autumn migrant
52	Oriental Pratincole	<i>Glareola maldivarum</i>	Glareolidae	Migrant	Rare autumn migrant
53	Red-wattled Lapwing	<i>Vanellus indicus</i>	Charadriidae	Breeder;	Migrant and some breeding regularly
54	Kentish Plover	<i>Charadrius alexandrinus</i>	Charadriidae	Breeder	Common resident; winter migrant
55	White-tailed Plover	<i>Vanellus leucurus</i>	Charadriidae	Migrant	Regular winter migrant; occasional breeder
56	Little Ringed Plover	<i>Charadrius dubius</i>	Charadriidae	Breeder	Passage migrant; breeding summer migrant
57	Ringed Plover	<i>Charadrius hiaticula</i>	Charadriidae	Migrant	Common migrant
58	Lesser Sand Plover	<i>Charadrius mongolus</i>	Charadriidae	Migrant	Common winter migrant
59	Greater Sand Plover	<i>Charadrius leschenaultii</i>	Charadriidae	Migrant	Common winter migrant
60	Caspian Plover	<i>Charadrius asiaticus</i>	Charadriidae	Migrant	Uncommon passage migrant
61	Dotterel	<i>Eudromias morinellus</i>	Charadriidae	Migrant	Rare autumn migrant
62	Pacific Golden Plover	<i>Pluvialis fulva</i>	Charadriidae	Migrant	Regular winter migrant
63	Grey Plover	<i>Pluvialis squatarola</i>	Charadriidae	Migrant	Common winter migrant
64	Lapwing	<i>Vanellus vanellus</i>	Charadriidae	Migrant	Rare winter migrant
65	Great Knot	<i>Calidris tenuirostris</i>	Scolopacidae	Migrant	Winter migrant
66	Sanderling	<i>Calidris alba</i>	Scolopacidae	Migrant	Common winter migrant
67	Little Stint	<i>Calidris minuta</i>	Scolopacidae	Migrant	Common winter migrant
68	Temminck's Stint	<i>Calidris temminckii</i>	Scolopacidae	Migrant	Regular winter migrant
69	Long toed Stint	<i>Calidris subminuta</i>	Scolopacidae	Migrant	Rare passage migrant
70	Curlew Sandpiper	<i>Calidris ferruginea</i>	Scolopacidae	Migrant	Common winter migrant
71	Dunlin	<i>Calidris alpina</i>	Scolopacidae	Migrant	Common winter migrant
72	Broad-billed Sandpiper	<i>Limicola falcinellus</i>	Scolopacidae	Migrant	Regular winter migrant
73	Ruff	<i>Philomachus pugnax</i>	Scolopacidae	Migrant	Common winter migrant
74	Jack Snipe	<i>Lymnocyptes minimus</i>	Scolopacidae	Migrant	Rare
75	Snipe	<i>Gallinago gallinago</i>	Scolopacidae	Migrant	Common winter migrant
76	Great Snipe	<i>Gallinago media</i>	Scolopacidae	Migrant	Rare passage migrant
77	Pintail Snipe	<i>Gallinago stenura</i>	Scolopacidae	Migrant	Localised winter migrant
78	Black-tailed Godwit	<i>Limosa limosa</i>	Scolopacidae	Migrant	Localised winter migrant
79	Bar-tailed Godwit	<i>Limosa lapponica</i>	Scolopacidae	Migrant	Common winter migrant
80	Whimbrel	<i>Numenius phaeopus</i>	Scolopacidae	Migrant	Common winter migrant

81	Curlew	<i>Numenius arquata</i>	Scolopacidae	Migrant	Common winter migrant
82	Spotted Redshank	<i>Tringa erythropus</i>	Scolopacidae	Migrant	Scarce winter migrant
83	Redshank	<i>Tringa totanus</i>	Scolopacidae	Migrant	Common winter migrant
84	Marsh Sandpiper	<i>Tringa stagnatilis</i>	Scolopacidae	Migrant	Uncommon winter migrant
85	Greenshank	<i>Tringa nebularia</i>	Scolopacidae	Migrant	Common winter migrant
86	Green Sandpiper	<i>Tringa ochropus</i>	Scolopacidae	Migrant	Common winter migrant
87	Wood Sandpiper	<i>Tringa glareola</i>	Scolopacidae	Migrant	Common winter migrant
88	Terek Sandpiper	<i>Tringa cinerea</i>	Scolopacidae	Migrant	Common winter migrant
89	Common Sandpiper	<i>Tringa hypoleucos</i>	Scolopacidae	Migrant	Common winter migrant
90	Turnstone	<i>Arenaria interpres</i>	Scolopacidae	Migrant	Common winter migrant
91	Red-necked Phalarope	<i>Phalaropus lobatus</i>	Scolopacidae	Migrant	Common winter migrant
92	Grey Phalarope	<i>Phalaropus fulicarius</i>	Scolopacidae	Migrant	Scarce winter migrant
93	Sooty Gull	<i>Larus hemprichii</i>	Laridae	Breeder	Common
94	Pomarine Skua	<i>Stercorarius pomarinus</i>	Stercorariidae	Migrant	Common passage migrant
95	Arctic Skua	<i>Stercorarius parasiticus</i>	Stercorariidae	Migrant	Uncommon passage migrant
96	Great Black-headed Gull	<i>Larus ichthyaetus</i>	Laridae	Migrant	Uncommon winter migrant
97	Black-headed Gull	<i>Larus ridibundus</i>	Laridae	Migrant	Common winter migrant
98	Brown-headed Gull	<i>Larus brunnicephalus</i>	Laridae	Migrant	Uncommon winter migrant
99	Slender-billed Gull	<i>Larus genei</i>	Laridae	Migrant	Common winter migrant
100	Common Gull	<i>Larus canus</i>	Laridae	Migrant	Rare winter migrant
101	Lesser Black-backed (Baltic) Gull	<i>Larus fuscus</i>	Laridae	Migrant	Uncommon winter migrant
102	Siberian Gull	<i>Larus heuglini</i>	Laridae	Migrant	Common passage migrant
103	Caspian Gull	<i>Larus cachinnans</i>	Laridae	Migrant	Common winter migrant
104	Lesser Crested Tern	<i>Sterna bengalensis</i>	Sternidae	Breeder	Summer breeding visitor
105	Caspian Tern	<i>Sterna caspia</i>	Sternidae	Breeder	Common winter migrant; passage migrant; some breed in the country
106	Swift (Crested) Tern	<i>Sterna bergii</i>	Sternidae	Breeder	Migrant breeder
107	White-cheeked Tern	<i>Sterna repressa</i>	Sternidae	Breeder	Migrant breeder
108	Bridled Tern	<i>Sterna anaethetus</i>	Sternidae	Breeder	Migrant breeder
109	Saunders' Little Tern	<i>Sterna saundersi</i>	Sternidae	Breeder	Migrant breeder
110	Gull-billed Tern	<i>Gelochelidon nilotica</i>	Sternidae	Migrant	Common passage & winter migrant
111	Sandwich Tern	<i>Sterna sandvicensis</i>	Sternidae	Migrant	Common winter migrant
112	Roseate tern	<i>Sterna dougallii</i>	Sternidae	Migrant	Uncommon winter migrant
113	Common Tern	<i>Sterna hirundo</i>	Sternidae	Migrant	Common winter migrant
114	Sooty Tern	<i>Sterna fuscata</i>	Sternidae	Migrant	Uncommon winter migrant
115	Little Tern	<i>Sterna albifrons</i>	Sternidae	Migrant	Regular summer migrant
116	Whiskered Tern	<i>Chlidonias hybridus</i>	Sternidae	Migrant	Common passage migrant
117	White-winged Black Tern	<i>Chlidonias leucopterus</i>	Sternidae	Migrant	Regular autumn migrant

Appendix 2
List of Important wintering, breeding and staging sites for waterbirds in the UAE

Sn	Site name	Location	Emirate	Area	Important wintering and breeding species	Status	Source
1	Ghasha	24.25 °N - 52.39 °E	Abu Dhabi	0.4 km ²	Breeding colonies of Bridled Tern, White-cheeked Terns and also few pairs of Ospreys. Other species reported are, Lesser Crested, and Saunders Tern.	IBA: The three islands together form one IBA - Islands off Sir Bani Yas island	Javed & Khan 2003; Aspinnall 1996; NARC 1994
2	Umm Qasr	24.38 °N - 52.77 °E	Abu Dhabi	c. 0.35 km ²	About 10-15000 Socotra Cormorants breed on the island. Also important for wintering Western Reef Heron, Black-headed Gull and Turnstone.		
3	Umm Kurkum	24.39 N - 52.76 E	Abu Dhabi	c. 0.3 km ²	Part of the IBA complex consisting of Ghasha and Umm Qasr islands. Supports about 400 breeding Socotra Cormorant and some wintering waders.		
4	Ghagah	24.24 °N - 51.32 °E	Abu Dhabi	c. 4 km ²	An important breeding and wintering site for Socotra Cormorant, about 5-7 pairs of Osprey and some breeding White-cheeked Terns	IBA	Javed & Khan 2003; Aspinnall 1996; NARC 1994
5	Jarnein	24.57 °N - 52.40 °E	Abu Dhabi	1.5 km ²	Breeding colonies of Bridled Terns, Lesser Crested Terns, Swift Terns, Sooty Gulls and Red-billed Tropicbirds	IBA; WWF Gift to the Earth - Private Property	Javed & Khan 2003; NARC 1994
6	Yasat	24.16 °N - 51.51 °E	Abu Dhabi	14 km ²	Breeding colonies of Bridled Terns, White-cheeked Terns and Socotra cormorant on the North Yasat island. Some White-cheeked Tern also on the South Yasat island.	IBA; The two islands together are Yasat Island IBA; North Yasat is a private property	Javed & Khan 2003; Aspinnall 1996; NARC 1994
7	Delma	24.30 °N - 52.18 E	Abu Dhabi	c. 35 km ²	An important bird area by virtue of the breeding site for Sooty Falcon. Wintering Socotra Cormorant and Ospreys can be seen/	IBA	Aspinnall 1996; Evans (1994)
8	Abu Al Abyad	24.17 °N - 53.58 °E	Abu Dhabi	60 km ²	Biggest Crab Plover breeding colony in UAE. About 300 pairs, Also WC terns, Saunders Little Tern	IBA; Marine Protected Area - Managed by ERWDA	Evans (1994); Javed & Khan (2003); Aspinnall 1996;
9	Um Amim	24.13 °N - 53.25 °E	Abu Dhabi	c. 1 km ²	Crab Plover breeding site c. 40 pairs. Bridled terns, White cheeked Tern	IBA; Marine Protected Area - ERWDA Managed	Evans (1994); Javed & Khan (2003); Aspinnall 1996;
10	Bu Tiyeneh	24.62 °N - 53.04 °E	Abu Dhabi	c. 0.5 km ²	Small numbers of Bridled Terns and White cheeked Terns breed on the island. Several thousand Socotra Cormorant breed on a nearby rocky outcrop and also several active nests of Osprey.	Marine Protected Area - ERWDA Managed	Javed & Khan 2003; NARC 1994; Aspinnall 1996;

11	Morrawah	24.18 °N- 53....°E	Abu Dhabi	35 km ²	The inter-tidal areas support important concentration of wintering crab plovers, Kentish Plover, Bar-tailed Godwit and Black-headed Gull	Marine Protected Area - ERWDA Managed	Javed & Khan 2003; NARC 1994; Aspinnall 1996;
12	Jenanah	24.19 N - 53.43 E	Abu Dhabi	12.4 km ²	Important site for wintering Kentish Plovers, Crab Plovers and several other wader species.	Marine Protected Area - ERWDA Managed	Javed & Khan 2003; NARC 1994; Aspinnall 1996;
13	Al Bazm	24.31 N - 53.10 E	Abu Dhabi	5.3 km ²	Important for wintering Crab Plovers and Caspian Terns. Also has 4 active nests of Ospreys.	Marine Protected Area - ERWDA Managed	Javed & Khan 2003; NARC 1994; Aspinnall 1996;
14	Salahah	24.19 53.54	Abu Dhabi	c. 1.5 km ²	Important for breeding Bridled Terns, Socotra Cormorant and for	Marine Protected Area - ERWDA Managed	Javed & Khan 2003; NARC 1994; Aspinnall 1996;
15	Umm Al Hatab	24.21 N - 51.86 E	Abu Dhabi	c. 0.5 km ²	Breeding colonies of Bridled Terns, White-cheeked Terns, Two pairs of Osprey	New IBA; proposed for protection	Javed & Khan 2003; NARC 1994; Aspinnall 1996;
16	Muhayyamat	24.28 °N - 51.58 °E	Abu Dhabi	c. 1.25 km ²	The North Muhayyamat has important breeding colonies of Bridled Tern and White cheeked Terns. Nearly 5000 pairs of breeding Lesser Crested Terns are also present. There are several Osprey nests also on the island. Important wintering site for Socotra Cormorant. The south Muhayyamat has few hundred pairs of breeding White-cheeked Tern.	New IBA; proposed for protection	Javed & Khan 2003; NARC 1994; Aspinnall 1996;
17	Ushsh	24.29 N - 52.88 E	Abu Dhabi	0.5 km ²	Important breeding colonies of Bridled Tern and White-cheeked Tern, besides wintering waders in the inter-tidal areas around the island	New IBA; proposed for protection	Javed & Khan 2003; NARC 1994; Aspinnall 1996;
18	Dinah	24. 59 N - 52.25 E	Abu Dhabi	c. 1.5 km ²	Important for breeding Lesser Crested Tern (only 3-4 sites in UAE), more than 2000 White-cheeked Terns and few thousands Socotra Cormorants	New IBA; proposed for protection	Javed & Khan 2003; NARC 1994; Aspinnall 1996;
19	A Faziya	24.30 51.66	Abu Dhabi	3.25km ²	Important for breeding Ospreys, wintering waders	New IBA; proposed for protection	Javed & Khan 2003; NARC 1994; Aspinnall 1996;
20	Al Wathba Wetland	24.15 °N - 54.35 °E	Abu Dhabi	5 km ²	The only breeding site for Greater Flamingo in the UAE; Also supports regionally important breeding numbers of Kentish Plover and Black-winged Stilt and large numbers of wintering Kentish Plover and Little Stint.	Protected Area - ERWDA Managed	Aspinnall & Hirschfeld (1993); Khan & Javed (2004);
21	Sir Bani Yaas	24.20 N - 53.05 E	Abu Dhabi	87 km ²	Important for wintering Black-headed and Slender-billed Gulls and many other wader species		Javed & Khan 2003; NARC 1994; Aspinnall 1996;
22	Dhabbiya	24.25 N - 54.15 E	Abu Dhabi		Important for wintering crab plovers and several species of shorebirds		Aspinnall 1996;

23	Al Futaysi	24.18 N - 54.24 E	Abu Dhabi		Important site breeding Saunder's Little Tern Osprey and for the non-breeding numbers of Socotra Cormorant and Lesser Crested Tern		Aspinall 1996;
24	Zirku	24.88 N - 52.88 E	Abu Dhabi	7.5 km ²	Nationally important and second largest breeding population of the Red-billed Tropicbirds in the UAE	Oil concession island	Javed et al. (2004); Aspinall 1996;
25	Arzanah	24.78 N - 52.56 E	Abu Dhabi	4.2 km ²	One of the three breeding sites for the Red-billed Tropicbirds in the UAE	Oil concession island	Javed et al. (2004); Aspinall 1996;
26	Al Jazira Khor	24.45 N - 55.50 E	Ras Al Khaimah	5 km ²	Supports 3000-4000 wintering and passage migrants. Also supports 1% of the Terek Sandpiper (<i>Tringa cineria</i>) population and about 100 wintering Reef Heron	IBA	Evans (1994)
27	Sinyah Islan	25.39 °N - 55.40 °E	Umm al Quwain	10 km ²	About 40,000 pairs of Socotra are reported to breed on the island	IBA	Evans (1994)
28	Khor Al Beidah	25.32 °N - 55.38 °E	Umm al Quwain	50 km ²	Important for wintering crab plovers, Kentish Plovers and Little Stint. At least 30 pairs of Western Reef Heron breed in the area	IBA	Evans (1994); Emirates Bird report no. 20
29	Ramtha Lagoon	25.22 °N - 55.27 °E	Sharjah	2.5 km ²	Supports 50 pairs (1% or more of population) of the Black-winged Stilt. Also is important for wintering Greater Flamingo, Night Heron, breeding Little Ringed Plover and Western Reef Heron (on passage)	IBA	Evans (1994)
30	Zabeel	25.12 °N - 55.18 °E	Dubai	0.5 km ²	A nationally important waterbird site, mainly for wintering grebes, herons, ducks. The Little ringed Plover breeds on the site and is the only site for breeding Night Herons in the UAE	IBA	Evans (1994)
31	Khor Dubai	25.12 °N - 55.20 °E	Dubai	3 km ²	Mouth of about 10-km tidal creek is important for several species of migratory waterbirds. Main species are Grey Heron, Kentish Plover, Lesser & Greater Sand plovers, ringed Plover, Grey Plover, Red Shank and Black-headed Gull	IBA	Evans (1994)
32	Khor Kalba	25.00 °N - 56.20 °E	Sharjah	6 km ²	The only breeding site for the endemic subspecies of White-collared Kingfisher (<i>T.c.kalbaensis</i>) and important wintering site for Grey Heron.	IBA	Evans (1994)

Note: status of some of the sites, particularly from 26-30 and 31 may have changed significantly

Appendix 3
Priority waterbird species of the United Arab Emirates*

Sn	Species	Scientific name	Categories	Importance
1	Persian Shearwater	<i>Puffinus persicus</i>	6	Globally Threatened (NT) wintering species
2	Red-billed Tropicbird	<i>Phaethon aethereus</i>	1, 3	Small World Range; Internationally important breeding population
3	Socotra Cormorant	<i>Phalacrocorax nigrogularis</i>	1,3,6	Globally Threatened (VU); Internationally important breeding and non-breeding numbers
4	Western Reef Heron	<i>Egretta gularis</i>	2,3,4	Internationally important breeding population
5	Greater Flamingo	<i>Phoenicopterus ruber</i>	3,4	Rare UAE breeder
6	Ferruginous Duck	<i>Aythya nyroca</i>	6	Globally Threatened (VU) wintering species
7	Corn Crake	<i>Crex crex</i>	6	Globally Threatened (NT) wintering species
8	Black-winged Stilt	<i>Himantopus himantopus</i>	3	Nationally important breeding population
9	Avocet	<i>Recurvirostra avosetta</i>	5	Rare UAE breeder
10	Crab Plover	<i>Dromas ardeola</i>	1,2,3,4,	Internationally and nationally important breeding and wintering numbers
11	Kentish Plover	<i>Charadrius alexandrinus</i>	2,3	Internationally important non-breeding and nationally important breeding numbers
12	Lesser Sand Plover	<i>Charadrius mongolus</i>	2,4	Internationally & nationally important non-breeding numbers
13	Greater Sand Plover	<i>Charadrius leschenaultii</i>	2,4	Internationally & nationally important non-breeding numbers
14	Grey Plover	<i>Pluvialis squatarola</i>	2,4	Internationally & nationally important non-breeding numbers
15	Sociable Plover	<i>Vanellus gregarius</i>	6	Globally Threatened (VU) migrant in the country
16	Great Knot	<i>Calidris tenuirostris</i>	2,4	Internationally & nationally important non-breeding numbers
17	Curlew	<i>Numenius arquata</i>	2,4	Internationally & nationally important non-breeding numbers
18	Dunlin	<i>Calidris alpina</i>	2,4	Internationally & nationally important non-breeding numbers
19	Broad-billed Sandpiper	<i>Limicola falcinellus</i>	2,4,6	Globally Threatened (NT); Internationally & nationally important non-breeding numbers
20	Great Snipe	<i>Gallinago media</i>	6	Globally Threatened (NT); non-breeding migrant
21	Bar-tailed Godwit	<i>Limosa lapponica</i>	2,4	Internationally & nationally important non-breeding numbers
22	Redshank	<i>Tringa totanus</i>	2,4	Internationally & nationally important non-breeding numbers
23	Turnstone	<i>Arenaria interpres</i>	2,4	Internationally & nationally important non-breeding numbers
24	Sooty Gull	<i>Larus hemprichii</i>	1,3	Small World Range and with internationally important breeding numbers
25	White-eyed Gull	<i>Larus leucophthalmus</i>	6	Globally Threatened (NT) wintering species
26	Great Black-headed Gull	<i>Larus ridibundus</i>	2,4	Internationally & nationally important non-breeding numbers

27	Yellow-legged Gull	<i>Larus cachicanus</i>	2,4	Internationally & nationally important non-breeding numbers
28	Slender-billed Gull	<i>Larus genei</i>	2,4	Internationally & nationally important non-breeding numbers
29	Caspian Tern	<i>Sterna caspia</i>	3,5,6	Globally threatened (NT); rare UAE breeder and nationally important breeding numbers;
30	Crested Tern	<i>Sterna bergii</i>	1,3	Internationally and nationally important breeding numbers
31	Sandwich Tern	<i>Larus</i>	2,4	Internationally & nationally important non-breeding numbers
32	Lesser Crested Tern	<i>Sterna bengalensis</i>	1,3,4	Internationally important breeding and nationally important non-breeding numbers
33	White-cheeked Tern	<i>Sterna repressa</i>	1,3	Internationally important breeding numbers; Restricted range species
34	Bridled Tern	<i>Sterna anaethetus</i>	1,3	Internationally important breeding numbers; Threatned in the ME (V)
35	Saunders' Little Tern	<i>Sterna saundersi</i>	2,3,4	Small World Range and nationally important breeding numbers

* The list is tentative and is a draft list and is drawn up using criteria used by Evans (1994); Scott & Rose (1994); Javed & Khan (2003). National importance is based on 5% criteria used by Aspinall & Loughland (2005).

Categories

IIBP (1)	<i>Internationally important breeding population</i>
IINBP (2)	<i>Internationally important non-breeding population</i>
NIBP (3)	<i>Nationally important breeding population</i>
NINBP (4)	<i>Nationally important non-breeding population</i>
Rare UAE breeder (5)	<i>Rare breeding bird in the country (UAE)</i>
IUCN Threat Status (6)	<i>Globally threatened species as per IUCN categories</i>