

Area no. 9: Qeshm Island and adjacent marine and coastal areas

Abstract

The area comprises Qeshm, Hormuz, Larak and Hengam islands, as well as more than 250 km of mainland coastal areas of Iran. The area includes several protected areas, wetlands of international importance (Ramsar sites), biosphere reserves and important bird areas (IBAs). Qeshm Island and adjacent marine and coastal areas have a wide range of coastal and marine habitats, including coral reefs, mangrove forests, seagrass beds, estuaries, and rocky, muddy and sandy shores, including the largest mangrove forest of the Gulf and Oman Sea. The coral reefs of the area are the richest and are among the healthiest ecosystems in the Gulf. This area supports significant feeding, breeding and nursery grounds for sea turtles, waterbirds, dolphins, reef fishes, sharks, rays and skates.

Introduction

The area is part of the Strait of Hormuz, a channel approximately 50 km wide and 100 m deep at its narrowest point that connects the Gulf, a warm, hypersaline, shallow and semi-enclosed sea, to the Gulf of Oman, which is relatively more exposed to the deep component of the Arabian Sea in the North-West Indian Ocean (Riegl and Purkis, S.J. 2012a; 2012b). Qeshm Island and adjacent marine and coastal areas are greatly influenced by the less saline and nutrient-rich oceanic waters from the Indian Ocean, while the inner parts of the Gulf tolerate more saline and less fertile conditions than those prevailing in most of the region (Riegl and Purkis, S.J. 2012a). Water enters the semi-enclosed Gulf through the Strait of Hormuz and a density- and wind-driven counter-clockwise current flows north-west along the Iranian coast and then south-east along the Arabian coast with a flushing time that ranges from 3 to 5.5 years (Sheppard et al., 1993; 2010; Riegl and Purkis, 2012a). Due to the counter-clockwise pattern of the water circulation in the Gulf, the northern part and the Iranian coastline is characterized by lower temperature, lower salinity, higher aragonite saturation and greater depth (Riegl and Purkis, 2012a). This results in increasing species richness in this area (Riegl and Purkis, 2012a). There are two seasons in the area: cold from December to March and warm from April to November.

Location

The area is located along 250 km of the mainland coast of Iran and extends from Tiab and Minab protected area in the north-east to the west end of Qeshm Island within the national jurisdiction of Iran.

Feature description of the proposed area

The area is part of the coastal and marine ecosystems of the Strait of Hormuz, which plays the most significant role in the ecological and genetic connectivity across the Gulf, Gulf of Oman and the Arabian Sea. This area comprises the islands of Qeshm, Hormuz, Larak and Hengam, as well as more than 250 km of the mainland coast of Iran. This area has a wide range of terrestrial and marine habitats, including coral reefs, mangrove forests, seagrass beds, estuaries, and rocky, muddy and sandy shores. The coral reefs of the area are among the healthiest ecosystems in the Gulf. There are 44 species of hard corals reported from

the Gulf; Iran has the highest number, with 37 and 24 species having been reported from Larak and Hengam Islands, respectively, representing the highest biodiversity of coral reefs of the area within the Gulf (Riegl and Purkis, 2012a; SOMER, 2013; Vajed-Samiei et al., 2013). This area supports significant feeding, breeding and nursery grounds for sea turtles, waterbirds, dolphins, reef fishes, sharks, rays and skates (BirdLife International, 2015a, 2015b, 2015c; DoE of Qeshm Free Zone; Neinavaz et al., 2012; Rezai et al., 2010). The area has the highest abundance of mollusc larvae and zooplankton in the northern Gulf (ROPME, 2013).

The area consists of three important mangrove forests of Iran, including Tiab and Minab, Hara and Hara-e Khuran protected areas. All three mangrove forests are also recognized as wetlands of international importance (Ramsar sites) and important bird areas by BirdLife International (IBAs). Their mangrove forests are monospecific stands of *Avicennia marina*. Hara and Hara-e Khuran protected areas run between the region of the Mehran and Kul/Rasul (Gol) deltas of the Iranian mainland and Qeshm Island (110km from east to west and up to 20 km across) and are also recognized as a biosphere reserve. Hara biosphere reserve supports the largest mangrove/mudflat ecosystem of the entire Gulf and the Gulf of Oman, with 100,000ha of mangroves (*Avicennia marina*), creeks, mudflats and low islands (Naderloo et al., 2013; Spalding et al., 2010). Along the Khuran straits, including Qeshm Island and mainland coasts, there are mainly barren sandflats with scattered *Acacia*, *Prosopis* and other thorn trees. A few small settlements are scattered along the shore, with some small palm gardens. Traditional and commercial fishing is an important activity in the area.

The mangrove ecosystem of Khuran Straits supports substantial breeding populations of egrets and herons as well as some shorebirds (notably *Dromas ardeola* and *Burhinus recurvirostris*) and terns. The Goliath heron (*Ardea goliath*) has its only confirmed breeding site in Iran here, but it is likely that several other pairs are breeding in the mangrove swamps along the coast of the area, for example, in the deltas and creeks of Tiab and Minab (Behrouzi-Rad & Kiabi, 2008; BirdLife International, 2015b; 2015c; Scott, 2007). There is a small colony of *Casmerodius albus modestus* (South Asian race), which probably reaches its western limit in this region. The Khuran Straits area holds Iran's largest colony of *Ardeola grayii* (at least 30 pairs), and Striated Heron (*Butorides striatus*) may breed here (BirdLife International, 2015b). The largest breeding population of the Western-reef Heron in Iran occurs in the Hara Biosphere Reserve (Etezadifar, 2010). The Great Egret (*Ardea alba*), Western-reef Heron (*Egretta gularis*), Indian Pond Heron (*Ardeola grayii*), Eurasian Spoonbill (*Platalea leucorodia*), Great Stone Plover (*Esacus recurvirostris*) and Kentish Plover (*Charadrius alexandrinus*), crab plover (*Dromas ardeola*), Gull-billed Tern (*Gelochelidon nilotica*) and Saunders's Tern (*Sterna saundersi*) successfully breed in mangrove forests of Qeshm Island (Neinavaz, 2012; Scott, 1995). Due to the recent multi-year drought, reduction of precipitation and habitat destruction, it appears that the breeding places of the Great Egret (*Ardea alba*) are now limited to mangrove forests of Qeshm Island (Neinavaz, 2012). It is also considered as the largest breeding colony of the Great Egret in the Gulf (Neinavaz et al, 2011). The largest breeding population of the Western-reef Heron in Iran occurs in the Hara Biosphere Reserve (Etezadifar, 2010). The extensive mudflats are an extremely important staging and wintering area for shorebirds and gulls, along with smaller numbers of *Pelecanus crispus*, *Platalea leucorodia*, *Phoenicopterus ruber* and many other species. The adjacent desertic plains, with scattered thorn trees and palm gardens, support a typical Baluchi avifauna with several primarily Indo-Malayan species. At least 120 bird species have been recorded in the Khuran Straits (BirdLife International, 2015b; Neinavaz et al., 2012; Scott, 2007).

Among the rare birds in Iran, Pacific Golden Plover (*Pluvialis fulva*), Socotra Cormorant (*Phalacrocorax nigrogularis*), Striated Heron (*Butorides striata*), African Sacred Ibis (*Threskiornis aethiopicus*) have been recorded in Khuran straits (Khaleghizadeh et al., 2011).

The green sea turtle (*Chelonia mydas*), finless porpoise (*Neophocaena phocaenoides*), Indo-pacific humpback dolphin (*Sousa plumbea*) and long-beaked common dolphins (*Delphinus capensis*) occur in the Khuran Straits regularly (Collins et al., 2005; DoE of Qeshm Free Zone). The green sea turtle, Dalmatian pelican, crab plover and curlew are endangered species of the area with global importance. Regular sightings of finless porpoise (*Neophocaena phocaenoides*) by local people and researchers suggest it is likely that they breed in waters of Khuran Straits. This area is one of the most important breeding sites for the Annulated sea snake (*Hydrophis cyanocinctus*), which along with the Gulf Sea Snake (*H. lapemoides*) are the most abundant sea snakes in the Gulf and the Gulf of Oman (Rezaie-Atagholipour et al., 2012; Rezaie-Atagholipour et al., 2013). Sea snakes become entrapped in the trap nets used by local fishers for shrimp fishing, but they are not known as dangerous animals by the local people, and trapped snakes are usually returned to the water alive. Among the three mudskipper species reported, including *Periophthalmus waltoni*, *Boleophthalmus dussumieri* and *Scartelaos tenuis*, *P. waltoni* is dominant in the area (Rezaie-Atagholipour et al., 2012; Rezaie-Atagholipour et al., 2013).

This area is a critical habitat in the Gulf for fish stocks, including silver pomfret (*Pampus argenteus*), jinga shrimp (*Metapenaeus affinis*) and the green tiger prawn (*Penaeus Semisulcatus*) (DoE of Qeshm Free Zone). The black rat (*Rattus rattus*) is the only rodent species that exists in the mangrove forests of Hara Biosphere Reserve. This has been reported as an invasive species with a significant impact on the reproduction of forest birds and breeding seabirds (DoE of Qeshm Free Zone).

Tiab and Minab protected area is a 55 km stretch of creeks, c.10-70 km east of Bandar Abbas city, incorporating three river deltas of Minab, Shirin and Shur rivers. The waters of the Shirin and Minab rivers are fresh, but the Shur River is somewhat brackish. This area includes extensive intertidal mudflats, significant stands of *Avicennia marina* mangroves at the river mouths and along adjacent creeks, long sand beaches, low sandbars and sand spits, and two large shallow bays, Khor Tiab (Tiab Creek) and Khor Kolahy (Kolahy Creek), near the mouth of the Minab River in the east. The rivers flow only after erratic rainfall in the interior, usually in winter. The adjacent arid plain supports a sparse woodland of *Acacia*, *Prosopis*, *Ziziphus* and *Tamarix* with large areas of bare, sandy flats. There are a few small settlements of local peoples, generally with palm gardening and traditional fishing as their main livelihood. Tiab and Minab protected area is an extremely important wintering area for shorebirds and gulls, notably the Eurasian Oystercatcher (*Haematopus ostralegus*), Bar-tailed Godwit (*Limosa lapponica*), Eurasian Curlew (*Numenius arquata*), Great Cormorant (*Phalacrocorax carbo*), Greater Flamingo (*Phoenicopterus ruber*) Eurasian Oystercatcher (*Haematopus ostralegus*) and *Larus* spp. (BirdLife International 2015c; Carp, 1980). The area may also be important for breeding herons and egrets, including *Ardea goliath* and *Ardeola grayii* (Behrouzi-Rad & Kiabi, 2008; BirdLife International, 2015b; 2015c; Scott, 2007). Among the rare birds in Iran, Long-tailed Duck (*Clangula hyemalis*), Pacific Golden Plover (*Pluvialis fulva*), Red Knot (*Calidris canutus*), Great Black-backed Gull (*Larus marinus*), Striated Heron (*Butorides striata*), Great Knot (*Calidris tenuirostris*) have been recorded in Tiab and Minab creeks (Khaleghizadeh et al., 2011).

The adjacent plains and woodland have a typical Baluchi avifauna with several Indo-Malayan species at or near their western limit, notably *Gyps bengalensis*, *Francolinus pondicerianus*, *Athene*

brama, *Dendrocopos assimilis* and *Acridotheres tristis*. Common winter visitors include Hume's leaf warbler (*Phylloscopus humei*).

Qeshm Island is located in the mouth of Hormuz Strait, separated from the Iranian coast by the narrow Khuran Straits. Qeshm Island is part of the Zagros Mountains and is the largest island of the Gulf. The island is 120km long and up to 30km wide. A mountainous island, with peaks rising to 397 metres, but about one-third is low-lying plains. On the western side of the island, there is a salt dome 395 metres in height, which is locally called Namakdan Mountain, recognized as the world's longest salt cave. Based on archaeological, ecological and cultural values of Qeshm Island, it has been registered as the only coastal and terrestrial Geopark in the Middle East by the Global Network of National Geoparks (GGN) in 2006. The 300 km of coastline includes stretches of low cliff, rocky shoreline and long sandy beaches along the south coast, and extensive inter-tidal mud-flats with large areas of mangrove forest along the north coast in the Khuran Straits. Due to its wide sandy and muddy shores, hard coral areas are mainly restricted to two sites along the southern and southeastern shorelines. The southeast coast of Qeshm Island supports a coral reef area of approximately 45ha dominated by *Porites* species (DoE of Qeshm Free Zone). One of the most unique soft coral beds in the Gulf, locally called *Gesher Springi*, occurs in the deep waters of south Qeshm Island at depths of 40-60 metres (DoE of Qeshm Free Zone). The recently discovered Gesher Springi is also an important foraging site for dolphins and sharks. The majority of Indo-Pacific bottlenose dolphin (*Tursiops aduncus*) records in Iranian waters occur around Qeshm Island, in the narrow channel and a bay between Hengam and Qeshm islands called Deyrestan Bay. This species has also been frequently sighted in waters around Larak and Hormuz islands.

All five sea turtle species of the Gulf occur in the waters around Qeshm Island, including the critically endangered hawksbill turtle (*Eretmochelys imbricata*), endangered green sea turtle (*Chelonia mydas*), endangered loggerhead sea turtle (*Caretta caretta*), olive ridley (*Lepidochelys olivacea*) and leatherback sea turtle (*Dermochelys coriacea*) (DoE of Qeshm Free Zone). Qeshm Island is the largest and one of the most significant nesting sites in the Gulf for the critically endangered hawksbill turtles (DoE of Qeshm Free Zone). Each year, large numbers of hawksbill turtles come to lay their eggs in the soft sandy beaches of the south coast of Qeshm Island. According to several interviews with local fishers of Qeshm Island, green sea turtle nests used to be found in abundance in southern coasts and near Qeshm city. Intertidal habitats of Qeshm Island are also recorded as the biodiversity hotspot for crustaceans within the Gulf (Naderloo et al., 2013). The area surprisingly includes the highest number of decapod species known from the Iranian coast, where 150 species are recorded. Of these, 131 decapod species (87 per cent) have been recorded from Qeshm Island. This area is comparable with other regions in the Indian Ocean, including Socotra Island (Naderloo et al., 2013).

Hengam Island is located south of Qeshm Island and supports one of the healthiest coral reefs in the area. Coral reefs of Hengam Island are mainly concentrated on the northeastern parts of the island and are dominated by *Acropora* and *Porites* species, with 48.47 per cent mean hard coral cover (Rezai et al., 2010). At least 24 species of hard corals have been reported from Hengam Island (personal observations). This area is one of the most important foraging sites for dolphins and sea turtles (DoE of Qeshm Free Zone; personal observation). The most significant resident population of the Indo-Pacific bottlenose dolphin (*Tursiops aduncus*) in the area occurs around the island and in Deyrestan Bay between Qeshm and Hengam Islands (DoE of Qeshm Free Zone; personal observations). The Indo-Pacific humpback dolphin (*Sousa plumbea*) also occurs around Hengam Island as a migratory species (DoE of Qeshm Free Zone; personal observations). The sandy coast of Hengam Island is also an important nesting site for hawksbill sea turtles

(DoE of Qeshm Free Zone; Nabavi et al., 2012). Deyrestan Bay, which is located between Hengam and Qeshm Island, is one of the most significant breeding and foraging sites for elasmobranch species, including sharks, rays and skates (DoE of Qeshm Free Zone; personal observations). Extensive seagrass beds also occur in Deyrestan Bay.

Larak Island is located in the Strait of Hormuz, approximately 17 km southwest of Hormuz Island and 9 km southeast of Qeshm Island. Larak Island supports the most diverse and one of the healthiest coral reefs in the Gulf. Larak Island is the richest and among the healthiest hard coral and soft coral ecosystems in the entire Gulf, which represent a biodiversity hotspot in the region, with 37 species of hard corals and 31 species of soft corals, with a 44.67 per cent mean hard coral cover (Riegl and Purkis, 2012a; Samimi Namin and van Ofwegen, 2009; SOMER, 2013; Vajed-Samiei et al., 2013; personal observation). Coral reefs of Larak Island are mainly dominated by *Acropora* and *Porites* species. Whales and whale sharks (*Rhincodon typus*) also frequently occur in waters around Larak Island (DoE of Qeshm Free Zone).

Documented studies and unpublished data suggest that the three islands of Qeshm, Hengam and Larak comprise a triangular biodiversity hotspot within the Gulf and the Gulf of Oman.

Hormuz Island is located about 5 km off the Iranian mainland to the south of Tiab and Minab protected area. Shorelines of Hormuz Island are mainly sandy beaches, but there are some rocky shores and low cliffs, and a small tidal creek system with saltmarsh vegetation just east of the main harbour. Hormuz Island is recognized as an important bird area (IBA) by BirdLife International. This island is an important staging and/or wintering area for shorebirds, gulls and terns. The sandy shores of Hormuz Island are also recognized as an important nesting site for hawksbill turtles.

Feature condition and future outlook of the proposed area

In general, anthropogenic impacts presently cannot be considered as a big threat to the marine habitats of the area, mainly because of the small rural population inhabiting the coastal area. Developing the free economic zone, with subsequent impacts on the Qeshm, Hengam and Hormuz islands, is by far the greatest threat to the region. Land reclamation and coastal construction are potential threats to this area. There are some pollution impacts along the northern coast of Qeshm island and the Khuran Straits due to its vicinity to Bandar Abbas city. Mangrove forests of the area are in relatively good condition compared with the mangroves of the other Gulf States. Illegal shrimp catching, an activity that was controlled by community elders and customary laws in the past, is occasionally seen in the mangrove forests of Khuran straits. The area is the most important tourist and eco-tourist destination in the northern Gulf, which needs integrated tourism management. Anchor damage of hard corals inflicted by divers and snorkelers has increased in recent years. Monitoring and documenting the biodiversity of the area is very important and highly recommended, since the area is under pressure due to anthropogenic and environmental factors, including oil-related industries, coastal development, urban sewage, developing tourist industry, invasive alien species and climate change.

Assessment of the area against CBD EBSA Criteria

CBD EBSA	Description	Ranking of criterion relevance
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Criteria (Annex I to decision IX/20)	(Annex I to decision IX/20)	(please mark one column with an X)			
		No information	Low	Medium	High
Uniqueness or rarity	Area contains either (i) unique (“the only one of its kind”), rare (occurs only in few locations) or endemic species, populations or communities, and/or (ii) unique, rare or distinct, habitats or ecosystems; and/or (iii) unique or unusual geomorphological or oceanographic features.				X
<ul style="list-style-type: none"> - Supports the largest mangrove community of the entire Gulf and the Gulf of Oman with 100,000ha of mangroves (<i>Avicennia marina</i>), creeks, mudflat and low islands (Naderloo et al., 2013; Spalding et al., 2010); - The richest and among the healthiest hard coral and soft coral ecosystems in the entire Gulf, which represents a biodiversity hotspot in the region with 37 species of hard corals and 31 species of soft corals recorded from Larak Island (Riegl and Purkis, 2012a; Samimi Namin and van Ofwegen, 2009; SOMER, 2013; Vajed-Samiei et al., 2013; personal observations); - The Goliath heron (<i>Ardea goliath</i>) has its only confirmed breeding site in Iran in this area (Behrouzi-Rad & Kiabi, 2008; BirdLife International, 2015b; Scott, 2007); - One of the largest and the most significant nesting sites in the Gulf for the critically endangered hawksbill turtle (Nabavi et al., 2012; DoE of Qeshm Free Zone Organization, internal reports); - The richest and the most extensive deep sea and shallow water soft coral beds in the Gulf (Samimi Namin and van Ofwegen, 2009; DoE of Qeshm Free Zone Organization, internal reports); - Comprises significant breeding and foraging sites for sharks, rays and skates (DoE of Qeshm Free Zone Organization, internal reports; local knowledge; personal observation); - Unique coastal and terrestrial geomorphological features, which represent the only registered Geopark in the Middle East by the Global Network of National Geoparks (GGN). - Whales and whale sharks (<i>Rhincodon typus</i>) also frequently occur in waters around Larak Island (DoE of Qeshm Free Zone). 					
Special importance for life-history stages of species	Areas that are required for a population to survive and thrive.				X
<ul style="list-style-type: none"> - Extensive mangrove/creek system of the area is an important feeding, breeding and nursery ground for marine mammals, fish, shrimps and many threatened, endangered and declining bird species (DoE of Qeshm Free Zone). - Mangrove forests of the area are extremely important wintering sites for shorebirds and gulls, notably the Eurasian Oystercatcher (<i>Haematopus ostralegus</i>), Bar-tailed Godwit (<i>Limosa lapponica</i>), Eurasian Curlew (<i>Numenius arquata</i>), Great Cormorant (<i>Phalacrocorax carbo</i>), Greater Flamingo (<i>Phoenicopterus ruber</i>) Eurasian Oystercatcher (<i>Haematopus ostralegus</i>) and <i>Larus</i> spp. (BirdLife International 2015c; Carp, 1980). - Regular sightings of finless porpoise (<i>Neophocaena phocaenoides</i>) by local people and 					

<p>researchers suggest it is likely that they breed in waters of Khuran Straits.</p> <ul style="list-style-type: none"> - The Great Egret (<i>Ardea alba</i>), Western-reef Heron (<i>Egretta gularis</i>), Indian Pond Heron (<i>Ardeola grayii</i>), Eurasian Spoonbill (<i>Platalea leucorodia</i>), Great Stone Plover (<i>Esacus recurvirostris</i>) and Kentish Plover (<i>Charadrius alexandrinus</i>), crab plover (<i>Dromas ardeola</i>), Gull-billed Tern (<i>Gelochelidon nilotica</i>) and Saunders's Tern (<i>Sterna saundersi</i>) successfully breed in mangrove forests of Qeshm Island (Neinavaz, 2012; Scott, 1995). - Due to the recent multi-year drought, reduction of precipitation and habitat destruction, it appears that the breeding places of the Great Egret (<i>Ardea alba</i>) are now limited to mangrove forests of Qeshm Island (Neinavaz, 2012). It is also considered as the largest breeding colony of the Great Egret in the Gulf (Neinavaz et al, 2011). - The largest breeding population of the Western-reef Heron in Iran occurs in the Hara Biosphere Reserve (Etezadifar, 2010). - 					
Importance for threatened, endangered or declining species and/or habitats	Area containing habitat for the survival and recovery of endangered, threatened, declining species or area with significant assemblages of such species.				X
<ul style="list-style-type: none"> - Qeshm Island includes one of the most significant and one of the largest nesting sites in the Gulf for the critically endangered hawksbill turtle (DoE Qeshm Free Zone); - The sandy coasts of Hengam, Hormuz and Larak Island are also important nesting sites for hawksbill sea turtles (DoE of Qeshm Free Zone; Nabavi et al., 2012). - Important feeding, breeding and nursery grounds for marine mammals (DoE Qeshm Free Zone); - The most significant resident population of the Indo-Pacific bottlenose dolphin (<i>Tursiops aduncus</i>) in the area occurs around the island and in Deyrestan Bay between Qeshm and Hengam Islands (DoE of Qeshm Free Zone; personal observations). - The finless porpoise (<i>Neophocaena phocaenoides</i>) is resident in mangrove creeks of Qeshm Island and it is likely that they breed in this area. - Important feeding, breeding and nursery grounds for elasmobranch species, including sharks, rays and skates (DoE Qeshm Free Zone); - Whale sharks (<i>Rhincodon typus</i>) also frequently occur in waters around Larak Island (DoE of Qeshm Free Zone). - Important bird area (IBA) for many threatened, endangered and declining bird species (BirdLife International, 2015a; 2015b; 2015c); The Dalmatian pelican (<i>Pelecanus crispus</i>), crab plover and curlew are endangered species of the area with global importance. - The area is among the healthiest coral reef ecosystems in the northern Gulf. The area includes a recently discovered and unique soft coral bed in the Gulf, locally called <i>Gesher Springi</i>, which occurs in the deep waters of south Qeshm Island at depths of 40-60 metres (DoE of Qeshm Free Zone). - 					
Vulnerability, fragility,	Areas that contain a relatively high proportion of sensitive habitats, biotopes or				X

sensitivity, or slow recovery	species that are functionally fragile (highly susceptible to degradation or depletion by human activity or by natural events) or with slow recovery.				
<ul style="list-style-type: none"> - Vulnerable marine and island habitats. Coral reefs of Qeshm, Hengam and Larak islands are sensitive and fragile to direct human-induced disturbances, including coastal development and anchoring, as well as environmental disturbances, including red tides and climate change. 					
Biological productivity	Area containing species, populations or communities with comparatively higher natural biological productivity.	X			
<p>The area has high abundance of mollusc larvae and zooplankton in the northern Gulf (ROPME, 2013). Moer detail are not provided in the article. More research is needed</p>					
Biological diversity	Area contains comparatively higher diversity of ecosystems, habitats, communities, or species, or has higher genetic diversity.				X
<ul style="list-style-type: none"> - The area has the most significant role in ecological and genetic connectivity across the Gulf, Oman Sea and the Arabian Sea; - All five sea turtle species of the Gulf occur in the waters around Qeshm Island, including the critically endangered hawksbill turtle (<i>Eretmochelys imbricata</i>), endangered green sea turtle (<i>Chelonia mydas</i>), endangered loggerhead sea turtle (<i>Caretta caretta</i>), olive ridley (<i>Lepidochelys olivacea</i>) and leatherback sea turtle (<i>Dermochelys coriacea</i>) (DoE of Qeshm Free Zone). - The richest and among the healthiest hard coral and soft coral ecosystems in the entire Gulf, which represent a biodiversity hotspot in the region, with 37 species of hard corals and 31 species of soft corals recorded from Larak Island (Riegl and Purkis, 2012a; Samimi Namin and van Ofwegen, 2009; SOMER, 2013; Vajed-Samiei et al., 2013; personal observations). - The area includes the highest number of decapod species known from the Iranian coast, where 150 species are recorded. Of these, 131 decapod species (87 per cent) have been recorded from Qeshm Island. This area is comparable with other regions in the Indian Ocean, including Socotra Island (Naderloo et al., 2013). - At least 120 bird species have been recorded in the Khuran Straits (BirdLife International, 2015b; Neinavaz et al., 2012; Scott, 2007). 					
Naturalness	Area with a comparatively higher degree of naturalness as a result of the lack of or low level of human-induced disturbance or degradation.				X
<ul style="list-style-type: none"> - Extensive areas of marine and coastal habitats; - Few small settlements are scattered in the area except Bandar Abbas city along the mainland coast of Iran and Qeshm city in east Qeshm Island; - Low levels of human-induced disturbances. 					

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Maps and Figures



Figure 1. Map of the area.



Figure 2. Mangrove ecosystem of Hara Biosphere Reserve, the largest mangrove forest of the Gulf and Oman Sea (Photo by Koosha Dab).



Figure 3. *Acropora*-dominated coral reef of Hengam Island (Photo by Koosha Dab).



Figure 4. *Porites*-dominated coral reef of Hengam Island (Photo by Koosha Dab).



Figure 5. Healthy *Acropora*-dominated coral reef of Larak Island (Photo by Koosha Dab).



Figure 6. Large colony of *Porites* in coral reef of Larak Island, the oldest known coral reef of the northern Gulf (Photo by Koosha Dab).



Figure 7. Resident Indo-Pacific bottlenose dolphins (*Tursiops aduncus*) in Deyrestan Bay between Qeshm and Hengam islands (photo by Koosha Dab).



Figure 8. Sharks caught by local fishers in Deyrestan Bay, South Qeshm Island (photo by Koosha Dab).



Figure 9. Rocky intertidal shores of Qeshm Island with extensive tidal pools (photo by Koosha Dab).



Figure 10. Extensive sandy intertidal shores of Qeshm Island (photo by Koosha Dab).



Figure 11. Intertidal fauna of rocky shores of the area (photo by Koosha Dab).



Figure 12. Intertidal fauna of rocky shores of the area (photo by Koosha Dab).



Figure 13. *Periophthalmus waltoni*, the dominant mudskipper species in mangrove ecosystems of the area (photo by Koosha Dab).



Figure 14. Eurasian Spoonbill (*Platalea leucorodia*) in mangrove forest of the area (photo by Koosha Dab).



Figure 15. Greater flamingo (*Phoenicopterus roseus*) in shallow waters of Tiab and Minab protected area (photo by Koosha Dab).