

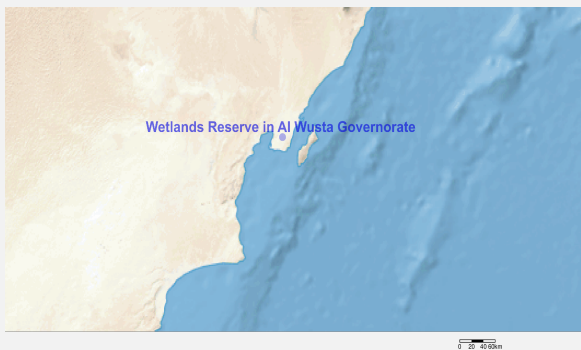


# Ramsar Information Sheet

Published on 8 November 2023

## Oman

### Wetlands Reserve in Al Wusta Governorate



|                  |                       |
|------------------|-----------------------|
| Designation date | 25 October 2023       |
| Site number      | 2529                  |
| Coordinates      | 20°32'31"N 58°24'25"E |
| Area             | 213 714,90 ha         |

## Color codes

Fields back-shaded in light blue relate to data and information required only for RIS updates.

Note that some fields concerning aspects of Part 3, the Ecological Character Description of the RIS (tinted in purple), are not expected to be completed as part of a standard RIS, but are included for completeness so as to provide the requested consistency between the RIS and the format of a 'full' Ecological Character Description, as adopted in Resolution X.15 (2008). If a Contracting Party does have information available that is relevant to these fields (for example from a national format Ecological Character Description) it may, if it wishes to, include information in these additional fields.

## 1 - Summary

### Summary

The Site was established as a Nature Reserve by the Royal Decree No. 51/2014, and it holds significant national, regional and international conservation value. The Site is situated on the southeast coast of Oman, primarily within the jurisdiction of the Wilayat of Mahout, with a portion of the Site extending into the Wilayat of Jalan Bani BuAli in South Sharqia Governorate. It spans over 2621 square kilometres with 1487 square kilometres covering the land and 1134 square kilometres covering the sea.

The location of Barr Al Hikman wetland is between latitudes 20 to 21 degrees north and longitudes 58 to 59 degrees east, situated along the coastline of Oman. Barr Al Hikman is one of the most prominent coastal wetland regions in the Middle East, having a coastline of over 160 km bordered by an inland sabkha (a sabkha is a coastal, supratidal mudflat or sandflat in which evaporite-saline minerals accumulate as the result of semiarid to arid climate). About 120 square kilometres of its area is characterized by intertidal mudflats, shallow seas, and five tidal inlets. Moreover, Barr Al Hikman remains a pristine coastal area with minimal human intervention, which allows for natural hydrodynamic and sedimentary processes. It also has extensive seagrass beds that have vanished from other intertidal areas globally.

The Site is notable for its unique geological features characterized by a shallow water carbonate/evaporite system that is composed of siliciclastic sand and gravel sourced mainly from the nearby Hajar Mountains, which developed in situ over the Pleistocene and Holocene epochs. Its coastal landforms including the sandy beaches, dunes and tidal flats, are influenced by marine processes and wind-driven sediment deposition. The presence of evaporite minerals such as gypsum and halite, highlights the interplay between marine and arid conditions.

Barr Al Hikman is considered the most significant wintering wetland in the Middle East according to Delany et al. (2009) and de Fouw et al. (2017). It holds over 500,000 shorebirds and the conspicuous affluence of avian species especially in Barr Al Hikman prominently showcases its varied and thriving ecosystem.

## 2 - Data & location

### 2.1 - Formal data

#### 2.1.1 - Name and address of the compiler of this RIS

##### Responsible compiler

|                    |  |
|--------------------|--|
| Institution/agency | Environment Authority                                |
| Postal address     | PO Box: 323<br>Postal code: 100<br>Sultanate of Oman |

##### National Ramsar Administrative Authority

|                    |                                  |
|--------------------|----------------------------------|
| Institution/agency | Environment Authority            |
| Postal address     | PO Box 323<br>P.C. 100<br>Khwait |

#### 2.1.2 - Period of collection of data and information used to compile the RIS

|           |      |
|-----------|------|
| From year | 2016 |
| To year   | 2022 |

#### 2.1.3 - Name of the Ramsar Site

|   |  |
|---|--|
| Official name (in English, French or Spanish) | Wetlands Reserve in Al Wusta Governorate |
| Unofficial name (optional)                    | Barr Al Hikman                           |

## 2.2 - Site location

### 2.2.1 - Defining the Site boundaries

#### b) Digital map/image

<2 file(s) uploaded>

|             |   |
|-------------|---|
| Former maps | 0 |
|-------------|---|

#### Boundaries description

The Al Wusta Wetlands Reserve is situated in the Al Wusta Governorate of the Sultanate of Oman and lies within the jurisdiction of Wilayat of Mahout about 400 km south of Muscat (capital of Oman), between latitudes 20 and 21 north and longitudes 58 and 59 east. With the exception of the central sabkha region, the Site covers at least 80% of the Reserve. The resting grounds of migratory birds within the central sabkha region are however included in the Site. The Site is moreover bounded by the Arabian Sea in the south, east, and west, approximately 3 km from the coast. Along the entire coastline of the peninsula at the eastern and western boundaries, there are low coastal dunes. These dunes support a typical coastal vegetation known as the *Astriplex-Suaeda* community. The higher 'continental' sabkha (5-15 masl) makes the northern boundary of Site.

Covering an area of approx. 900 km<sup>2</sup>, the Barr Al Hikman peninsula occupies the largest part of the Site and is situated about 80 kilometres west of the Masirah Island along the coast of Oman. It has about 160 kilometres of coastline surrounded by extensive inland sabkhas including Shannah, Khawr Barr Al Hikman and Filim, and 22,000 ha of inter-tidal mudflats that lie seaward of the coastline. Along the mainland coast are 5 tidal inlets, with Khawr Barr Al Hikman (4,000 ha) being the largest khawr (bay) in Oman. A large shallow bay called Ghubbat Hashish lies adjacently to the west. It is home to a mangrove-fringed island called Mahout and the most extensive seagrass beds in Oman. To the east of the peninsula and south of Shannah, the Site's boundary consists of intertidal mudflats and few reef structures located near the water's surface. On the southern coast of the peninsula, there are sandy lagoons (Khawr Al Milh) such as characterized by dense stands of *Salicornia* spp. and approximately 10 km<sup>2</sup> of sandy mudflats that extend along the shoreline.

Throughout the Site, various patches of the *Avicennia marina* mangrove are present, particularly on the east coast south of the village of Shannah, in the west in Ghubbat Hashish near the village of Filim, and on both Mahawt and Ma'awil islands.

Geographical coordinate - Approx. Centre: 20.560359N 58.427945E

### 2.2.2 - General location

|  |                                    |
|--|------------------------------------|
| a) In which large administrative region does the site lie? | Al Wusta Governorate               |
| b) What is the nearest town or population centre?          | Hij village and Shannah Ferry port |

### 2.2.3 - For wetlands on national boundaries only

a) Does the wetland extend onto the territory of one or more other countries? Yes  No

b) Is the site adjacent to another designated Ramsar Site on the territory of another Contracting Party? Yes  No

### 2.2.4 - Area of the Site

Official area, in hectares (ha): 213714.903

Area, in hectares (ha) as calculated from GIS boundaries 214032.862

### 2.2.5 - Biogeography

#### Biogeographic regions

| Regionalisation scheme(s)             | Biogeographic region    |
|---------------------------------------|-------------------------|
| Marine Ecoregions of the World (MEOW) | 92. Western Arabian Sea |

#### Other biogeographic regionalisation scheme

(1) Indo-West Pacific Realm- Somali-Arabian Province- Western Arabian sea ecoregion  
 This coastal region is identified as a unique biogeographic area due to its exclusive selection of marine invertebrate and fish species that became separated from other tropical regions approximately 3 to 3.5 million years ago.

(2) Oman Arabian Sea EBSA region (North-West Indian Ocean and Adjacent Gulf Areas)  
 The area is located in south Oman between the Ra's al Hadd peninsula in the north and the Oman-Yemen border in the south. It extends several hundred kilometres offshore and includes three core areas off the central and southern coast of Oman.

### 3 - Why is the Site important?

#### 3.1 - Ramsar Criteria and their justification

Criterion 1: Representative, rare or unique natural or near-natural wetland types

Hydrological services provided

Barr Al Hikman has unique hydrological characteristics that help to maintain the mangrove ecosystem, mudflats, coral communities, and sabkha. It also provides protection for coastal communities and supports plant and animal life. The peninsula is made up of sabkha, a mixture of sand, salt, and mud. There are two types of sabkha: lower coastal sabkha, which is flooded during high tides and heavy rains, and higher continental sabkha which is fed by continental groundwater. Along the coast of the peninsula, there are low coastal dunes with a specific coastal vegetation. There are also mangrove patches found in several locations (de Fouw et al., 2017).

The Arabian Sea, the Sea of Oman, and the Arabian Gulf have experienced coastal exposure to sea surges and cyclone waves. The coasts of the Arabian Sea and the Sea of Oman are more vulnerable than the Arabian Gulf. Only two severe weather storms occurred in the Bar Al Hikman area between 1972 and 2004. One severe cyclone was observed on Masirah Island in June 1977, and another major storm occurred in May 2002 (Kwarteng et al. 2005). The South West Monsoon brings humid winds that blow parallel to Arabia's southeast coastline from July to September (Glennie et al. 2002). The Arabian Sea is characterized by strong winds and energetic waves with maximum heights of 6-7 m (Hereher et al., 2020).

Other ecosystem services provided

The Site is a pristine stopover and wintering area for shorebirds migrating along the West Asian-East African flyway. The waters around the Barr all Hikman peninsula and Masirah Island have seagrass beds, coral reefs, and mangrove forests that support diverse marine life. It also serves as a protected nursery for fishes, turtles and Arabian Sea Humpback whales. Many species including shorebirds, shellfish, shrimps, crabs and fishes, use the soft-sediment areas for foraging, nursery, and spawning. The south and eastern coasts of the Barr Al Hikman Peninsula in particular have abundant bird species and provide crucial habitat for turtles. The Masirah channel that lies between the Peninsula and the Masirah Island are used for migration by whales and dolphins. The Peninsula is enclosed by 148 square kilometres of highly productive intertidal mudflats. However, it is exposed to numerous stressors such as habitat destruction, overfishing, eutrophication, climate change and pollution.

Other reasons

The Barr Al Hikman Peninsula is a vast and pristine wetland comprised of dry desert, wadis and sabkhas. A sabkha is a coastal, supratidal mudflat or sandflat in which evaporite-saline minerals accumulate as the result of semiarid to arid climate. This peninsula evolved over time as a shallow water carbonate/evaporite system and was designated as a Nature Reserve in 2014. It's southern coast has unique Montipora corals that are arranged in patchy carpets on two separate areas, with each area measuring approximately 10 square kilometres. Currently, it is designated as an International Bird Area (IBA) by the Birdlife International due to its critical role in providing crucial habitat for wintering shorebirds. Given its rarity and ecological significance, this Peninsula has also been proposed for the inclusion in the World Heritage Site list.

The intertidal mudflats represent one of the most endangered intertidal habitats globally, and they face a range of significant threats. These include the destruction of their natural habitat, overfishing, eutrophication, climate change, and pollution.

Criterion 2 : Rare species and threatened ecological communities

Optional text box to provide further information

The total number of plant species listed under this criteria is 1 and 77 of animal species. These numbers are based on the data from the IUCN red list. More species are listed under this criteria from the regional red list assessment (Jabado et al., 2017) and are justified in section 3.3.

VU= 1 plant, 5 others, fish 27 , birds 5

EN= 2 others, fish 22, birds 4

CR= 1 others, fish 10, birds 2

Rare and threatened in Oman - National Red list species (Annette Patzelt, 2015): 1 plant

Criterion 3 : Biological diversity

The Site is part of the Wetland Reserve in Al Wusta Governorate, a national protected area designated in 2014. It is designated as an Ecologically or Biologically Significant Areas (EBSAs) and Western Arabian Sea ecoregion for the functions it provides to specific breeding and non-breeding bird species (e.g. migratory, hibernating, sleeping, resting, foraging), fish, mammals, and plant species.

Barr al Hikman is a crucial location for wintering waterbirds in western Asia, accommodating up to half a million birds each winter. It surpasses similar sites in East Africa and Western Eurasia in terms of bird concentration. Notably, 18 bird species have over 1% of their biogeographic population. Bird numbers at Barr al Hikman have tripled since the 1990s. Annually, around one million migratory shorebirds use the Site, including notable species like Sooty Gulls, Crab Plovers, Dunlin, Bar-tailed Godwit, Lesser Sandplover, and Redshank. These birds are temporary visitors seeking favourable wintering conditions in Oman after breeding up north. They return to their breeding grounds during spring. Birds from diverse origins, spanning from Arctic Tundra to temperate regions, gather at Barr al Hikman, while some birds stay in the Middle East year-round. This location is among the few worldwide where large numbers of shorebirds gather due to pristine habitats including mudflats and undisturbed coastlines, thus standing out due to its high species diversity. These habitats provide abundant food and resting places especially during high tide periods.

Justification

The region of Barr al Hikman boasts a rich abundance of fish, primarily attributed to the prolonged upwelling occurrences that coincide with the monsoon climate system. The aquatic life is comprised of diverse shallow and reef species, in addition to pelagic varieties. In fact, the area is home to a plethora of over 500 recognized species (WS Atkins, 1997) and many threatened species of sharks and rays.

The interlinked habitats of mangroves, seagrass, and coral reefs form the basis of productivity and biodiversity in tropical coastal zones through active and passive exchange of nutrients, detritus, bacteria, small pelagic fish, predatory fish, seabirds and marine mammals. The coastal vegetation, which is dominated by halophytes and other species associated with small stabilized coastal dune, can be classified into four communities based on topography, salinity, substrate, and inundation by the sea. Several terrestrial mammals inhabit the Site such as sand fox and bushy tailed jird. Furthermore, domestic animals including goats, camels, and donkeys also inhabit the Site.

Barr Al Hikman hosts a verity of endemic plant, reptiles, and fish species such as (*Stipagrostis dhofarinsis*), (*Stipagrostis masirahensis*), (*Campylanthus sedoides*), (*Phrynocephalus sakoi*), (*Uromastix thomasi*), (*Stenodactylus sharqiyahensis*), (*Acanthodactylus masirae*), (*Heterodontus omanensis*), and (*Amphiprion omanensis*), respectively.

Criterion 4 : Support during critical life cycle stage or in adverse conditions

Optional text box to provide further information

Barr Al Hikman is a coastal system with tropical features that is highly productive and has a rich biodiversity. This is due to the abundance of water, nutrients, and sunlight that supports photosynthesis. Seagrasses, algae, and diatoms form the foundation of this ecosystem and provide nourishment to small marine organisms that live on and near the seabed. Crabs, bivalves, snails, and worms are crucial food sources for shorebirds and other marine animals, and they also improve intertidal life by constructing reefs and oxygenating the seabed. The significance of this ecosystem extends through the seasonal upwelling during the boreal summer monsoon, which introduces nutrient-enriched water to the surface and transforms the northern Arabian Sea into a highly productive oceanic zone. In Barr Al Hikman, the oystercatcher and great knot are the sole mollusc-eating shorebirds, using their specialized bills to open bivalve mollusk shells for food. These shorebirds play a pivotal role in maintaining mollusk populations and upholding the marine ecosystem's equilibrium (Bom et al., 2018a).

Criterion 5 : >20,000 waterbirds

|                           |                      |
|---------------------------|----------------------|
| Overall waterbird numbers | 464,887              |
| Start year                | 2016                 |
| End year                  | 2016                 |
| Source of data:           | de Fouw et al., 2017 |

Criterion 6 : >1% waterbird population

Optional text box to provide further information

The waterbird population data are based on the findings of de Fouw et al. (2017) and the findings of the International Waterbird Census January 2016 conducted by the Wetlands International. The 1% threshold was calculated using the population trends obtained from Wetland International's Waterbird Population Estimates.  
<https://wpe.wetlands.org/explore>  
<https://iwc.wetlands.org/index.php/aewatrends8>

Criterion 7 : Significant and representative fish

Justification

Barr Al Hikman is distinguished for its rich birdlife, turtles and cetaceans around the Masirah Island. It also serves as a vital habitat for commercially important species such as fish and crabs. Around 40 distinct fish species have been identified within the shallow coastal waters of Barr Al Hikman and a variety of them are found breeding as well. Rays and Sharks have also been recorded here. The only area for prawn fisheries in the country is situated in the southern territory of Barr al Hikman. Here, the prevailing seagrasses provide habitat for commercially-significant prawns, such as *Penaeus (Fenneropenaeus) indicus* and *P. semisulcatus*.

Here are some examples of fish, shark, and ray species that qualify under this criteria and the complete list is found in Section 3.3:  
*Heterodontus omanensis* (Oman bullhead shark)  
*Stegostoma fasciatum* (Zebra shark)  
*Rhincodon typus* (Whale shark)  
*Sphyrna lewini* (Scalloped hammerhead)  
*Mobula alfredi* (Reef Manta Ray)  
*Anoxypristis cuspidata* (Narrow sawfish)  
*Pristis zijsron* (Green Sawfish)

Criterion 8 : Fish spawning grounds, etc.

Justification

The intertidal mudflats, seagrass bed, algal communities, mangroves, and coral reefs located at Barr Al Hikman are a critical nursery area for commercial fish species and provide an important shelter and habitat for juvenile fishes and invertebrates. Thus, they support essential ecological processes for fish stocks in the Arabian Sea, which are already facing anthropogenic pressures from intensive commercial fishing at Masirah Island. This Site also supports a traditional fishery for shrimp (mostly *Pennaeus indicus*).

Criterion 9 : >1% non-avian animal population

Optional text box to provide further information

Arabian Sea Humpback Whale is a small, non-migratory population of humpback whales in the Arabian Sea and is classified as “Endangered” on the IUCN Red List of Threatened Species due to its isolation and low genetic diversity. Genetic analysis indicates that this population has been isolated for approximately 70,000 years, making it the world's most isolated humpback whale population, which raises concerns for its survival given low population abundance estimates and anthropogenic threats (Pomilla et al., 2014). This subpopulation feeds in the water channels of Barr Al Hikman. This species have a population fewer than 100 individuals (Bettridge et al., 2015)

### 3.2 - Plant species whose presence relates to the international importance of the site

| Phylum                         | Scientific name                  | Criterion 2                         | Criterion 3                         | Criterion 4              | IUCN Red List | CITES Appendix I         | Other status  | Justification   |
|--------------------------------|----------------------------------|-------------------------------------|-------------------------------------|--------------------------|---------------|--------------------------|---|---|
| <b>Plantae</b>                 |                                  |                                     |                                     |                          |               |                          |   |   |
| TRACHEOPHYTA/<br>MAGNOLIOPSIDA | <i>Avicennia marina</i>          | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | LC            | <input type="checkbox"/> | Rare and threatened in Oman - National Red list species (Annette Patzelt, 2015) | This is a widespread species in coastal Mangrove forests of this biogeographic region. It provides essential habitat for numerous species of birds, fish, and invertebrates.  |
| TRACHEOPHYTA/<br>MAGNOLIOPSIDA | <i>Campylanthus sedoides</i>     | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | NT            | <input type="checkbox"/> | National Red List species (Annette Patzelt, 2015)                               | Crit. 3: Endemic to Oman  |
| TRACHEOPHYTA/<br>MAGNOLIOPSIDA | <i>Euphorbia riebeckii</i>       | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> |               | <input type="checkbox"/> | National Red List species (Annette Patzelt, 2015)                               | Crit. 3: Endemic to the region  |
| TRACHEOPHYTA/<br>LILIOPSIDA    | <i>Halodule uninervis</i>        | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | LC            | <input type="checkbox"/> |   | The Site is hosting the largest bed of this species in Oman. The seagrass meadows support a variety of invertebrates, which, in turn, serve as food for migratory shorebirds, such as Great Knots ( <i>Calidris tenuirostris</i> ), during their non-breeding period. |
| TRACHEOPHYTA/<br>LILIOPSIDA    | <i>Halophila ovalis</i>          | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | LC            | <input type="checkbox"/> |   | The Site is hosting the largest bed of this species in Oman. The seagrass beds are habitats that provide refuge and foraging areas for several species during their non-breeding periods such as Lesser Sandplover ( <i>Charadrius mongolus</i> ).                    |
| TRACHEOPHYTA/<br>MAGNOLIOPSIDA | <i>Heliotropium riebeckii</i>    | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | VU            | <input type="checkbox"/> |   |   |
| TRACHEOPHYTA/<br>MAGNOLIOPSIDA | <i>Schweinfurthia imbricata</i>  | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | NT            | <input type="checkbox"/> | National Red List species (Annette Patzelt, 2015)                               | Crit. 3: Near Endemic to Oman   |
| TRACHEOPHYTA/<br>LILIOPSIDA    | <i>Stipagrostis masirahensis</i> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> |               | <input type="checkbox"/> | National Red List species (Annette Patzelt, 2015)                               | Crit. 3: Endemic to Oman  |
| TRACHEOPHYTA/<br>MAGNOLIOPSIDA | <i>Suaeda moschata</i>           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> |               | <input type="checkbox"/> | National Red List species (Annette Patzelt, 2015)                               | Crit. 3: Near Endemic to Oman   |



Plant species not in catalogue of life but present in the Site:

Stipagrostis dhofarinsis (Endemic to Oman)  
 Zygophyllum qatarense (Regional endemic)

Lyngbya majuscula  
 Arthrocnemum macrostachyum  
 Atriplex farinosum  
 Halopyrum macronatum  
 Atriplex leucoclada  
 Calotropis procera  
 Cistanche phelipaea  
 Cistanche tubulosa  
 Chaetomorpha crassa  
 Cressa cretica  
 Cyperus conglomeratus  
 Halopeplis perfoliata  
 Heliotropium ramosissimum  
 Limonium stocksii  
 Lycium shawii  
 Panicum turgidum  
 Solanum incanum  
 Sporobolus virginicus  
 Suaeda vermiculata  
 Thalassodendron ciliatum  
 Ulva fasciata  
 Urochondra setulosa

### 3.3 - Animal species whose presence relates to the international importance of the site

| Phylum              | Scientific name                 | Species qualifies under criterion   |                                     |                          |                          | Species contributes under criterion |                          |                          |                          | Pop. Size | Period of pop. Est. | % occurrence <sup>1)</sup> | IUCN Red List | CITES Appendix I                    | CMS Appendix I                      | Other Status | Justification   |
|---------------------|---------------------------------|-------------------------------------|-------------------------------------|--------------------------|--------------------------|-------------------------------------|--------------------------|--------------------------|--------------------------|-----------|---------------------|----------------------------|---------------|-------------------------------------|-------------------------------------|--------------|---|
|                     |                                 | 2                                   | 4                                   | 6                        | 9                        | 3                                   | 5                        | 7                        | 8                        |           |                     |                            |               |                                     |                                     |              |   |
| <b>Others</b>       |                                 |                                     |                                     |                          |                          |                                     |                          |                          |                          |           |                     |                            |               |                                     |                                     |              |   |
| CHORDATA / REPTILIA | <i>Acanthodactylus masirae</i>  | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |           |                     |                            | DD            | <input type="checkbox"/>            | <input type="checkbox"/>            |              | Crit. 3: Endemic to Barr Al Hikman and Masirah Island (Carranza et al, 2018; Carranza et al, 2021) Crit. 4: This Species breeds in the Site   |
| CHORDATA / REPTILIA | <i>Acanthodactylus schmidti</i> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |           |                     |                            | LC            | <input type="checkbox"/>            | <input type="checkbox"/>            |              | Crit. 3: Native species (Carranza et al., 2021); Coastal lagoons, sabkhas salt ponds, and littoral belt dunes of Barr Al Hikman provide diverse habitats for this species.  |
| CHORDATA / REPTILIA | <i>Caretta caretta</i>          | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |           |                     |                            | VU            | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |              | Crit. 3: Barr al Hikman shores are foraging habitat of this native species. They feed mainly on bottom-dwelling hard-shelled invertebrates. (Carranza et al., 2021)   |
| CHORDATA / REPTILIA | <i>Chelonia mydas</i>           | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |           |                     |                            | EN            | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |              | Crit. 3: Barr al Hikman shores are foraging habitat of this native species, where the adults mainly feed on algae and seagrass. More commonly, they are found in shallow, coastal waters with lush seagrass beds. (Carranza et al., 2021) Crit. 4: Nesting Site |

| Phylum                             | Scientific name                     | Species qualifies under criterion   |                                     |                          |                                     | Species contributes under criterion |                          |                                     |                                     | Pop. Size | Period of pop. Est. | % occurrence 1) | IUCN Red List | CITES Appendix I                    | CMS Appendix I                      | Other Status   | Justification   |
|------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|--------------------------|-------------------------------------|-------------------------------------|--------------------------|-------------------------------------|-------------------------------------|-----------|---------------------|-----------------|---------------|-------------------------------------|-------------------------------------|--|---|
|                                    |                                     | 2                                   | 4                                   | 6                        | 9                                   | 3                                   | 5                        | 7                                   | 8                                   |           |                     |                 |               |                                     |                                     |  |   |
| CHORDATA / REPTILIA                | <i>Dermochelys coriacea</i>         | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |           |                     |                 | VU            | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |  |   |
| CHORDATA / REPTILIA                | <i>Eretmochelys imbricata</i>       | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |           |                     |                 | CR            | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |  | Crit. 3: Barr al Hikman shores are foraging habitat of this native species. They inhabit clear, warm, shallow littoral waters on islands and mainland shelves with coral reefs and rocky areas in Oman. (Carranza et al., 2021) Crit. 4: Nesting Site   |
| CHORDATA / REPTILIA                | <i>Lepidochelys olivacea</i>        | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |           |                     |                 | VU            | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |  | Crit. 3: Barr al Hikman shores are foraging habitat of this species. Crit. 4: Barr Al Hikman and the offshore waters of the Bay of Mashirah are nursery areas for juveniles   |
| CHORDATA / MAMMALIA                | <i>Megaptera novaeangliae</i>       | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | 82        | 2022                | 24              | LC            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Arabian Sea subpopulation is considered Endangered in the IUCN red list. | Crit. 3: The Arabian Sea subpopulation of this species is found here, which is geographically, demographically and genetically isolated. Crit. 4: Resident species. Crit. 9: Less than 100 individuals remain in wild (Bettridge et al., 2015), the 1% threshold is based on surveys conducted by the Environment Society of Oman (ESO) through the Renaissance Whale and Dolphin Conservation project. |
| CNIDARIA / ANTHOZOA                | <i>Montipora foliosa</i>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |           |                     |                 | NT            | <input type="checkbox"/>            | <input type="checkbox"/>            |  | Crit. 3: Coral species; coral reefs are unique to this region. Crit. 4: The Site provides shelter for juveniles. Crit. 8: Nursery area.   |
| CHORDATA / REPTILIA                | <i>Phrynocephalus sakoi</i>         | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |           |                     |                 |               | <input type="checkbox"/>            | <input type="checkbox"/>            |  | Crit. 3: Endemic to Barr Al Hikman (Carranza et al., 2018; Carranza et al., 2021)   |
| CHORDATA / MAMMALIA                | <i>Sousa chinensis</i>              | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |           |                     |                 | VU            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |  | Crit. 3: Globally Vulnerable species and is of key conservation priority; Site provides essential habitat to ensure their survival. Crit. 4: Barr Al Hikman mangrove ecosystem and intertidal mudflats supports a variety of fish and invertebrates. A dolphin's survival depends on these aquatic resources, which indirectly benefit fishermen and local communities.                                 |
| CHORDATA / MAMMALIA                | <i>Sousa plumbea</i>                | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |           |                     |                 | EN            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |  | Crit. 3: Globally Endangered species and is of key conservation priority; Site provides essential habitat to ensure their survival. Crit. 4: Barr Al Hikman mangrove ecosystem and intertidal mudflats supports a variety of fish and invertebrates. A dolphin's survival depends on these aquatic resources, which indirectly benefit fishermen and local communities.                                 |
| CHORDATA / REPTILIA                | <i>Stenodactylus sharqiyahensis</i> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |           |                     |                 |               | <input type="checkbox"/>            | <input type="checkbox"/>            |  | Crit. 3: Endemic to Barr Al Hikman (Carranza et al., 2021)  |
| CHORDATA / REPTILIA                | <i>Uromastyx thomasi</i>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |           |                     |                 | VU            | <input type="checkbox"/>            | <input type="checkbox"/>            |  | Crit. 3: Endemic to Barr Al Hikman and Masirah Island. (Carranza et al., 2018; Carranza et al., 2021)   |
| <b>Fish, Mollusc and Crustacea</b> |                                     |                                     |                                     |                          |                                     |                                     |                          |                                     |                                     |           |                     |                 |               |                                     |                                     |  |   |
| CHORDATA / ACTINOPTERYGII          | <i>Acanthopagrus bifasciatus</i>    | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |           |                     |                 | LC            | <input type="checkbox"/>            | <input type="checkbox"/>            |  | Crit. 4 & 8: Shelter and habitat for Juveniles; uses the Site as a nursery area.  |
| CHORDATA / ELASMOBRANCHII          | <i>Aetobatus ocellatus</i>          | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |           |                     |                 | VU            | <input type="checkbox"/>            | <input type="checkbox"/>            |  | Crit. 3 & 7: This species isn't primarily the focus of conservation efforts, but it plays a valuable role in marine ecosystems. The conservation of biodiversity of the Reserve is supported by protecting the rays habitat.  |
| CHORDATA / ELASMOBRANCHII          | <i>Aetomylaeus milvus</i>           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |           |                     |                 | EN            | <input type="checkbox"/>            | <input type="checkbox"/>            |  | Crit. 3 & 7: This species isn't primarily the focus of conservation efforts, but it plays a valuable role in marine ecosystems. The conservation of biodiversity on the reserve is supported by protecting the ray's habitat. Crit. 8: Barr Al Hikman is an important nursery area for this species.  |

| Phylum                    | Scientific name               | Species qualifies under criterion   |                                     |                          |                          | Species contributes under criterion |                          |                                     |                                     | Pop. Size | Period of pop. Est. | % occurrence 1) | IUCN Red List | CITES Appendix I                    | CMS Appendix I                      | Other Status  | Justification  |
|---------------------------|-------------------------------|-------------------------------------|-------------------------------------|--------------------------|--------------------------|-------------------------------------|--------------------------|-------------------------------------|-------------------------------------|-----------|---------------------|-----------------|---------------|-------------------------------------|-------------------------------------|---|--|
|                           |                               | 2                                   | 4                                   | 6                        | 9                        | 3                                   | 5                        | 7                                   | 8                                   |           |                     |                 |               |                                     |                                     |   |  |
| CHORDATA / ELASMOBRANCHII | <i>Aetomylaeus nichofii</i>   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |           |                     |                 | VU            | <input type="checkbox"/>            | <input type="checkbox"/>            |   | Crit. 3 & 7: This species isn't primarily the focus of conservation efforts, but it plays a valuable role in marine ecosystems. The conservation of biodiversity on the reserve is supported by protecting the ray's habitat. Crit. 8: Barr Al Hikman is an important nursery area for this species.   |
| CHORDATA / ELASMOBRANCHII | <i>Alopias pelagicus</i>      | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |           |                     |                 | EN            | <input type="checkbox"/>            | <input type="checkbox"/>            | Endangered under the regional red list assessment (Jabado et al., 2017) | Crit. 3 & 7: The Barr Al Hikman marine environment supports a variety of marine life including sharks that are globally threatened; their conservation contributes to the marine biodiversity of the region. Crit. 4: In Barr Al Hikman, coral reefs and coastal areas serve as nurseries and foraging grounds for many marine species, including Pelagic Threshers. Crit. 8: Barr Al Hikman is an important nursery area for this species.                            |
| CHORDATA / ELASMOBRANCHII | <i>Alopias superciliosus</i>  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |           |                     |                 | VU            | <input type="checkbox"/>            | <input type="checkbox"/>            | Endangered under the regional red list assessment (Jabado et al., 2017) | Crit. 3 & 7: The Barr Al Hikman marine environment supports a variety of marine life including sharks that are globally threatened; their conservation contributes to the marine biodiversity of the region. Crit. 4: In Barr Al Hikman, coral reefs and coastal areas serve as nurseries and foraging grounds for many marine species, including the Bigeye thresher shark. Crit. 8: Barr Al Hikman's marine resources and conservation are essential to the survival |
| CHORDATA / ELASMOBRANCHII | <i>Alopias vulpinus</i>       | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |           |                     |                 | VU            | <input type="checkbox"/>            | <input type="checkbox"/>            |   | Crit. 8: Barr Al Hikman is an important nursery area for this species.   |
| CHORDATA / ACTINOPTERYGII | <i>Ambassis natalensis</i>    | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |           |                     |                 | LC            | <input type="checkbox"/>            | <input type="checkbox"/>            |   | Crit. 8: Barr Al Hikman is an important nursery area for this species.   |
| CHORDATA / ACTINOPTERYGII | <i>Amphiprion omanensis</i>   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |           |                     |                 | LC            | <input type="checkbox"/>            | <input type="checkbox"/>            |   | Crit 3 and 7: Endemic to Oman (Simpson et al., 2014). Crit. 4: The Site provides shelter for juveniles. Crit. 8: Barr Al Hikman is an important nursery area for this species.   |
| CHORDATA / ELASMOBRANCHII | <i>Anoxypristis cuspidata</i> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |           |                     |                 | EN            | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |   | Crit. 3 & 7: The Barr Al Hikman marine environment supports a variety of marine life including sharks that are globally threatened; their conservation contributes to the marine biodiversity of the region. Crit. 4: In Barr Al Hikman, coral reefs and coastal areas serve as nurseries and foraging grounds for many marine species, including the Narrow Saw shark. Crit. 8: Barr Al Hikman is an important nursery area for this species.                         |
| CHORDATA / ACTINOPTERYGII | <i>Aphanius dispar</i>        | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |           |                     |                 | LC            | <input type="checkbox"/>            | <input type="checkbox"/>            |   | Crit. 3: This species is regionally threatened in certain parts of its distribution; their conservation contributes to the marine biodiversity of the region. Crit. 8: Shelter and habitat for Juveniles/ Uses the wetland as a nursery.   |
| CHORDATA / ACTINOPTERYGII | <i>Arothron immaculatus</i>   | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |           |                     |                 | LC            | <input type="checkbox"/>            | <input type="checkbox"/>            |   | Crit. 8: Shelter and habitat for Juveniles/ Uses the wetland as a nursery.   |
| CHORDATA / ELASMOBRANCHII | <i>Bathytoshia lata</i>       | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |           |                     |                 | VU            | <input type="checkbox"/>            | <input type="checkbox"/>            |   | Crit. 3: The Barr Al Hikman marine environment supports a variety of marine life including rays that are globally threatened; their conservation contributes to the marine biodiversity of the region.   |
| CHORDATA / ACTINOPTERYGII | <i>Caranx sexfasciatus</i>    | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |           |                     |                 | LC            | <input type="checkbox"/>            | <input type="checkbox"/>            |   | Crit. 3 & 7: This species is regionally threatened in certain parts of its distribution; their conservation contributes to the marine biodiversity of the region. Crit. 4: In Barr Al Hikman, coral reefs and coastal areas serve as nurseries and foraging grounds for many marine species, including the Bigeye trevally. Crit. 8: Barr Al Hikman is an important nursery area for this species.   |

| Phylum                    | Scientific name                      | Species qualifies under criterion   |                                     |                          |                          | Species contributes under criterion |                          |                                     |                                     | Pop. Size | Period of pop. Est. | % occurrence 1) | IUCN Red List | CITES Appendix I         | CMS Appendix I           | Other Status  | Justification   |
|---------------------------|--------------------------------------|-------------------------------------|-------------------------------------|--------------------------|--------------------------|-------------------------------------|--------------------------|-------------------------------------|-------------------------------------|-----------|---------------------|-----------------|---------------|--------------------------|--------------------------|---|---|
|                           |                                      | 2                                   | 4                                   | 6                        | 9                        | 3                                   | 5                        | 7                                   | 8                                   |           |                     |                 |               |                          |                          |   |   |
| CHORDATA / ELASMOBRANCHII | <i>Carcharhinus albimarginatus</i>   | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |           |                     |                 | VU            | <input type="checkbox"/> | <input type="checkbox"/> | Endangered under the regional red list assessment (Jabado et al., 2017) | Crit. 3 & 7: The Barr Al Hikman marine environment supports a variety of marine life including sharks that are globally threatened; their conservation contributes to the marine biodiversity of the region. Crit. 4: In Barr Al Hikman, coral reefs and coastal areas serve as nurseries and foraging grounds for many marine species, including the Silvertip shark. Crit. 8: Barr Al Hikman is an important nursery area for this species. |
| CHORDATA / ELASMOBRANCHII | <i>Carcharhinus altimus</i>          | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |           |                     |                 | NT            | <input type="checkbox"/> | <input type="checkbox"/> | Vulnerable under the regional red list assessment (Jabado et al., 2017) | Crit. 3: The Barr Al Hikman marine environment supports a variety of marine life including sharks that are globally threatened; their conservation contributes to the marine biodiversity of the region. Crit. 8: Shelter and habitat for Juveniles/ Uses the wetland as a nursery.   |
| CHORDATA / ELASMOBRANCHII | <i>Carcharhinus amblyrhynchoides</i> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |           |                     |                 | VU            | <input type="checkbox"/> | <input type="checkbox"/> | Vulnerable under the regional red list assessment (Jabado et al., 2017) | Crit. 3: The Barr Al Hikman marine environment supports a variety of marine life including sharks that are globally threatened; their conservation contributes to the marine biodiversity of the region. Crit. 8: Shelter and habitat for Juveniles/ Uses the wetland as a nursery.   |
| CHORDATA / ELASMOBRANCHII | <i>Carcharhinus amblyrhynchos</i>    | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |           |                     |                 | EN            | <input type="checkbox"/> | <input type="checkbox"/> | Endangered under the regional red list assessment (Jabado et al., 2017) | Crit. 3: The Barr Al Hikman marine environment supports a variety of marine life including sharks that are globally threatened; their conservation contributes to the marine biodiversity of the region. Crit. 8: Shelter and habitat for Juveniles/ Uses the wetland as a nursery.   |
| CHORDATA / ELASMOBRANCHII | <i>Carcharhinus amboinensis</i>      | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |           |                     |                 | VU            | <input type="checkbox"/> | <input type="checkbox"/> | Vulnerable under the regional red list assessment (Jabado et al., 2017) | Crit. 3: The Barr Al Hikman marine environment supports a variety of marine life including sharks that are globally threatened; their conservation contributes to the marine biodiversity of the region. Crit. 8: Shelter and habitat for Juveniles/ Uses the wetland as a nursery.   |
| CHORDATA / ELASMOBRANCHII | <i>Carcharhinus brevipinna</i>       | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |           |                     |                 | VU            | <input type="checkbox"/> | <input type="checkbox"/> | Vulnerable under the regional red list assessment (Jabado et al., 2017) | Crit. 3: The Barr Al Hikman marine environment supports a variety of marine life including sharks that are globally threatened; their conservation contributes to the marine biodiversity of the region. Crit. 8: Shelter and habitat for Juveniles/ Uses the wetland as a nursery.   |
| CHORDATA / ELASMOBRANCHII | <i>Carcharhinus dussumieri</i>       | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |           |                     |                 | EN            | <input type="checkbox"/> | <input type="checkbox"/> | Endangered under the regional red list assessment (Jabado et al., 2017) | Crit. 3: The Barr Al Hikman marine environment supports a variety of marine life including sharks that are globally threatened; their conservation contributes to the marine biodiversity of the region. Crit. 8: Shelter and habitat for Juveniles/ Uses the wetland as a nursery.   |
| CHORDATA / ELASMOBRANCHII | <i>Carcharhinus falciformis</i>      | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |           |                     |                 | VU            | <input type="checkbox"/> | <input type="checkbox"/> |   | Crit. 3: The Barr Al Hikman marine environment supports a variety of marine life including sharks that are globally threatened; their conservation contributes to the marine biodiversity of the region. Crit. 8: Shelter and habitat for Juveniles/ Uses the wetland as a nursery.   |
| CHORDATA / ELASMOBRANCHII | <i>Carcharhinus leiodon</i>          | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |           |                     |                 | EN            | <input type="checkbox"/> | <input type="checkbox"/> |   | Crit. 3: Endemic species (Jabado et al., 2017) Crit. 4 and 8: Shelter and habitat for Juveniles, uses the Site for nursery.   |
| CHORDATA / ELASMOBRANCHII | <i>Carcharhinus leucas</i>           | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |           |                     |                 | VU            | <input type="checkbox"/> | <input type="checkbox"/> | Endangered under the regional red list assessment (Jabado et al., 2017) | Crit. 3 & 7: The Barr Al Hikman marine environment supports a variety of marine life including sharks that are globally threatened; their conservation contributes to the marine biodiversity of the region. Crit. 4: In Barr Al Hikman, coral reefs and coastal areas serve as nurseries and foraging grounds for many marine species, including the Bull shark. Crit. 8: Barr Al Hikman is an important nursery area for this species.      |

| Phylum                    | Scientific name                  | Species qualifies under criterion   |                                     |                          |                          | Species contributes under criterion |                          |                                     |                                     | Pop. Size | Period of pop. Est. | % occurrence 1) | IUCN Red List | CITES Appendix I         | CMS Appendix I                      | Other Status   | Justification  |
|---------------------------|----------------------------------|-------------------------------------|-------------------------------------|--------------------------|--------------------------|-------------------------------------|--------------------------|-------------------------------------|-------------------------------------|-----------|---------------------|-----------------|---------------|--------------------------|-------------------------------------|--|--|
|                           |                                  | 2                                   | 4                                   | 6                        | 9                        | 3                                   | 5                        | 7                                   | 8                                   |           |                     |                 |               |                          |                                     |  |  |
| CHORDATA / ELASMOBRANCHII | <i>Carcharhinus limbatus</i>     | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |           |                     |                 | VU            | <input type="checkbox"/> | <input type="checkbox"/>            | Vulnerable under the regional red list assessment (Jabado et al., 2017)            | Crit. 3 & 7: The Barr Al Hikman marine environment supports a variety of marine life including sharks that are globally threatened; their conservation contributes to the marine biodiversity of the region. Crit. 4: In Barr Al Hikman, coral reefs and coastal areas serve as nurseries and foraging grounds for many marine species, including the Blacktip shark. Crit. 8: Barr Al Hikman is an important nursery area for this species.         |
| CHORDATA / ELASMOBRANCHII | <i>Carcharhinus longimanus</i>   | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |           |                     |                 | CR            | <input type="checkbox"/> | <input type="checkbox"/>            | Critically Endangered under the regional red list assessment (Jabado et al., 2017) | Crit. 3 & 7: The Barr Al Hikman marine environment supports a variety of marine life including sharks that are globally threatened; their conservation contributes to the marine biodiversity of the region. Crit. 4: In Barr Al Hikman, coral reefs and coastal areas serve as nurseries and foraging grounds for many marine species, including the Oceanic whitetip shark. Crit. 8: Barr Al Hikman is an important nursery area for this species. |
| CHORDATA / ELASMOBRANCHII | <i>Carcharhinus melanopterus</i> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |           |                     |                 | VU            | <input type="checkbox"/> | <input type="checkbox"/>            | Vulnerable under the regional red list assessment (Jabado et al., 2017)            | Crit. 3: The Barr Al Hikman marine environment supports a variety of marine life including sharks that are globally threatened; their conservation contributes to the marine biodiversity of the region. Crit. 4: In Barr Al Hikman, coral reefs and coastal areas serve as nurseries and foraging grounds for many marine species, including the Reef blacktip shark. Crit. 8: Barr Al Hikman is an important nursery area for this species.        |
| CHORDATA / ELASMOBRANCHII | <i>Carcharhinus plumbeus</i>     | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |           |                     |                 | EN            | <input type="checkbox"/> | <input type="checkbox"/>            |  | Crit. 3: The Barr Al Hikman marine environment supports a variety of marine life including sharks that are globally threatened; their conservation contributes to the marine biodiversity of the region. Crit. 4: In Barr Al Hikman, coral reefs and coastal areas serve as nurseries and foraging grounds for many marine species, including the Sandbar shark. Crit. 8: Barr Al Hikman is an important nursery area for this species.              |
| CHORDATA / ELASMOBRANCHII | <i>Carcharodon carcharias</i>    | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |           |                     |                 | VU            | <input type="checkbox"/> | <input checked="" type="checkbox"/> |  | Crit. 3 & 7: The Barr Al Hikman marine environment supports a variety of marine life including sharks that are globally threatened; their conservation contributes to the marine biodiversity of the region. Crit. 4: In Barr Al Hikman, coral reefs and coastal areas serve as nurseries and foraging grounds for many marine species, including the Great white shark. Crit. 8: Barr Al Hikman is an important nursery area for this species.      |
| CHORDATA / ACTINOPTERYGII | <i>Chanos chanos</i>             | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |           |                     |                 | LC            | <input type="checkbox"/> | <input type="checkbox"/>            |  | Crit. 3 & 7: Native to Oman Crit. 8: Shelter and habitat for Juveniles, uses the Site as nursery   |
| CHORDATA / ELASMOBRANCHII | <i>Ctenacis fehlmanni</i>        | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |           |                     |                 | LC            | <input type="checkbox"/> | <input type="checkbox"/>            |  | Crit. 3: Endemic species (Jabado et al., 2017) Crit. 8: Shelter and habitat for Juveniles, uses the Site as nursery  |
| CHORDATA / ELASMOBRANCHII | <i>Echinorhinus brucus</i>       | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |           |                     |                 | EN            | <input type="checkbox"/> | <input type="checkbox"/>            | Vulnerable under the regional red list assessment (Jabado et al., 2017)            | Crit. 3: The Barr Al Hikman marine environment supports a variety of marine life including sharks that are globally threatened; their conservation contributes to the marine biodiversity of the region. Crit. 8: Shelter and habitat for Juveniles/ Uses the wetland as a nursery   |
| CHORDATA / ACTINOPTERYGII | <i>Ellochelone vaigiensis</i>    | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |           |                     |                 | LC            | <input type="checkbox"/> | <input type="checkbox"/>            |  | Crit. 8: Shelter and habitat for Juveniles/ Uses the wetland as a nursery  |
| ARTHROPODA / MALACOSTRACA | <i>Eriphia smithii</i>           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |           |                     |                 |               | <input type="checkbox"/> | <input type="checkbox"/>            |  | Crit. 3: This species is regionally threatened in certain parts of its distribution; their conservation contributes to the marine biodiversity of the region. Crit.4 & Crit. 8: Shelter and habitat for Juveniles/ Uses the wetland as a nursery   |

| Phylum                    | Scientific name               | Species qualifies under criterion   |                                     |                          |                          | Species contributes under criterion |                          |                                     |                                     | Pop. Size | Period of pop. Est. | % occurrence 1) | IUCN Red List | CITES Appendix I         | CMS Appendix I           | Other Status  | Justification   |
|---------------------------|-------------------------------|-------------------------------------|-------------------------------------|--------------------------|--------------------------|-------------------------------------|--------------------------|-------------------------------------|-------------------------------------|-----------|---------------------|-----------------|---------------|--------------------------|--------------------------|---|---|
|                           |                               | 2                                   | 4                                   | 6                        | 9                        | 3                                   | 5                        | 7                                   | 8                                   |           |                     |                 |               |                          |                          |   |   |
| CHORDATA / ACTINOPTERYGII | <i>Favonigobius reichei</i>   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |           |                     |                 | LC            | <input type="checkbox"/> | <input type="checkbox"/> |   | Crit. 4: This species breeds in the wetland and a resident species Crit. 8: Shelter and habitat for Juveniles/ Uses the wetland as a nursery  |
| CHORDATA / ELASMOBRANCHII | <i>Galeocerdo cuvier</i>      | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |           |                     |                 | NT            | <input type="checkbox"/> | <input type="checkbox"/> | Vulnerable under the regional red list assessment (Jabado et al., 2017) | Crit. 3 & 7: The Barr Al Hikman marine environment supports a variety of marine life including sharks that are globally threatened; their conservation contributes to the marine biodiversity of the region. Crit. 8: Shelter and habitat for Juveniles/ Uses the wetland as a nursery                  |
| CHORDATA / ACTINOPTERYGII | <i>Gerres erythrourus</i>     | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |           |                     |                 | LC            | <input type="checkbox"/> | <input type="checkbox"/> |   | Crit. 8: Shelter and habitat for Juveniles/ Uses the wetland as a nursery.  |
| CHORDATA / ACTINOPTERYGII | <i>Gerres filamentosus</i>    | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |           |                     |                 | LC            | <input type="checkbox"/> | <input type="checkbox"/> |   | Crit. 8: Shelter and habitat for Juveniles/ Uses the wetland as a nursery.  |
| CHORDATA / ELASMOBRANCHII | <i>Glaucostegus halavi</i>    | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |           |                     |                 | CR            | <input type="checkbox"/> | <input type="checkbox"/> |   | Crit. 3 & 7: Globally Critically Endangered species and is of key conservation priority; Site provides essential habitat to ensure their survival.  |
| CHORDATA / ACTINOPTERYGII | <i>Gobius niger</i>           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |           |                     |                 | LC            | <input type="checkbox"/> | <input type="checkbox"/> |   | Crit. 4 & Crit. 8: Shelter and habitat for Juveniles/ Uses the wetland as a nursery.  |
| CHORDATA / ELASMOBRANCHII | <i>Gymnura poecilura</i>      | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |           |                     |                 | VU            | <input type="checkbox"/> | <input type="checkbox"/> |   | Crit. 3 & 7: This species isn't primarily the focus of conservation efforts, but it plays a valuable role in marine ecosystems. The conservation of biodiversity of the Reserve is supported by protecting the rays habitat. Crit. 8: Shelter and habitat for Juveniles/ Uses the wetland as a nursery. |
| CHORDATA / ELASMOBRANCHII | <i>Hemipristis elongata</i>   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |           |                     |                 | VU            | <input type="checkbox"/> | <input type="checkbox"/> |   | Crit. 3: The Barr Al Hikman marine environment supports a variety of marine life including sharks that are globally threatened; their conservation contributes to the marine biodiversity of the region.  |
| CHORDATA / ELASMOBRANCHII | <i>Heterodontus omanensis</i> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |           |                     |                 | DD            | <input type="checkbox"/> | <input type="checkbox"/> |   | Crit. 3 and 7: Endemic species (Jabado et al., 2017). Crit. 4 and 8: Breeds in the Site and is a resident species   |
| CHORDATA / ELASMOBRANCHII | <i>Himantura leoparda</i>     | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |           |                     |                 | VU            | <input type="checkbox"/> | <input type="checkbox"/> |   | Crit. 3: The Barr Al Hikman marine environment supports a variety of marine life including rays that are globally threatened; their conservation contributes to the marine biodiversity of the region. Crit. 4 & Crit. 8: Shelter and habitat for Juveniles/ Uses the wetland as a nursery.             |
| CHORDATA / ELASMOBRANCHII | <i>Himantura uarnak</i>       | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |           |                     |                 | EN            | <input type="checkbox"/> | <input type="checkbox"/> |   | Crit. 3: The Barr Al Hikman marine environment supports a variety of marine life including rays that are globally threatened; their conservation contributes to the marine biodiversity of the region. Crit. 4 & Crit. 8: Shelter and habitat for Juveniles/ Uses the wetland as a nursery.             |
| CHORDATA / ACTINOPTERYGII | <i>Istigobius decoratus</i>   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |           |                     |                 | LC            | <input type="checkbox"/> | <input type="checkbox"/> |   | Crit. 3: The Barr Al Hikman marine environment supports a variety of marine life including rays that are globally threatened; their conservation contributes to the marine biodiversity of the region. Crit. 4 & Crit. 8: Shelter and habitat for Juveniles/ Uses the wetland as a nursery.             |
| CHORDATA / ELASMOBRANCHII | <i>Isurus oxyrinchus</i>      | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |           |                     |                 | EN            | <input type="checkbox"/> | <input type="checkbox"/> |   | Crit. 3: The Barr Al Hikman marine environment supports a variety of marine life including sharks that are globally threatened; their conservation contributes to the marine biodiversity of the region. Crit. 4 & Crit. 8: Shelter and habitat for Juveniles/ Uses the wetland as a nursery.           |

| Phylum                    | Scientific name                 | Species qualifies under criterion   |                                     |                          |                          | Species contributes under criterion |                          |                                     |                                     | Pop. Size | Period of pop. Est. | % occurrence 1) | IUCN Red List | CITES Appendix I         | CMS Appendix I                      | Other Status   | Justification   |
|---------------------------|---------------------------------|-------------------------------------|-------------------------------------|--------------------------|--------------------------|-------------------------------------|--------------------------|-------------------------------------|-------------------------------------|-----------|---------------------|-----------------|---------------|--------------------------|-------------------------------------|--|---|
|                           |                                 | 2                                   | 4                                   | 6                        | 9                        | 3                                   | 5                        | 7                                   | 8                                   |           |                     |                 |               |                          |                                     |  |   |
| CHORDATA / ELASMOBRANCHII | <i>Isurus paucus</i>            | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |           |                     |                 | EN            | <input type="checkbox"/> | <input type="checkbox"/>            |  | Crit. 3: The Barr Al Hikman marine environment supports a variety of marine life including sharks that are globally threatened; their conservation contributes to the marine biodiversity of the region. Crit. 4 & Crit. 8: Shelter and habitat for Juveniles/ Uses the wetland as a nursery.   |
| CHORDATA / ACTINOPTERYGII | <i>Lutjanus ehrenbergii</i>     | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |           |                     |                 | LC            | <input type="checkbox"/> | <input type="checkbox"/>            |  | Crit. 8: Shelter and habitat for Juveniles  |
| ARTHROPODA / MALACOSTRACA | <i>Macrophthalmus depressus</i> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |           |                     |                 |               | <input type="checkbox"/> | <input type="checkbox"/>            |  | Crit. 8: Shelter and habitat for Juveniles  |
| CHORDATA / ELASMOBRANCHII | <i>Mobula alfredi</i>           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |           |                     |                 | VU            | <input type="checkbox"/> | <input type="checkbox"/>            |  | Crit. 3: The Barr Al Hikman marine environment supports a variety of marine life including rays that are globally threatened; their conservation contributes to the marine biodiversity of the region. Crit. 8: Shelter and habitat for Juveniles   |
| CHORDATA / ELASMOBRANCHII | <i>Mobula eregoodootenkee</i>   | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |           |                     |                 | EN            | <input type="checkbox"/> | <input checked="" type="checkbox"/> |  | Crit. 3 & 7: The Barr Al Hikman marine environment supports a variety of marine life including rays that are globally threatened; their conservation contributes to the marine biodiversity of the region. Crit. 4: In Barr Al Hikman, coral reefs and coastal areas serve as nurseries and foraging grounds for many marine species, including the Longhorned pygmy devil ray. Crit. 8: Barr Al Hikman is an important nursery area for this species.  |
| CHORDATA / ELASMOBRANCHII | <i>Mobula japonica</i>          | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |           |                     |                 | EN            | <input type="checkbox"/> | <input checked="" type="checkbox"/> |  | Crit. 3 & 7: The Barr Al Hikman marine environment supports a variety of marine life including rays that are globally threatened; their conservation contributes to the marine biodiversity of the region. Crit. 4: In Barr Al Hikman, coral reefs and coastal areas serve as nurseries and foraging grounds for many marine species, including the Spinetail devil ray. Crit. 8: Barr Al Hikman is an important nursery area for this species.   |
| CHORDATA / ELASMOBRANCHII | <i>Mobula kuhlii</i>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |           |                     |                 | EN            | <input type="checkbox"/> | <input checked="" type="checkbox"/> |  | Crit. 3: The Barr Al Hikman marine environment supports a variety of marine life including rays that are globally threatened; their conservation contributes to the marine biodiversity of the region.  |
| CHORDATA / ELASMOBRANCHII | <i>Mobula mobular</i>           | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |           |                     |                 | EN            | <input type="checkbox"/> | <input checked="" type="checkbox"/> |  | Crit. 3 & 7: The Barr Al Hikman marine environment supports a variety of marine life in the area, including rays that are vulnerable or threatened, including the Giant devilray. The conservation of these habitats contributes to the conservation of marine biodiversity as a whole. Crit. 4: In Barr Al Hikman, coral reefs and coastal areas serve as nurseries and foraging grounds for many marine species, including the Giant devilray.; Crit. 7: Marine ecosystems in Barr Al Hikman provide essential ecosystem services, such as supporting fisheries, protecting coastlines, and promoting tourism. Crit. 8: Barr Al Hikman is an important nursery area for this species. |
| CHORDATA / ELASMOBRANCHII | <i>Mobula thurstoni</i>         | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |           |                     |                 | EN            | <input type="checkbox"/> | <input checked="" type="checkbox"/> | Endangered under the regional red list assessment (Jabado et al., 2017)      | Crit. 3 & 7: The Barr Al Hikman marine environment supports a variety of marine life including rays that are globally threatened; their conservation contributes to the marine biodiversity of the region. Crit. 4: In Barr Al Hikman, coral reefs and coastal areas serve as nurseries and foraging grounds for many marine species, including the Smooth tail devil ray. Crit. 8: Barr Al Hikman is an important nursery area for this species.   |
| CHORDATA / ELASMOBRANCHII | <i>Narke dipterygia</i>         | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |           |                     |                 | VU            | <input type="checkbox"/> | <input type="checkbox"/>            | Near threatened under the regional red list assessment (Jabado et al., 2017) | Crit. 3: The Barr Al Hikman marine environment supports a variety of marine life including rays that are globally threatened; their conservation contributes to the marine biodiversity of the region.  |

| Phylum                    | Scientific name              | Species qualifies under criterion   |                                     |                          |                          | Species contributes under criterion |                          |                                     |                                     | Pop. Size | Period of pop. Est. | % occurrence 1) | IUCN Red List                       | CITES Appendix I                    | CMS Appendix I   | Other Status   | Justification |
|---------------------------|------------------------------|-------------------------------------|-------------------------------------|--------------------------|--------------------------|-------------------------------------|--------------------------|-------------------------------------|-------------------------------------|-----------|---------------------|-----------------|-------------------------------------|-------------------------------------|--|--|---------------|
|                           |                              | 2                                   | 4                                   | 6                        | 9                        | 3                                   | 5                        | 7                                   | 8                                   |           |                     |                 |                                     |                                     |  |  |               |
| CHORDATA / ELASMOBRANCHII | <i>Nebrius ferrugineus</i>   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |           |                     | VU              | <input type="checkbox"/>            | <input type="checkbox"/>            |  | Crit. 3: The Barr Al Hikman marine environment supports a variety of marine life including sharks that are globally threatened; their conservation contributes to the marine biodiversity of the region.   |               |
| CHORDATA / ELASMOBRANCHII | <i>Negaprion acutidens</i>   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |           |                     | EN              | <input type="checkbox"/>            | <input type="checkbox"/>            | Endangered under the regional red list assessment (Jabado et al., 2017)            | Crit. 3: The Barr Al Hikman marine environment supports a variety of marine life including sharks that are globally threatened; their conservation contributes to the marine biodiversity of the region.   |               |
| CHORDATA / ELASMOBRANCHII | <i>Pastinachus ater</i>      | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |           |                     | VU              | <input type="checkbox"/>            | <input type="checkbox"/>            |  | Crit. 3: The Barr Al Hikman marine environment supports a variety of marine life including rays that are globally threatened; their conservation contributes to the marine biodiversity of the region.   |               |
| CHORDATA / ELASMOBRANCHII | <i>Pastinachus sephen</i>    | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |           |                     | NT              | <input type="checkbox"/>            | <input type="checkbox"/>            |  | Crit. 3 & 7: Endemic species (Jabado et al., 2017) Crit. 4 & Crit. 8: Shelter and habitat for Juveniles/ Uses the wetland as a nursery.  |               |
| ARTHROPODA / MALACOSTRACA | <i>Penaeus indicus</i>       | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |           |                     |                 | <input type="checkbox"/>            | <input type="checkbox"/>            |  | Crit. 8: Shelter and habitat for Juveniles/ Uses the wetland as a nursery.   |               |
| ARTHROPODA / MALACOSTRACA | <i>Penaeus semisulcatus</i>  | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |           |                     |                 | <input type="checkbox"/>            | <input type="checkbox"/>            |  | Crit. 8: Shelter and habitat for Juveniles/ Uses the wetland as a nursery.   |               |
| CHORDATA / ACTINOPTERYGII | <i>Pomatomus saltatrix</i>   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |           |                     | VU              | <input type="checkbox"/>            | <input type="checkbox"/>            |  |  |               |
| CHORDATA / ELASMOBRANCHII | <i>Pristis zijsron</i>       | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |           |                     | CR              | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | Critically endangered under the regional red list assessment (Jabado et al., 2017) | Crit. 3 & 7: Endemic species (Jabado et al., 2017) Crit. 4 & 8: Site provides shelter and habitat for Juveniles and act as a nursery.  |               |
| CHORDATA / ACTINOPTERYGII | <i>Rhabdosargus sarba</i>    | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |           |                     | LC              | <input type="checkbox"/>            | <input type="checkbox"/>            |  | Crit. 8: Shelter and habitat for Juveniles/ Uses the wetland as a nursery.   |               |
| CHORDATA / ELASMOBRANCHII | <i>Rhina ancylostoma</i>     | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |           |                     | CR              | <input type="checkbox"/>            | <input type="checkbox"/>            |  | Crit. 3: The Barr Al Hikman marine environment supports a variety of marine life including rays that are globally threatened; their conservation contributes to the marine biodiversity of the region.   |               |
| CHORDATA / ELASMOBRANCHII | <i>Rhincodon typus</i>       | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |           |                     | EN              | <input type="checkbox"/>            | <input type="checkbox"/>            |  | Crit. 3: Barr Al Hikman is a vital important feeding area and migratory pathway for this globally endangered species. Crit. 7: Globally endangered fish species whose presence is important from both regional biodiversity and eco-tourism perspectives. Crit. 8: Site is a foraging area for this species.   |               |
| CHORDATA / ELASMOBRANCHII | <i>Rhinobatos annandalei</i> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |           |                     | CR              | <input type="checkbox"/>            | <input type="checkbox"/>            | Near threatened under the regional red list assessment (Jabado et al., 2017)       | Crit. 3 & 7: Globally Critically Endangered species and is of key conservation priority; Barr Al Hikman provides essential habitat to ensure their survival. Crit. 4: Barr Al Hikman Coastal lagoons and intertidal mudflats support a variety of fish and invertebrates. Bengal Guitarfish survival depends on these aquatic resources, which indirectly benefit fishermen and local communities. |               |
| CHORDATA / ELASMOBRANCHII | <i>Rhinobatos punctifer</i>  | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |           |                     | NT              | <input type="checkbox"/>            | <input type="checkbox"/>            |  | Crit. 3: Endemic species (Jabado et al., 2017)   |               |
| CHORDATA / ELASMOBRANCHII | <i>Rhinoptera javanica</i>   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |           |                     | EN              | <input type="checkbox"/>            | <input type="checkbox"/>            | Endangered under the regional red list assessment (Jabado et al., 2017)            | Crit. 3: The Barr Al Hikman marine environment supports a variety of marine life including rays that are globally threatened; their conservation contributes to the marine biodiversity of the region.   |               |



| Phylum                    | Scientific name                | Species qualifies under criterion   |                                     |                          |                          | Species contributes under criterion |                          |                                     |                                     | Pop. Size | Period of pop. Est. | % occurrence 1) | IUCN Red List            | CITES Appendix I         | CMS Appendix I   | Other Status  | Justification |
|---------------------------|--------------------------------|-------------------------------------|-------------------------------------|--------------------------|--------------------------|-------------------------------------|--------------------------|-------------------------------------|-------------------------------------|-----------|---------------------|-----------------|--------------------------|--------------------------|--|---|---------------|
|                           |                                | 2                                   | 4                                   | 6                        | 9                        | 3                                   | 5                        | 7                                   | 8                                   |           |                     |                 |                          |                          |  |   |               |
| CHORDATA / ELASMOBRANCHII | <i>Rhinoptera jayakari</i>     | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |           |                     | EN              | <input type="checkbox"/> | <input type="checkbox"/> | Endangered under the regional red list assessment (Jabado et al., 2017)            | Crit. 3: The Barr Al Hikman marine environment supports a variety of marine life including rays that are globally threatened; their conservation contributes to the marine biodiversity of the region.  |               |
| CHORDATA / ELASMOBRANCHII | <i>Rhizoprionodon acutus</i>   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |           |                     | VU              | <input type="checkbox"/> | <input type="checkbox"/> |  | Crit. 3: The Barr Al Hikman marine environment supports a variety of marine life including sharks that are globally threatened; their conservation contributes to the marine biodiversity of the region.  |               |
| CHORDATA / ELASMOBRANCHII | <i>Rhynchobatus australiae</i> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |           |                     | CR              | <input type="checkbox"/> | <input type="checkbox"/> | Endangered under the regional red list assessment (Jabado et al., 2017)            |   |               |
| CHORDATA / ELASMOBRANCHII | <i>Rhynchobatus djiddensis</i> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |           |                     | CR              | <input type="checkbox"/> | <input type="checkbox"/> | Endangered under the regional red list assessment (Jabado et al., 2017)            | Crit. 3: The Barr Al Hikman marine environment supports a variety of marine life including sharks that are globally threatened; their conservation contributes to the marine biodiversity of the region.  |               |
| CHORDATA / ELASMOBRANCHII | <i>Rhynchobatus laevis</i>     | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |           |                     | CR              | <input type="checkbox"/> | <input type="checkbox"/> | Endangered under the regional red list assessment (Jabado et al., 2017)            |   |               |
| CHORDATA / ELASMOBRANCHII | <i>Sphyrna lewini</i>          | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |           |                     | CR              | <input type="checkbox"/> | <input type="checkbox"/> | Endangered under the regional red list assessment (Jabado et al., 2017)            | Crit. 3 & 7: The Barr Al Hikman marine environment supports a variety of marine life including sharks that are globally threatened; their conservation contributes to the marine biodiversity of the region. Crit. 4: In Barr Al Hikman, coral reefs and coastal areas serve as nurseries and foraging grounds for many marine species, including the Scalloped hammer head shark. Crit. 8: Barr Al Hikman is an important nursery area for this species. |               |
| CHORDATA / ELASMOBRANCHII | <i>Sphyrna mokarran</i>        | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |           |                     | CR              | <input type="checkbox"/> | <input type="checkbox"/> | Endangered under the regional red list assessment (Jabado et al., 2017)            | Crit. 3 & 7: The Barr Al Hikman marine environment supports a variety of marine life including sharks that are globally threatened; their conservation contributes to the marine biodiversity of the region. Crit. 4: In Barr Al Hikman, coral reefs and coastal areas serve as nurseries and foraging grounds for many marine species, including the Great hammer head shark. Crit. 8: Barr Al Hikman is an important nursery area for this species.     |               |
| CHORDATA / ELASMOBRANCHII | <i>Sphyrna zygaena</i>         | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |           |                     | VU              | <input type="checkbox"/> | <input type="checkbox"/> | Criterion 2: Endangered under the regional red list assessment Jabado et al., 2017 | Crit. 3 & 7: The Barr Al Hikman marine environment supports a variety of marine life including sharks that are globally threatened; their conservation contributes to the marine biodiversity of the region. Crit. 4: In Barr Al Hikman, coral reefs and coastal areas serve as nurseries and foraging grounds for many marine species, including the Smooth hammer head shark. Crit. 8: Barr Al Hikman is an important nursery area for this species.    |               |
| CHORDATA / ELASMOBRANCHII | <i>Stegostoma fasciatum</i>    | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |           |                     | EN              | <input type="checkbox"/> | <input type="checkbox"/> | Vulnerable under the regional red list assessment (Jabado et al., 2017)            | Crit. 3 & 7: The Barr Al Hikman marine environment supports a variety of marine life including sharks that are globally threatened; their conservation contributes to the marine biodiversity of the region. Crit. 4: In Barr Al Hikman, coral reefs and coastal areas serve as nurseries and foraging grounds for many marine species, including the zebra shark. Crit. 8: Barr Al Hikman is an important nursery area for this species.                 |               |
| CHORDATA / ACTINOPTERYGII | <i>Stolephorus indicus</i>     | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |           |                     | LC              | <input type="checkbox"/> | <input type="checkbox"/> |  | Crit. 8: Shelter and habitat for Juveniles/ Uses the wetland as a nursery.  |               |

| Phylum                    | Scientific name             | Species qualifies under criterion   |                                     |                                     |                          | Species contributes under criterion |                          |                                     |                                     | Pop. Size | Period of pop. Est. | % occurrence 1) | IUCN Red List | CITES Appendix I                    | CMS Appendix I                      | Other Status  | Justification  |
|---------------------------|-----------------------------|-------------------------------------|-------------------------------------|-------------------------------------|--------------------------|-------------------------------------|--------------------------|-------------------------------------|-------------------------------------|-----------|---------------------|-----------------|---------------|-------------------------------------|-------------------------------------|---|--|
|                           |                             | 2                                   | 4                                   | 6                                   | 9                        | 3                                   | 5                        | 7                                   | 8                                   |           |                     |                 |               |                                     |                                     |   |  |
| CHORDATA / ELASMOBRANCHII | <i>Taeniurops meyeri</i>    | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |           |                     |                 | VU            | <input type="checkbox"/>            | <input type="checkbox"/>            |   | Crit. 3: The Barr Al Hikman marine environment supports a variety of marine life including rays that are globally threatened; their conservation contributes to the marine biodiversity of the region.   |
| ARTHROPODA / MALACOSTRACA | <i>Thalamita crenata</i>    | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |           |                     |                 |               | <input type="checkbox"/>            | <input type="checkbox"/>            |   | Crit. 8: Shelter and habitat for Juveniles/ Uses the wetland as a nursery.   |
| CHORDATA / ELASMOBRANCHII | <i>Torpedo panthera</i>     | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |           |                     |                 | EN            | <input type="checkbox"/>            | <input type="checkbox"/>            |   | Crit. 3: The Barr Al Hikman marine environment supports a variety of marine life including rays that are globally threatened; their conservation contributes to the marine biodiversity of the region.   |
| CHORDATA / ELASMOBRANCHII | <i>Triacnodon obesus</i>    | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |           |                     |                 | VU            | <input type="checkbox"/>            | <input type="checkbox"/>            | Vulnerable under the regional red list assessment (Jabado et al., 2017) | Crit. 3 & 7: The Barr Al Hikman marine environment supports a variety of marine life including sharks that are globally threatened; their conservation contributes to the marine biodiversity of the region. Crit. 4: In Barr Al Hikman, coral reefs and coastal areas serve as nurseries and foraging grounds for many marine species, including the White-tip reef shark. Crit. 8: Barr Al Hikman is an important nursery area for this species. |
| CHORDATA / ELASMOBRANCHII | <i>Urogymnus asperrimus</i> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |           |                     |                 | VU            | <input type="checkbox"/>            | <input type="checkbox"/>            |   | Crit. 3 & 7: The Barr Al Hikman marine environment supports a variety of marine life including sharks that are globally threatened; their conservation contributes to the marine biodiversity of the region. Crit. 4: In Barr Al Hikman, coral reefs and coastal areas serve as nurseries and foraging grounds for many marine species, including the Porcupineray. Crit. 8: Barr Al Hikman is an important nursery area for this species.         |
| <b>Birds</b>              |                             |                                     |                                     |                                     |                          |                                     |                          |                                     |                                     |           |                     |                 |               |                                     |                                     |   |  |
| CHORDATA / AVES           | <i>Aquila heliaca</i>       | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |           |                     |                 | VU            | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |   |  |
| CHORDATA / AVES           | <i>Arenaria interpres</i>   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | 6940      | 2016                | 7               | LC            | <input type="checkbox"/>            | <input type="checkbox"/>            |   | Crit. 4: The Barr Al Hikman's intertidal mudflats and shallow waters provide Ruddy Turnstones with vital foraging habitats. Their main diet consists of invertebrates, such as crabs and mollusks. There are a number of fish and crustacean species at the Barr Al Hikman site that contribute to local fisheries. This bird species plays a key role in maintaining ecosystem health by controlling invertebrate populations.                    |
| CHORDATA / AVES           | <i>Aythya ferina</i>        | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |           |                     |                 | VU            | <input type="checkbox"/>            | <input type="checkbox"/>            |   |  |
| CHORDATA / AVES           | <i>Calidris alba</i>        | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | 3638      | 2016                | 2               | LC            | <input type="checkbox"/>            | <input type="checkbox"/>            |   | Crit. 4: Sanderlings feed on the vast intertidal mudflats, salt marshes, and shallow coastal waters of Barr Al Hikman during their migration. This includes invertebrates like small crustaceans and marine worms. There are several fish and crustacean species at the Barr Al Hikman site that contribute to local fisheries. This bird species plays a key role in ecosystem health by controlling invertebrate populations.                    |
| CHORDATA / AVES           | <i>Calidris alpina</i>      | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | 125659    | 2016                | 23              | LC            | <input type="checkbox"/>            | <input type="checkbox"/>            |   | Crit. 4: Dunlin feed on the vast intertidal mudflats, salt marshes, and shallow coastal waters of Barr Al Hikman during their migration. This includes invertebrates like small crustaceans and marine worms. There are several fish and crustacean species at the Barr Al Hikman site that contribute to local fisheries. This bird species plays a key role in ecosystem health by controlling invertebrate populations.                         |

| Phylum        | Scientific name                 | Species qualifies under criterion   |                                     |                                     |                          | Species contributes under criterion |                                     |                          |                          | Pop. Size | Period of pop. Est. | % occurrence 1) | IUCN Red List | CITES Appendix I         | CMS Appendix I                      | Other Status | Justification   |
|---------------|---------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|--------------------------|-------------------------------------|-------------------------------------|--------------------------|--------------------------|-----------|---------------------|-----------------|---------------|--------------------------|-------------------------------------|--------------|---|
|               |                                 | 2                                   | 4                                   | 6                                   | 9                        | 3                                   | 5                                   | 7                        | 8                        |           |                     |                 |               |                          |                                     |              |   |
| CHORDATA/AVES | <i>Calidris ferruginea</i>      | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 14633     | 2016                | 4               | NT            | <input type="checkbox"/> | <input type="checkbox"/>            |              | Crit. 4: For Curlew Sandpipers, Barr Al Hikman mudflats provide vital foraging habitats with aquatic insects, crustaceans, and snails. There are a number of fish and crustacean species at the Barr Al Hikman site that contribute to local fisheries. This bird species plays a key role in maintaining ecosystem health by controlling invertebrate populations.   |
| CHORDATA/AVES | <i>Calidris minuta</i>          | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 7838      | 2016                | 1               | LC            | <input type="checkbox"/> | <input type="checkbox"/>            |              | Crit. 4: The intertidal mudflats and tidal areas of Barr Al Hikman provide vital stopovers and feeding grounds for Little Stints. Marine worms and small crustaceans make up the rich invertebrate populations found in coastal habitats, which little stints depend on for food. The area is connected to local fisheries and supports various fish species. Little Stints maintain ecosystem health by controlling invertebrate populations.        |
| CHORDATA/AVES | <i>Calidris tenuirostris</i>    | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 390       | 2016                | 26              | EN            | <input type="checkbox"/> | <input checked="" type="checkbox"/> |              | Crit. 4: The Barr Al Hikman's intertidal mudflats and shallow waters provide Great knot with vital foraging habitats. Their main diet consists of invertebrates, such as crabs and mollusks. There are a number of fish and crustacean species at the Barr Al Hikman site that contribute to local fisheries. This bird species plays a key role in maintaining ecosystem health by controlling invertebrate populations.                             |
| CHORDATA/AVES | <i>Charadrius alexandrinus</i>  | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 1641      | 2016                | 1               | LC            | <input type="checkbox"/> | <input type="checkbox"/>            |              | Resident species and breeding in the Site (Michael C. Jennings, Ed. 2010). Barr Al Hikman mudflats and intertidal areas provide critical stopovers and foraging habitats for migratory shorebirds. A rich invertebrate population in these areas provides food for Kentish Plovers.   |
| CHORDATA/AVES | <i>Charadrius leschenaultii</i> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 14789     | 2016                | 35              | LC            | <input type="checkbox"/> | <input type="checkbox"/>            |              | Crit. 4: Greater Sandplovers rely on the vast intertidal mudflats of Barr Al Hikman for stopovers and foraging grounds. Wetlands provide food for birds, such as crustaceans and insects. There are a number of fish and crustacean species at the Barr Al Hikman site that contribute to local fisheries. This bird species plays a key role in maintaining ecosystem health by controlling invertebrate populations.                                |
| CHORDATA/AVES | <i>Charadrius mongolus</i>      | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 123369    | 2016                | 46              | LC            | <input type="checkbox"/> | <input type="checkbox"/>            |              | Crit. 4: Lesser Sandplovers depend on the vast intertidal mudflats of Barr Al Hikman for foraging grounds. A wide variety of invertebrates, like small crustaceans and insects, inhabit the wetlands, feeding the birds. There are a number of fish and crustacean species at the Barr Al Hikman site that contribute to local fisheries. This bird species plays a key role in maintaining ecosystem health by controlling invertebrate populations. |
| CHORDATA/AVES | <i>Chroicocephalus genei</i>    | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 9282      | 2016                | 6               |               | <input type="checkbox"/> | <input type="checkbox"/>            |              | Crit. 4: Slender-billed Gulls rely on the intertidal mudflats, shallow lagoon, and tidal areas of Barr Al Hikman for feeding and stopovers. In coastal habitats, Slender-billed Gulls depend on a rich invertebrate population composed of invertebrates and small fish. The area is connected to local fisheries and supports various fish species. Slender-billed Gulls maintain ecosystem health by controlling invertebrate populations.          |

| Phylum          | Scientific name                   | Species qualifies under criterion   |                                     |                                     |                          | Species contributes under criterion |                                     |                          |                          | Pop. Size | Period of pop. Est. | % occurrence 1) | IUCN Red List | CITES Appendix I                    | CMS Appendix I                      | Other Status | Justification   |
|-----------------|-----------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|--------------------------|-------------------------------------|-------------------------------------|--------------------------|--------------------------|-----------|---------------------|-----------------|---------------|-------------------------------------|-------------------------------------|--------------|---|
|                 |                                   | 2                                   | 4                                   | 6                                   | 9                        | 3                                   | 5                                   | 7                        | 8                        |           |                     |                 |               |                                     |                                     |              |   |
| CHORDATA / AVES | <i>Dromas ardeola</i>             | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 8462      | 2016                | 14              | LC            | <input type="checkbox"/>            | <input type="checkbox"/>            |              | Crit. 4: Resident species and breeding in the Site (Michael C. Jennings, Ed. 2010) Crab Plovers depend on Barr Al Hikman's intertidal mudflats foraging. In these wetlands, crabs are abundant, particularly burrowing crabs, on which these birds feed. The site is also home to a wide variety of crustaceans, including crabs. In addition to controlling crab populations, crab plovers support other shorebird species that consume the same prey, which helps maintain the ecosystem. |
| CHORDATA / AVES | <i>Egretta gularis</i>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 2425      | 2016                | 10              | LC            | <input type="checkbox"/>            | <input type="checkbox"/>            |              | Crit. 4: Resident species and breeding in the Site (Michael C. Jennings, Ed. 2010) Western Reef Herons forage on the intertidal mudflats and shallow waters of Barr Al Hikman. Fish and invertebrates found in these habitats provide crucial food for the species.   |
| CHORDATA / AVES | <i>Falco cherrug</i>              | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> |           |                     |                 | EN            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |              |   |
| CHORDATA / AVES | <i>Falco concolor</i>             | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> |           |                     |                 | VU            | <input type="checkbox"/>            | <input type="checkbox"/>            |              |   |
| CHORDATA / AVES | <i>Haematopus ostralegus</i>      | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 4280      | 2016                | 5               | NT            | <input type="checkbox"/>            | <input type="checkbox"/>            |              | Crit. 3: Barr Al Hikman mudflats, salt marshes, and shallow coastal waters provide abundant food resources, especially bivalves and worms, to this species during non-breeding periods. Crit. 4: The Barr Al Hikman supports rich biodiversity and serves as a nursery for fish species of commercial value. The oystercatcher contributes to the health of the ecosystem by controlling intertidal invertebrates.  |
| CHORDATA / AVES | <i>Hydroprogne caspia</i>         | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 2089      | 2016                | 6               | LC            | <input type="checkbox"/>            | <input type="checkbox"/>            |              |   |
| CHORDATA / AVES | <i>Ichthyaeetus hemprichii</i>    | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 5257      | 2016                | 3               |               | <input type="checkbox"/>            | <input type="checkbox"/>            |              |   |
| CHORDATA / AVES | <i>Limicola falcinellus</i>       | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 853       | 2016                | 1               | LC            | <input type="checkbox"/>            | <input type="checkbox"/>            |              |   |
| CHORDATA / AVES | <i>Limosa lapponica</i>           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 60976     | 2016                | 51              | NT            | <input type="checkbox"/>            | <input type="checkbox"/>            |              |   |
| CHORDATA / AVES | <i>Neophron percnopterus</i>      | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> |           |                     |                 | EN            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |              | Resident in the Site and confirmed breeder (Michael C. Jennings, Ed. 2010).   |
| CHORDATA / AVES | <i>Numenius arquata</i>           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 14518     | 2016                | 5               | NT            | <input type="checkbox"/>            | <input type="checkbox"/>            |              |   |
| CHORDATA / AVES | <i>Numenius madagascariensis</i>  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> |           |                     |                 | EN            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |              |   |
| CHORDATA / AVES | <i>Numenius tenuirostris</i>      | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> |           |                     |                 | CR            | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |              |   |
| CHORDATA / AVES | <i>Phalacrocorax carbo</i>        | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 20801     | 2016                | 15              | LC            | <input type="checkbox"/>            | <input type="checkbox"/>            |              |   |
| CHORDATA / AVES | <i>Phalacrocorax nigrogularis</i> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> |           |                     |                 | VU            | <input type="checkbox"/>            | <input type="checkbox"/>            |              |   |
| CHORDATA / AVES | <i>Phoenicopterus roseus</i>      | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 14538     | 2016                | 5               | LC            | <input type="checkbox"/>            | <input type="checkbox"/>            |              | This Site is an Important during non-breeding period for adults and juveniles. The intertidal mudflats and mangrove forests in this area offer abundant food sources for the flamingos. They feed on algae, aquatic invertebrates, and small fish.  |
| CHORDATA / AVES | <i>Platalea leucorodia</i>        | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 222       | 2016                | 4               | LC            | <input type="checkbox"/>            | <input type="checkbox"/>            |              |   |
| CHORDATA / AVES | <i>Pluvialis squatarola</i>       | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 3802      | 2016                | 4               | LC            | <input type="checkbox"/>            | <input type="checkbox"/>            |              |   |

| Phylum          | Scientific name            | Species qualifies under criterion   |                                     |                                     |                          | Species contributes under criterion |                                     |                          |                          | Pop. Size | Period of pop. Est. | % occurrence 1) | IUCN Red List | CITES Appendix I         | CMS Appendix I                      | Other Status | Justification   |
|-----------------|----------------------------|-------------------------------------|-------------------------------------|-------------------------------------|--------------------------|-------------------------------------|-------------------------------------|--------------------------|--------------------------|-----------|---------------------|-----------------|---------------|--------------------------|-------------------------------------|--------------|---|
|                 |                            | 2                                   | 4                                   | 6                                   | 9                        | 3                                   | 5                                   | 7                        | 8                        |           |                     |                 |               |                          |                                     |              |   |
| CHORDATA / AVES | <i>Sternula saundersi</i>  | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> |           |                     |                 | LC            | <input type="checkbox"/> | <input type="checkbox"/>            |              | Migrant breeder (Michael C. Jennings, Ed. 2010) Crit. 4: Saunders's Terns rely on Barr Al Hikman's intertidal mudflats and tidal areas for foraging. Diverse fish species and invertebrates inhabit the Reserve, providing terns with essential food sources. |
| CHORDATA / AVES | <i>Streptopelia turtur</i> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> |           |                     |                 | VU            | <input type="checkbox"/> | <input type="checkbox"/>            |              |   |
| CHORDATA / AVES | <i>Tringa totanus</i>      | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 18485     | 2016                | 9               | LC            | <input type="checkbox"/> | <input type="checkbox"/>            |              |   |
| CHORDATA / AVES | <i>Vanellus gregarius</i>  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> |           |                     |                 | CR            | <input type="checkbox"/> | <input checked="" type="checkbox"/> |              |   |

1) Percentage of the total biogeographic population at the site

Barr al Hikman is widely recognized as one of the most notable regions for wintering waterbirds in Western Asia, with a staggering half a million birds utilizing the area each winter. It is noteworthy that the dominant group of birds are shorebirds, including species such as Dunlin, Bar-tailed Godwit, Lesser Sandplover, and Redshank. De Fouw et al. (2016) have pointed out that the number of birds utilizing Barr al Hikman during winter is higher than any other comparable wintering site in East Africa and Western Eurasia. Furthermore, it is worth noting that for 18 species, the population utilizing Barr Al Hikman exceeds 1% of their flyway population.

Wetlands International provided bird data based on the survey of Barr Al Hikman (Oman) from 2016-2023. The 1% waterbird population thresholds are based on an article titled: Barr Al Hikman, a major shorebird hotspot within the Asian-East African flyway: results of three winter surveys (de Fouw et al., 2017) and the findings of the International Waterbird Census in January 2016 conducted by Wetlands International.

Hawksbill turtles: It feeds primarily on sponges as a juvenile, but also on anemones, soft corals, and crustaceans as an adult. (Carranza et al., 2021)

Green Turtle: Juveniles are carnivores while most adults are herbivores who feed on algae and seagrass. (Carranza et al., 2021)

### 3.4 - Ecological communities whose presence relates to the international importance of the site

<no data available>

Optional text box to provide further information

The Barr al Hikman peninsula is home to approximately 480 km<sup>2</sup> of silty salt pans of marine or fluvial origin. These sabkhas are only slightly elevated above sea level or connected to the sea, making them susceptible to flooding during storms and spring tides. The center of the peninsula hosts large fossil sabkhas, indicating a relatively young uplifting of the area. These sabkhas may be covered by an evaporative salt crust, rendering them impassable to vehicles. Due to the extremely saline conditions of the sabkha environment, plant life is largely absent, with the exception of halophytic plants such as *Halopeplis perfoliata*, which can form monospecific stands on the fringes. In areas with windblown sand deposits, additional species like *Arthrocnemum macrostachyum* or *Limonium stocksii* may also be present. Low densities of vegetation may also appear further into the sabkha if windblown sand deposits form or if rainfall temporarily lowers the salinity. The harsh environment of the sabkha is inhospitable to most animal species, with few reptiles and foxes being able to traverse it in order to get to more favorable areas.

The intertidal mudflats of Barr Al Hikman represent one of the most endangered intertidal habitats globally, and they face a range of significant threats. These include the destruction of their natural habitat, overfishing, eutrophication, climate change, and pollution. These mudflats are highly productive areas in marine habitats. The abundance of consumers is very high, attracting various organisms including fish and birds. These areas also serve as important feeding grounds when they are dry. Shallow waters are crucial for the hatching of many fish species. While the ecological balance is well maintained, it is also very fragile. The thin upper layer, only a few millimeters thick, makes the populations vulnerable to pollutants.

Coral Communities consist of 3 true reef areas located west and east of BAH. The reef structures from *Montipora foliosa* species are unique for Oman and the whole world. These communities are important for the ecological balance of the marine environment. Seagrass beds play crucial ecological and economic roles in coastal zones globally. Coral reefs and seagrass meadows are closely interconnected habitats that support marine biodiversity. Seagrass serves as a vital primary producer and helps maintain the balance of coastal waters. It enhances prey density and abundance. Seagrasses serve as a critical habitat for migrating coral reef species and various other animals, such as waterbirds, fish, and turtles.

Algal communities resemble seagrass beds but only grow on hard substrata. Algal growth is limited in sandy beaches. Algae compete with corals. Coral communities often co-occur with algal associations.

Mangrove forest is mainly composed of *Avicennia marina*, an evergreen salt-extracting halophyte that survives in muddy substrate and builds pneumatophores. The largest intact stand of mangroves in Oman is found on Mahout island. Mangroves offer various ecological services, including salt tolerance, habitat formation, nutrient cycling, fauna habitat, wildlife shelter, carbon sequestration, sediment stabilization, biodiversity support, tidal and storm surge buffering, and adaptation to sea-level rise.

The Barr Al Hikman ecosystem is comprised of several habitats, but should not be viewed in isolation due to the interconnected nature of these habitats. Various species, such as shorebirds and turtles, facilitate cross-habitat interactions either through nutrient transfer or migration, while other examples include the transfer of detritus between seagrasses and coral reefs and bird migration between tidal flats and sabkhas.

## 4 - What is the Site like? (Ecological character description)

### 4.1 - Ecological character

The Barr Al Hikman peninsula is a vast terrain with a predominantly low elevation that gradually increases from the coast to the inner inland regions and rarely exceeds 40 meters. The wetland is relatively undegraded and shallow, and comprises dry desert areas, wadis and sabkhas. The geological formation is made up of a carbonate/evaporite system and includes a small amount of clastic sand and gravel that are supplied from the alluvial systems that originate from the Hajar Mountains. There are also negligible amount of clastic sands coming from the adjacent areas of Masirah Island and Huqf.

In the western region, the Barr Al Hikman is demarcated by the Wadi Halfayn, the longest valley in Oman. It begins from the northern mountains of Jabal Akhdar and ends at the Ghubbat Hashish near Filim. The Ghubbat Hashish is a vast plain that constitutes the base of the Gulf of Masirah. The bay has a southern opening and spans approximately 15 kilometers in width and 25 kilometers in length. The bay's substrate has mainly mud banks that dry at low tide. In the northern region, the flat sandy island of Mahawt is bordered by an extensive mangrove forest. Two minor rocky islands (Raak and Abb) are located southwest of Mahout and close to the bay's centre.

The Site has a wide range of different landscape types with natural vegetation, namely:

- (1) mangrove forest: that consist mainly of *Avicennia marina*, which is an evergreen salt-extracting halophyte that survives in muddy substrate and builds pneumatophores. Mahawt island is the largest intact mangrove area in Oman;
- (2) coastal mudflats: which are Black silt plain that gets inundated during each spring tide;
- (3) sabkhas and salt pond: which are silty salt pans of marine or fluvial origin. They are mainly non-vegetated or only fringed by *Halopeplis perfoliata* community. This community grows on a thin layer of fine sand covering the salty substrate and has its own microhabitat;
- (4) Littoral belt dunes: which consists of heavily salt concentrated silt and soft sand or soft gravel. They are covered with halophytes, mainly shrubs, dwarf shrubs and perennial grasses;
- (5) Shifting sand area: which has varying concentrations of shifting sand mainly on gravel plains. The sand accumulation occurs due to presence of psammophytes on hillocks. Few shrublands may be present depending on the air moisture;
- (6) Gravel plain with sandy hillocks: which is an extended area in the central Barr Al Hikman that is covered by old fluvial gravel and intersected by sabkhas. It is sparsely vegetated by dwarf shrublands;
- (7) Highly mobile and salt-affected coastal dunes, and;
- (8) Barchane dunes: which are non-vegetated and highly mobile calcareous white sands of marine origin.

This Site has provide important functions for species and services for communities. They protect against flooding, improve water quality, support fisheries, conserve biodiversity, sequester carbon, attract tourists, hold cultural value, provide educational opportunities, enhance landscapes, and support local livelihoods. It hosts a variety of endemic plant, reptiles, and fish species such as (*Stipagrostis dhofarinsis*), (*Stipagrostis masirahensis*), (*Campylanthus sedoides*), (*Phrynocephalus sakoi*), (*Uromastix thomasi*), (*Stenodactylus sharqiyahensis*), (*Acanthodactylus masirae*), (*Heterodontus omanensis*), and (*Amphiprion omanensis*), respectively.

### 4.2 - What wetland type(s) are in the site?

#### Marine or coastal wetlands

| Wetland types (code and name)                              | Local name | Ranking of extent (1: greatest - 4: least) | Area (ha) of wetland type | Justification of Criterion 1 |
|--|------------|--|---------------------------|------------------------------|
| B: Marine subtidal aquatic beds<br>(Underwater vegetation) |            | 1  |                           | Rare                         |
| C: Coral reefs   | AlArqoob   | 3  | 1500                      | Unique                       |
| D: Rocky marine shores                                     |            | 2  |                           | Representative               |
| E: Sand, shingle or pebble shores                          |            | 2  |                           | Representative               |
| G: Intertidal mud, sand or salt flats                      |            | 1  |                           | Unique                       |
| Ga: Bivalve (shell-fish) reefs                             |            | 2  |                           | Representative               |
| I: Intertidal forested wetlands                            |            | 4  | 200                       | Representative               |
| J: Coastal brackish / saline lagoons                       |            | 2  |                           | Representative               |

#### Inland wetlands

| Wetland types (code and name)   | Local name | Ranking of extent (1: greatest - 4: least) | Area (ha) of wetland type | Justification of Criterion 1 |
|---|------------|--|---------------------------|------------------------------|
| Saline, brackish or alkaline water > Lakes >> R:<br>Seasonal/<br>intermittent saline/<br>brackish/<br>alkaline lakes and flats              |            | 2  |                           | Representative               |
| Saline, brackish or alkaline water > Marshes & pools<br>>> Ss: Seasonal/<br>intermittent saline/<br>brackish/<br>alkaline marshes/<br>pools |            | 2  |                           | Representative               |

#### Human-made wetlands

| Wetland types (code and name) | Local name | Ranking of extent (1: greatest - 4: least) | Area (ha) of wetland type |
|-------------------------------|------------|--|---------------------------|
| 5: Salt exploitation sites    | Filim      | 3  |                           |

#### Other non-wetland habitat

| Other non-wetland habitats within the site | Area (ha) if known |
|--|--------------------|
| Sand dunes                                 |                    |

**(ECD) Habitat connectivity** The interlinked habitats of mangroves, seagrass, and coral reefs form the basis of productivity and biodiversity in tropical coastal zones through active and passive exchange of nutrients, detritus, and other organisms.

### 4.3 - Biological components

#### 4.3.1 - Plant species

Optional text box to provide further information

Barr Al Hikman contains some of the most beautiful coastal vegetation in Southern Arabia, including extensive succulent shrubland (such as the endemic Suaeda moschata and Stipagrostis dhofarinsis), patches of mangrove (Avicennia marina). Ghubbat Hashish is the most abundant and rich seagrass beds in Oman.

The flora found along the coasts is primarily dominated by halophytes and other species that are associated with small, stabilized coastal dunes. Sandy soils and saline depressions are characterized by the presence of Suaeda aegyptiaca, which is the dominant species and can be found either in monospecific stands or in association with Cornulana monacantha, Cyperus conglomeratus, S. vermiculata, Limonium and Zygophyllum. The intertidal and spray zones are divided into four communities based on their topography, salinity, substrate, and the frequency of inundation by the sea, which determines the species composition. (Ghazanfar 1999).

An attachment of all plant species are in the additional material.

#### 4.3.2 - Animal species

Optional text box to provide further information

An attachment of all animal species are in the additional material.

### 4.4 - Physical components

#### 4.4.1 - Climate

| Climatic region | Subregion                                     |
|-----------------|---|
| B: Dry climate  | BWh: Subtropical desert (Low-latitude desert) |

The climate of Oman is characterized by high temperatures, low and erratic rainfall, and high potential evapotranspiration. Meteorological data collected over a 30-year period indicate that minimum and maximum temperatures during summer are 25.2°C and 39.3°C, respectively, while in winter, the minimum and maximum temperatures are 14.7°C and 27.0°C, respectively. The primary weather systems that bring rainfall to the region include frontal systems, cyclones, and monsoons.

The region encompassing Masirah to Duqm, known as Al Wusta, is regarded as a focal point of historical cyclonic events in Oman, and is subject to the occurrence of such phenomena at an average frequency of once every 2-3 years.

#### 4.4.2 - Geomorphic setting

a) Minimum elevation above sea level (in metres)

a) Maximum elevation above sea level (in metres)

- Entire river basin
- Upper part of river basin
- Middle part of river basin
- Lower part of river basin
- More than one river basin
- Not in river basin
- Coastal

Please name the river basin or basins. If the site lies in a sub-basin, please also name the larger river basin. For a coastal/marine site, please name the sea or ocean.

The Arabian Sea

#### 4.4.3 - Soil

- Mineral
- Organic
- No available information



Are soil types subject to change as a result of changing hydrological conditions (e.g., increased salinity or acidification)? Yes  No

Please provide further information on the soil (optional)

Soil classification in Filim area (near sea water and relatively upper land on tidal zone) is Typic Psammaquents.  
 Coordinates (UTM): Northing 2279694 Easting 624930  
 Northing 2279864 Easting 624615

Soil classification in Mahout island is Typic Fluvaquents in the swamp on the southeast beach under vegetation, and Humaqueptic (Mollic) Psammaquents in gentle intertidal zone in south shore under vegetation.  
 Coordinates (UTM): Northing 2274285 Easting 622719  
 Northing 2274839 Easting 621579

#### 4.4.4 - Water regime

Water permanence

| Presence?   |           |
|---|-----------|
| Usually seasonal, ephemeral or intermittent water present | No change |

Source of water that maintains character of the site

| Presence?    | Predominant water source |           |
|--------------|--------------------------|-----------|
| Marine water | <input type="checkbox"/> | No change |

Water destination

| Presence? |           |
|-----------|-----------|
| Marine    | No change |

Stability of water regime

| Presence?                                  |           |
|--|-----------|
| Water levels fluctuating (including tidal) | No change |

Please add any comments on the water regime and its determinants (if relevant). Use this box to explain sites with complex hydrology:

A complex system of currents and winds affects the area. In addition to equatorial winds, monsoon winds cause marine currents to change direction with the seasons. In the north winter (October - March), the main currents flow west, while in the north summer (April - August), they flow east.

(ECD) Connectivity of surface waters and of groundwater

There are no registered groundwater wells in the Barr Al Hikman area.

#### 4.4.5 - Sediment regime

Significant erosion of sediments occurs on the site

Significant accretion or deposition of sediments occurs on the site

Significant transportation of sediments occurs on or through the site

Sediment regime is highly variable, either seasonally or inter-annually

Sediment regime unknown

(ECD) Water temperature

28-33 C, August 2022

#### 4.4.6 - Water pH

Acid (pH<5.5)

Circumneutral (pH: 5.5-7.4 )

Alkaline (pH>7.4)

Unknown

Please provide further information on pH (optional):

pH was recorded from several locations randomly and the range was between 8 to 8.6. (August 2022)

#### 4.4.7 - Water salinity

Fresh (<0.5 g/l)

Mixohaline (brackish)/Mixosaline (0.5-30 g/l)

Euhaline/Eusaline (30-40 g/l)

Hyperhaline/Hypersaline (>40 g/l)

Unknown

Please provide further information on salinity (optional):

Sal ranges between 37,8 to 41.4 ppt (August 2022)

(ECD) Dissolved gases in water

DO Ranges between 5.90- 6.70 mg/L (2004)  
DO Ranges between 7.76- 9.25 mg/L (August 2022)

4.4.8 - Dissolved or suspended nutrients in water

- Eutrophic
- Mesotrophic
- Oligotrophic
- Dystrophic
- Unknown

(ECD) Water conductivity 56.8- 61.6 mS/cm (August 2022)

4.4.9 - Features of the surrounding area which may affect the Site

Please describe whether, and if so how, the landscape and ecological characteristics in the area surrounding the Ramsar Site differ from the i) broadly similar  ii) significantly different  site itself:

- Surrounding area has greater urbanisation or development
- Surrounding area has higher human population density
- Surrounding area has more intensive agricultural use
- Surrounding area has significantly different land cover or habitat types

4.5 - Ecosystem services

4.5.1 - Ecosystem services/benefits

Provisioning Services

| Ecosystem service | Examples   | Importance/Extent/Significance |
|-------------------|--|--------------------------------|
| Food for humans   | Sustenance for humans (e.g., fish, molluscs, grains) | High                           |

Regulating Services

| Ecosystem service  | Examples                              | Importance/Extent/Significance |
|--------------------|---------------------------------------|--------------------------------|
| Erosion protection | Soil, sediment and nutrient retention | High                           |

Cultural Services

| Ecosystem service          | Examples   | Importance/Extent/Significance |
|----------------------------|--|--------------------------------|
| Recreation and tourism     | Nature observation and nature-based tourism  | Medium                         |
| Recreation and tourism     | Picnics, outings, touring  | Low                            |
| Scientific and educational | Important knowledge systems, importance for research (scientific reference area or site) | High                           |
| Scientific and educational | Long-term monitoring site  | High                           |
| Scientific and educational | Major scientific study site  | High                           |

Supporting Services

| Ecosystem service | Examples  | Importance/Extent/Significance |
|-------------------|---|--------------------------------|
| Biodiversity      | Supports a variety of all life forms including plants, animals and microorganisms, the genes they contain, and the ecosystems of which they form a part | High                           |
| Nutrient cycling  | Carbon storage/sequestration  | High                           |
| Nutrient cycling  | Storage, recycling, processing and acquisition of nutrients   | High                           |

Within the site: 1000s

Outside the site: 17,538 (2021)

Have studies or assessments been made of the economic valuation of ecosystem services provided by this Ramsar Site? Yes  No  Unknown

4.5.2 - Social and cultural values

- i) the site provides a model of wetland wise use, demonstrating the application of traditional knowledge and methods of management and use that maintain the ecological character of the wetland

Description if applicable

The most extensive and recognized settlement within Barr al Hikman is Hij. On the coastline, there are fishing camps constructed using temporary materials, which serve as residences for non-permanent and seasonal settlers. These camps are predominantly situated along the back beach towards the south of Shannah and the northern and eastern coast of the Ghubat Hashish. They are also landing areas for fishermen and resupply stations for food, fuel, and water.

In the 1940s and 1950s, there was a migration trend to Zanzibar due to Oman's impoverished state. Emigrants would wait for ships on Mahout Island for approximately two weeks. Eventually, a community formed and moved to Filim from Mahout Island >60 years ago due to lack of resources. The community in Mahout consists of several households who live in huts and travel to the Island for fishing, while 20-30 of the 80 houses are permanently occupied and the remaining serve as temporary residences for those coming and going from Filim and Hij, with school-aged children residing with relatives during the week and returning to the island on weekends and holidays.

The fishing activities on Mahout Island involve men fishing for fish and shrimp by boat, while women catch crabs, small fish on the beach and in the mangrove forest, and cuttlefish in the coral reef outside of the mangrove area, with the frequency of fishing depending on the weather. This Site is utilized for salt mining, ecotourism and nature-based activities such as on birdwatching, kite surfing, and experiencing the unique coastal and wetland ecosystems.

- ii) the site has exceptional cultural traditions or records of former civilizations that have influenced the ecological character of the wetland
- iii) the ecological character of the wetland depends on its interaction with local communities or indigenous peoples
- iv) relevant non-material values such as sacred sites are present and their existence is strongly linked with the maintenance of the ecological character of the wetland

#### 4.6 - Ecological processes

|   |  |
|---|--|
| (ECD) Primary production  | Unknown  |
| (ECD) Nutrient cycling  | Unknown  |
| (ECD) Carbon cycling  | The cumulative primary productivity of the coastal ecosystem, comprising of unicellular algae, seagrasses and mangroves, is estimated to exceed 165,000 tonnes of carbon annually, as per literature review (Bom et.al., 2018c). |
| (ECD) Animal reproductive productivity  | High   |
| (ECD) Vegetational productivity, pollination, regeneration processes, succession, role of fire, etc.  | Unknown  |
| (ECD) Notable species interactions, including grazing, predation, competition, diseases and pathogens | Unknown  |
| (ECD) Notable aspects concerning animal and plant dispersal   | Unknown  |
| (ECD) Notable aspects concerning migration  | Unknown  |
| (ECD) Pressures and trends concerning any of the above, and/or concerning ecosystem integrity         | Unknown  |

## 5 - How is the Site managed? (Conservation and management)

### 5.1 - Land tenure and responsibilities (Managers)

#### 5.1.1 - Land tenure/ownership

##### Public ownership

| Category                    | Within the Ramsar Site              | In the surrounding area  |
|-----------------------------|-------------------------------------|--------------------------|
| National/Federal government | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

##### Private ownership

| Category                                   | Within the Ramsar Site              | In the surrounding area             |
|--|-------------------------------------|-------------------------------------|
| Other types of private/individual owner(s) | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |

Provide further information on the land tenure / ownership regime (optional):

The Wetlands Reserve in Al Wusta Governorate encompasses the Barr Al Hikman peninsula on the Omani coast of the Arabian Sea and was established in 2014 (Royal Decree 51/2014). The Environment Authority Chairman can issue bylaws, regulations and decisions necessary for the implementation of this Decree and the management of the protected area.

#### 5.1.2 - Management authority

Please list the local office / offices of any agency or organization responsible for managing the site:

The Environment Authority (Directorate General of Nature Conservation)  
The Environment Authority (Al Wusta Governorate regional office)

Provide the name and/or title of the person or people with responsibility for the wetland:

Nature Reserves Section- Directorate General of Nature Conservation

Postal address:

Environment Authority  
PO Box: 323  
Postal code: 100  
Sultanate of Oman

E-mail address:

aziza.aladhubi@ea.gov.om

## 5.2 - Ecological character threats and responses (Management)

### 5.2.1 - Factors (actual or likely) adversely affecting the Site's ecological character

#### Human settlements (non agricultural)

| Factors adversely affecting site | Actual threat | Potential threat | Within the site                     | In the surrounding area  |
|----------------------------------|---------------|------------------|-------------------------------------|--------------------------|
| Unspecified development          | Low impact    | Low impact       | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

#### Agriculture and aquaculture

| Factors adversely affecting site  | Actual threat | Potential threat | Within the site                     | In the surrounding area             |
|-----------------------------------|---------------|------------------|-------------------------------------|-------------------------------------|
| Marine and freshwater aquaculture |               | High impact      | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |

#### Transportation and service corridors

| Factors adversely affecting site | Actual threat  | Potential threat | Within the site          | In the surrounding area             |
|----------------------------------|----------------|------------------|--------------------------|-------------------------------------|
| Roads and railroads              | unknown impact | unknown impact   | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

#### Biological resource use

| Factors adversely affecting site         | Actual threat | Potential threat | Within the site                     | In the surrounding area             |
|--|---------------|------------------|-------------------------------------|-------------------------------------|
| Fishing and harvesting aquatic resources | Low impact    | unknown impact   | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| Unspecified                              | Low impact    | Low impact       | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |

#### Pollution

| Factors adversely affecting site    | Actual threat  | Potential threat | Within the site                     | In the surrounding area             |
|-------------------------------------|----------------|------------------|-------------------------------------|-------------------------------------|
| Household sewage, urban waste water | unknown impact | unknown impact   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| Garbage and solid waste             | Medium impact  | High impact      | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |

#### Climate change and severe weather

| Factors adversely affecting site | Actual threat | Potential threat | Within the site                     | In the surrounding area             |
|----------------------------------|---------------|------------------|-------------------------------------|-------------------------------------|
| Storms and flooding              | Low impact    | unknown impact   | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |

### 5.2.2 - Legal conservation status

National legal designations

| Designation type | Name of area                             | Online information url              | Overlap with Ramsar Site |
|------------------|--|-------------------------------------|--------------------------|
| Nature Reserve   | Wetlands Reserve in Al Wusta Governorate | http://qanoon.om/p/2014/rd201405 1/ | whole                    |

### 5.2.3 - IUCN protected areas categories (2008)

- Ia Strict Nature Reserve
- Ib Wilderness Area: protected area managed mainly for wilderness protection
- II National Park: protected area managed mainly for ecosystem protection and recreation
- III Natural Monument: protected area managed mainly for conservation of specific natural features
- IV Habitat/Species Management Area: protected area managed mainly for conservation through management intervention
- V Protected Landscape/Seascape: protected area managed mainly for landscape/seascape conservation and recreation
- VI Managed Resource Protected Area: protected area managed mainly for the sustainable use of natural ecosystems

### 5.2.4 - Key conservation measures

Legal protection

| Measures         | Status                |
|------------------|-----------------------|
| Legal protection | Partially implemented |

Species

| Measures                                      | Status   |
|---|----------|
| Threatened/rare species management programmes | Proposed |

Human Activities

| Measures   | Status                |
|--|-----------------------|
| Research   | Partially implemented |
| Regulation/management of recreational activities                     | Proposed              |
| Regulation/management of wastes                                      | Proposed              |
| Communication, education, and participation and awareness activities | Partially implemented |
| Harvest controls/poaching enforcement                                | Proposed              |

### 5.2.5 - Management planning

Is there a site-specific management plan for the site? No

Has a management effectiveness assessment been undertaken for the site? Yes  No

If the site is a formal transboundary site as indicated in section Data and location > Site location, are there shared management planning processes with another Contracting Party? Yes  No

### 5.2.6 - Planning for restoration

Is there a site-specific restoration plan? No need identified

### 5.2.7 - Monitoring implemented or proposed

<no data available>

## 6 - Additional material

### 6.1 - Additional reports and documents

#### 6.1.1 - Bibliographical references

1. Annette Patzelt, 2015. Oman Plant Red Data Book. Diwan of Royal Court, Sultanate of Oman
2. Bettridge, S. O. M., Baker, C. S., Barlow, J., Clapham, P., Ford, M. J., Gouveia, D., ... & Wade, P. R. (2015). Status review of the humpback whale (*Megaptera novaeangliae*) under the Endangered Species Act.
3. Bom, R. A., de Fouw, J., Klaassen, R. H., Piersma, T., Lavaleye, M. S., Ens, B. J., ... & van Gils, J. A. (2018a). Food web consequences of an evolutionary arms race: Molluscs subject to crab predation on intertidal mudflats in Oman are unavailable to shorebirds. *Journal of Biogeography*, 45(2), 342-354.
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#### 6.1.2 - Additional reports and documents

i. taxonomic lists of plant and animal species occurring in the site (see section 4.3)

<2 file(s) uploaded>

ii. a detailed Ecological Character Description (ECD) (in a national format)

<no file available>

iii. a description of the site in a national or regional wetland inventory

<no file available>

iv. relevant Article 3.2 reports

<no file available>

v. site management plan

<no file available>

vi. other published literature

<2 file(s) uploaded>

#### 6.1.3 - Photograph(s) of the Site

Please provide at least one photograph of the site:



Mangroves near Shannah ( Environment Authority, 13-03-2018 )



Mangroves near Shannah ( Environment Authority, 13-03-2018 )



Mahout Island ( Environment Authority, 13-03-2018 )



Intertidal mudflats near Shannah ( Environment Authority, 13-03-2018 )



Filim salt flat ( Aziza Al Adhoobi, 19-02-2020 )



Kinasah lagoon ( Aziza Al Adhoobi, 12-02-2020 )



Abb Island ( Aziza Al Adhoobi, 14-02-2020 )



Kinasah lagoon ( Aziza Al Adhoobi, 13-12-2021 )



Intertidal mudflats ( Aziza Al Adhoobi, 09-09-2021 )

#### 6.1.4 - Designation letter and related data

Designation letter

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Date of Designation 2023-10-25