

Location



Introduction

The Kingdom of Saudi Arabia is the largest country in the middle East, bordered by the Red Sea to the west, Jordan, Iraq and Kuwait to the north, the Arabian Gulf, Bahrain, Qatar and the UAE to the east, Oman to the southeast and Yemen to the south. The Gulf of Aqaba in the northwest separates Saudi Arabia from Egypt and Israel.

Saudi Arabia has a total coastline length of 2,640 km. It is the largest country in the Middle East. There are approximately 1,300 islands in the Red Sea and Arabian Gulf. The kingdom is largely desert, with some lakes and wadis. Temperature ranges are extreme, with average summer temperatures around 45°C and winter temperatures rarely falling below zero outside of mountainous areas.

Regional Seas and Biogeography

Red Sea
Arabian Gulf
Gulf of Aqaba
Red Sea LME

Habitats

The Red Sea coast, outside of the big cities, is largely undeveloped, whereas the Arabic coast is more developed.

- Coral reefs are found extensively all along the Red Sea coast. On the east coast, coral reefs are found in the Jubail Marine Area north of Al Jubail and on the coast north and south of Damman.
- Sea grasses are found extensively on the Red Sea coast and also on the Arabian Gulf coast, with higher concentrations in the northeast and around Damman.
- Mangroves are found on both coasts, with denser forests on the Red Sea coast and more scattered distribution on the Arabian Gulf coast.
- Reeds are found on the eastern coast of the Kingdom and have been recently started to be observed on the Red Sea Coast.
- Mud and salt flats are found on both coasts.

Biodiversity Hotspots

→ National Parks and ecological reserves

Farasan Islands protected area (also an IBA) in the southeastern Red Sea about 42 km off the city of Jizan, includes more than 84 islands – the largest of which are populated. The site hosts high concentration of nesting species of wading birds and seabirds such as gulls and terns, plus important concentrations of some wintering waders. The site is also known for nesting turtles and is designated as an IMMA due to the presence of several whale and dolphin species.

Umm Al-Qamari Island Protected Area (also an IBA), in the Red Sea southwest of the city of Al-Qanfah consists of two small coral islands. It hosts large numbers of birds, especially during the migration season and also is an important breeding site for herons.

On the Arabian Gulf Coast, **Jubail Marine Protected Area**, north of the industrial city of Jubail hosts flamingos, gulls and ducks. The area overlaps with the Abu Ali IBA, consisting of two inshore islands north-east of Jubail. The exposed northern shores are mainly sand beach with some fringing reefs in, while on the sheltered south side there are intertidal flats of sand and sand-mud, bordered by large saltmarshes. This site supports vast numbers of terns as well as breeding populations of plover and wintering gulls.

→ IBAs

Al-Wajh bank, a group of northern Red Sea islands, are important for breeding seabirds and nesting turtles.

On the Arabian Gulf Coast, **the Gulf Coral Islands** (5 uninhabited islands) support significant populations of Socotra cormorants (VU) as well as several breeding species of tern. Hawksbill (CR) and green (EN) turtles nest on the islands.

Tarut Bay, north of Dammam, is the most important site for wintering and migrating waders and other waterbirds on the Gulf Coast. It also is an important feeding area for green turtles (EN).

The Gulf of Salwah, the western part of a shallow enclosed bay between Saudi Arabia, Bahrain and Qatar, holds the most important breeding sites in the Kingdom for the Socotra cormorant (VU). Several tern species also breed there and many wintering gulls are present. The area is also designated as an IMMA for its globally important population of dugongs (VU) and presence of dolphins including the Indian Ocean humpback dolphin (EN).

At risk Wildlife

In this section, some individual wildlife species are mentioned followed by a letter in parentheses. These are species included in the IUCN Red List of Threatened Species within the top three categories of risk - Vulnerable to extinction (VU), Endangered (EN) or Critically Endangered (CR). A more complete list of IUCN listed species is found in Appendix 1.

→ At risk birds

Saudi Arabia is located on important north-south and east-west migration flyways and is an important staging post for many migratory species. Migration is more substantial in the western part, with many birds passing down this side of the country and into Yemen and across to Africa.

The Kingdom supports important populations of migrating gulls, terns and waders. Breeding species include striated heron (*Butorides striatus*), western reef heron (*Egretta gularis*), purple heron (*Ardea purpurea*), pink-backed pelicans (*Pelecanus rufescens*), Osprey (*Phaethon aethereus*), greater crested tern (*Sterna bergii*), Kentish plover (*Charadrius alexandrinus*), crab plover (*Dromas ardeola*) and more rarely, brown booby (*Sula leucogaster*). The Socotra cormorant (VU) is an endemic species which regularly breeds on islands in the Arabian Gulf. It forms huge feeding flocks sometimes over 40,000 in size.

Wintering species include several species of pelicans, gulls, ducks and other waders such as ruddy turnstone. Greater flamingos (*Phoenicopterus roseus*) are found in all coastal areas and are commonly seen in winter.

→ At risk reptiles

Two species of turtle nest in Saudi Arabia – hawksbill (CR) and green (EN). Largest nesting sites on the Red Sea coast are at Ras Baridi and in the Farasan islands, but are also spread throughout the rest of the Red Sea Coast. On the Arabian Gulf coast, both species are known to nest on the Coral gulf Islands. Green turtles are commonly observed offshore around the Jubail MPA, off the coast of Dammam and in the area just north of the border with the UAE.

Several species of sea snake are found along the Gulf coast, mostly in shallow waters, all are venomous. These include Arabian gulf sea snake (*Hydrophis lapemoides*), Spine-bellied sea snake (*Hydrophis curtus*), annulated sea snake (*Hydrophis cyanocinctus*), graceful small-headed sea snake (*Hydrophis gracilis*), yellow-bellied sea snake (*Hydrophis platurus*), beaked sea snake (*Hydrophis schistosus*) and viperine sea snake (*Hydrophis viperinus*).

→ At risk mammals

Five dolphin species have been recorded in Saudi waters of the Arabian Gulf, including (Indo-Pacific bottlenose dolphin (*Tursiops aduncus*), Indian Ocean humpback dolphin (EN) Indo-Pacific finless porpoise (VU), common dolphin (*Delphinus delphis*) and killer whale (*Orcinus orca*), as well as two species of whales: Bryde's (*Balaenoptera edeni*) and humpback whale (*Megaptera novaeangliae*). Dugongs (VU) are also found here. The most commonly seen marine mammals are bottlenose and humpback dolphins and dugongs.

The majority of the above species have also been observed off the Red Sea Coast, plus the spinner dolphin (*Stenella longirostris*).

Past experience with oil spill and potential risks

Saudi Arabia gained considerable experience from the oiled wildlife response in the aftermath of major oil spills caused by the Iran-Iraq and Kuwait-Iraq Wars (resp. 1980-1988 and 1991). Oiled wildlife responders from Europe (UK, Netherlands, Belgium) were invited to assist with oiled wildlife rehabilitation for many months. Counts of dead seabirds, including the threatened Socotra cormorant, along the northern Arabian Gulf coast of Saudi Arabia indicated that at least 30,000 wintering seabirds were killed by the Gulf War oil spills during

January-April 1991.

Saudi Arabia is the world's largest oil producer and exporter and has the world's largest conventional offshore oilfield. There is extensive shipping of crude oil on both the Arabian Gulf and Red Sea.

International and Regional Treaties and Agreements

→ Oil spill and HNS Response

- CLC Convention 69
- CLC Protocol 76
- CLC Protocol 92
- FUND Protocol 76
- FUND Protocol 92
- FUND Protocol 2003
- LLMC Convention 76
- LLMC Protocol 96
- OPRC Convention 90
- HNS Convention 96
- HNS PROT 2010
- OPRC_HNS 2000
- BUNKERS CONVENTION 01

→ Marine Biodiversity Protection

- Indian Ocean South East Asia (IOSEA) Marine Turtle MoU
- Jeddah Convention and its Protocol Concerning Regional Cooperation in Combating Pollution by Oil and Other Harmful Substances in Cases of Emergency
- MoU on the Conservation and Management of Marine Turtles and their Habitats of the Indian Ocean and Southeast Asia (CMS IOSEA)
- MoU on conservation and management of Dugongs (*Dugong dugon*) and their habitats throughout their range
- Kuwait Regional Convention for Cooperation on the Protection of the Marine Environment from Pollution

Oil Spill Response and HNS Spill Response

→ National Contingency Plan?

The National Contingency Plan for Combatting Marine Pollution by Oil and Other Harmful Substances in Emergency Cases was adopted in 1991 and is undergoing an update.

→ Role of Competent National Authorities

The agency in charge of oil spill response is the National Centre for Environmental Compliance (NCEC) who are the holders of the National Oil Spill Contingency Plan.

Oiled Wildlife Preparedness and Response

→ Formal guidelines?

There is no reference of a national Oiled Wildlife Response Plan. One oil operator developed its own wildlife response plan a number of years ago. The National Centre for Wildlife, under the Ministry of Environment, Water and Agriculture, would have responsibility for oiled wildlife operations in the event of an incident.

→ Response objectives and strategy

No reference.

→ Euthanasia or rehabilitation?

It is likely that marine wildlife rehabilitation would be permitted.

→ Impact assessment

The National Center for Wildlife would likely manage impact assessment activities (they coordinate seabird and

waterbird census monitoring and for sea turtle distribution and nesting). KAUST (King Abdullah University of Science and Technology) are also likely to get involved in scientific impact assessment activities for birds, turtles and dugongs.

→ **Notification and early response**

There is no published formal notification and response system in Saudi Arabia.

→ **Wildlife responders**

The National Center for wildlife carry out rescue, rehabilitation and veterinary care of a range of species, including seabirds and sea turtles.

→ **Cooperation between stakeholders**

No reference

→ **Permanent facilities**

The National Centre for Wildlife is the main wildlife rehabilitation centre in the Kingdom, including for seabirds. They hold a mobile unit which could serve as a Beachhead Collection Point for birds. The Fakieh Aquarium, on the Red Sea coast may potentially be able to offer facilities to rehabilitate sea turtles.

→ **Current processes**

The NEOM megaproject is underway, to build an urban area in the far southwest of the country, which will include a linear city powered by renewable energy. In 2021 an expedition to document marine life in the northern Red sea was carried out via a collaboration between NEOM and OceanX, which included monitoring observations of marine mammals and sea turtles.

A workshop was held in 2024 on assessing the impacts of oil pollution on marine resources and fisheries, which included procedures to be followed in the event of an incident. The workshop was organised by PERSGA (the Regional Organization for the Conservation of the Environment of the Red Sea and Gulf of Aden), which oversees activities under the Jeddah Convention.

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Appendix 1

➔ At risk birds

Common name / Latin name / IUCN Red List Category (CR,EN,VU) / Resident-Migratory (season) / Breeding-Nesting-Pupping (season)

Slender-billed Curlew / *Numenius tenuirostris* / CR / Resident (non-breeding) /

Sociable Lapwing / *Vanellus gregarius* / CR / Migratory (winter) /

Great Knot / *Calidris tenuirostris* / EN / Migratory (winter) /

Northern Bald Ibis / *Geronticus eremita* / EN / Migratory (winter) /

Common Pochard / *Aythya ferina* / VU / Migratory (winter) /

Socotra Cormorant / *Phalacrocorax nigrogularis* / VU / Resident (breeding) / Oct-Apr

➔ At risk reptiles

Common name / Latin name / IUCN Red List Category (CR,EN,VU) / Resident-Migratory (season) / Breeding-

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Nesting-Pupping (season)

Hawksbill Turtle / *Eretmochelys imbricata* / CR / /

Green Turtle / *Chelonia mydas* / EN / /

➔ **At risk mammals**

Common name / Latin name / IUCN Red List Category (CR,EN,VU) / Resident-Migratory (season) / Breeding-

Nesting-Pupping (season)

Indian Ocean humpback dolphin / *Sousa plumbea* / EN / Resident /

Indo-Pacific Finless Porpoise / *Neophocaena phocaenoides* / VU / Not well known /

Dugong / *Dugong dugon* / VU / Resident /