

Information Sheet on Ramsar Wetlands

Categories approved by Recommendation 4.7 of the Conference of the Contracting Parties.

NOTE: It is important that you read the accompanying *Explanatory Note and Guidelines* document before completing this form.

1. Date this sheet was completed/updated:

April 24, 2001

FOR OFFICE USE ONLY.

DD	MM	YY

Designation date

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Site Reference Number

2. Country:

PAKISTAN

3. Name of wetland: Astola (Haft Talar) Island

4. Geographical coordinates: 25°07'N, 63°52'E.

5. Altitude: (average and/or max. & min.) 0-200 m

6. Area: (in hectares) c. 5,000

7. Overview: (general summary, in two or three sentences, of the wetland's principal characteristics)

A small, uninhabited island about six kilometres in length, with an isolated rock a short distance to the south. The island lies about 25 km south of the desert coast of southern Balochistan, and is the only significant offshore island along the north coast of the Arabian Sea. Green turtles (*Chelonia mydas*) and possibly the Hawksbill turtle (*Eretmochelys imbricata*) nest on the beach at the foot of cliffs. The island is maintaining the genetic and ecological diversity of the area. It is a very important area for endemic reptiles.

8. Wetland Type (please circle the applicable codes for wetland types as listed in Annex I of the *Explanatory Note and Guidelines* document.)

marine-coastal: A . B . C . D . E . F . G . H . I . J . K

inland: L . M . N . O . P . Q . R . Sp . Ss . Tp . Ts
 . U . Va . Vt . W . Xf . Xp . Y . Zg . Zk

man-made: 1 . 2 . 3 . 4 . 5 . 6 . 7 . 8 . 9

Please now rank these wetland types by listing them from the most to the least dominant:

E,D

9. Ramsar Criteria: (please circle the applicable criteria; see point 12, next page.)

1 . 2 . 3 . 4 . 5 . 6 . 7 . 8

Please specify the most significant criterion applicable to the site: 2

10. Map of site included? Please tick *yes* ✓ -or- *no*

(Please refer to the *Explanatory Note and Guidelines* document for information regarding desirable map traits).

11. Name and address of the compiler of this form:

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Please provide additional information on each of the following categories by attaching extra pages (please limit extra pages to no more than 10):

12. Justification of the criteria selected under point 9, on previous page. (Please refer to Annex II in the Explanatory Note and Guidelines document).

Criterion 1: The site is a particularly good representative example of a natural coastal wetland, characteristic of this biogeographical region; this criteria has also been identified in the Asian Wetland Directory, 1989.

Criterion 2: The island supports some rare and vulnerable species of animals such as endanger species Green turtle (*Chelonia mydas*) and quite possibly critically endanger species Hawksbill turtle (*Eretmochelys imbracata*).

Criterion 3: The site is of special value for maintaining the genetic and ecological diversity of the area. There is a considerable convergence of plant and animal species that inhabit the island and the surrounding waters. This criteria has also been identified in the Asian Wetland Directory, 1989.

Criterion 4: The area is of special value as the nesting ground of Green turtles and possibly the Hawksbill turtle. As well as, the site is of special value for *at least one* endemic animal species, *Echis carinatus astoli*, a viper. This criteria has also been identified in the Asian Wetland Directory, 1989.

13. General location: (include the nearest large town and its administrative region)

Situated in the northern Arabian Sea, approximately 25 kilometres off the mainland coast, 40 kilometres East-Southeast of Pasni Harbour, Balochistan province. It comes under the Pasni subdivision of Gwadar district.

14. Physical features: (e.g. geology, geomorphology; origins - natural or artificial; hydrology; soil type; water quality; water depth water permanence; fluctuations in water level; tidal variations; catchment area; downstream area; climate)

Despite the name given to the island by the locals (Haft Talar—meaning ‘seven rocks’), the island appears to form a single block roughly 3 miles in length and one mile in width with an estimated height of two hundred feet at its highest point. An isolated rocky area has broken away from the main block towards the south end. Given that the island is not sheltered from the open sea, it is subject to strong wave attack during the southwest monsoons, when wave height exceeds 3.5 metres. The coastline therefore suffers from severe erosion and most of the littoral material is lost to the sea.

15. Hydrological values: (groundwater recharge, flood control, sediment trapping, shoreline stabilisation etc.)

No information available.

16. Ecological features: (main habitats and vegetation types)

The natural vegetation is composed of xeromorphic type able to survive the arid climate. It does not only suffers from extreme drought but also from wind carrying saline particles. Salt sprays coupled with sand particles clog the respiratory mechanism of plants, affecting growth. *Prosopis juliflora* is the most significant widespread species distributed in the island. *Indigofera oblongifolia* and *Hycium depressum* are also prevalent forming large bushes. Other types of vegetation found include *Sueda fruticosa*, *Aerua persica*, and *Tamarix dioca*.

17. Noteworthy flora: (indicating, e.g., which species/communities are unique, rare, endangered or biogeographically important, etc.)

For detailed information on flora, refer to the list appended herewith. Species, which are relatively rare, endangered or unique, are in bold.

18. Noteworthy fauna: (indicating, e.g., which species are unique, rare, endangered, abundant or biogeographically important; include count data, etc.)

The island is reported to support a large number of breeding seabirds including *Larus hemprichii* and several species of terns. Avifauna includes: *Ardeola cinerea*, *Egretta gularis*, *Pluvialis squatarola*, *Numenius arquata*, *Limosa limosa*, *Calidris minutus*, *Larus argentatus*, *Larus genei*, *Cursorius coromandelius*, *Galerida cristata*, *Oenanthe deserti*, and *Prinia spp.*

It has been reported that the international endanger Green turtle (*Chelonia mydas*) and critically endanger Hawksbill turtle (*Eretmochelys imbricata*) (2000 IUCN Red List) frequents the site for nesting purposes along the sandy beach threatened (Khurshid *et al* 1995). This is the only site along the 1,000-km Pakistan coast where sightings of Hawksbill turtles have allegedly occurred. Sightings of cetaceans such as dolphins and to a lesser extent, whales have also been reported. In fact, in December 1994, a large whale (possibly sperm whale) carcass washed up on the shores of Ganz, Balochistan. The vertebrate and other bones of the whale are on display at the Gwadar Tourist Motel, in Gwadar town. The area is also rich in corals, oysters and important commercial fishes.

Isolated islands such as Astola which have been cut off from the mainland for millions of years are likely candidates to support endemic life forms. One such endemic species, *Echis carinatus astoli*, a sub-species of saw scaled viper has been reported, which was discovered by a German scientist who took a specimen back with him for display at the Senckenberg Museum in Germany. If a detailed study is carried out, it is highly likely that many other sub-species of small mammals, reptiles, plants, and shrubs could be discovered, which are endemic to the site. No detailed surveys have been undertaken in the area as yet, so there is a lack of count data for the important species.

19. Social and cultural values: (e.g. fisheries production, forestry, religious importance, archaeological site etc.)

An aura of mystery and legend has always surrounded Astola Island. According to the Balochistan Gazetteer, printed in the beginning of the 20th century, the island is held in extreme veneration by the Hindus and pilgrims from all parts of the country visit in increasing numbers. It is said that goats are taken to the island for sacrifice; only the blood is spilt at the shrine while the flesh and entrails are thrown out to the sea. The island, also known as 'Satadip' among Hindus houses the remains of an ancient temple of the goddess, *Kali Devi*.

Likewise, the island carries religious significance for muslims as well. There is a prayer yard built for *Pir (Saint) Khwaja Khizr* who is said to rule over the oceans and it is believed that he visits the area occasionally and offers his prayers there.

A small solar operated beacon has been constructed on the top of one of the island's cliffs for the safety of passing vessels.

20. Land tenure/ownership of:

Balochistan Board of Revenue; no ownership claims by local communities since the island does not have a resident population.

21. Current land use:

The whole island is temporarily used as a base for fisherman who frequent the island seasonally between September and May to catch fish in general and lobster and oysters in particular. Between June and August, the island generally remains free from human interference owing to rough sea and high tides.

22. Factors (past, present or potential) adversely affecting the site's ecological character, including changes in land use and development projects:

The extent of disturbance to the site's biodiversity and biodisparity as a result of human interference, mainly in terms of seasonal fishing activity is not fully known. Fishing activity is geared towards common species with commercial value, such as sole, tuna, oysters, and lobsters. However, it is probable that incidental catch of rare fish and endangered marine turtles occurred needs to be documented.

The sea-bird population has dropped over the years, as a result of increased numbers of feral cats which feed on the eggs and disrupt the nesting and breeding sites. These cats were originally introduced to the island by fishermen who wanted to control the island's endemic rodent population, responsible for damaging the fishing nets.

23. Conservation measures taken: (national category and legal status of protected areas - including any boundary changes which have been made; management practices; whether an officially approved management plan exists and whether it has been implemented)

No measures taken and no legal protection.

24. Conservation measures proposed but not yet implemented: (e.g. management plan in preparation; officially proposed as a protected area etc.)

Conservationists have proposed that the island be declared as a Wildlife Sanctuary. The island constitutes a natural marine field laboratory and would be an ideal location for the establishment of a small marine research station. More detailed information on the fauna of Astola island needs to be gathered. In particular, the seasonal density and numbers of Green turtle nesting on the site needs to be determined so that appropriate measures may be taken to protect the habitat. (Scott et al 1990)

IUCN Pakistan has proposed that Astola Island be considered for assessment against standard criteria for marine Protected Areas (PAs). This suggestion was not pursued at the time since there were rumours that the Pakistan Navy was interested in occasionally using the island for strategic purposes.

25. Current scientific research and facilities: (e.g. details of current projects; existence of field station etc.)

A project to study the Biodiversity of Astola Island is under execution by WWF-Pakistan, in cooperation with Zoological Survey Department (ZSD) and the University of Karachi.

26. Current conservation education: (e.g. visitors centre, hides, information booklet, facilities for school visits etc.)

Apart from the fishing communities living along the Makran coast (Balochistan coast) of Balochistan, very few people have heard of Astola Island. A recent feature article in a leading Pakistani English newspaper first gave the general public a glimpse of the island and its unique physical and ecological characteristics. WWF-Pakistan, UNDP, and the Pasni Fish Harbour Authority jointly conducted a consultative workshop in Pasni town, discussing the potential of Astola Island and how its resources could be utilised in a sustainable manner.

The Balochistan Conservation Strategy (BCS), currently in its final stages of formulation by IUCN identifies Astola Island as being of particular significance to the Balochistan coast, insofar as endangered and rich marine resources are concerned. One of the recommendations of the BCS is to gather more information on Astola and scope out the feasibility to promote the island as a potential eco-tourism site.

27. Current recreation and tourism: (state if wetland is used for recreation/tourism; indicate type and frequency/intensity)

There is currently no recreational and/or tourism activity on site. As the largest island of Pakistan, however, Astola has a considerable potential for being developed into an eco-tourism site where both local and foreign nature enthusiasts can visit and behold the rich flora and fauna of the island, as well as witness the flourishing marine life in the clear waters through glass-bottomed boats. The communities living on the mainland would benefit by providing services to the eco-tourists as an alternative income generating venture. Caution should however be exercised in ensuring that any tourism activity is regulated and does not degrade the ecological character of the site.

28. Jurisdiction: (territorial e.g. state/region and functional e.g. Dept of Agriculture/Dept. of Environment etc.)

Astola island is under the territorial jurisdiction of the Balochistan Board of Revenue Department. The fishing activities are being controlled and regulated by the Balochistan Fisheries Department and Marine Fisheries Department of the Government of Pakistan.

29. Management authority: (name and address of local body directly responsible for managing the wetland)

Pakistan Navy; Balochistan Fisheries Department, and Marine Fisheries Department, Government of Pakistan. Pakistan Navy, Naval Headquarters, Islamabad – Tel: (92-51) 9217461, Balochistan Fisheries Department Quetta, Balochistan, Tel: (92-81) 9201586.

30. Bibliographical references: (scientific/technical only)

Craig Hilton-Taylor 2000. 2000 IUCN Red List of Threatened Species. The World Conservation Union

Groombridge, B. 1987. Mekran Coast: A newly explored habitat for marine turtles. WWF-Pakistan newsletter, vol 6(2): 1-5.

Scott, D.A., Rao, A.L., and Beg, A.R. 1990. The wetlands of Pakistan and the Ramsar Convention. (unpublished report).

Khurshid, S.N. et al 1995. Astola Island: A potential site for marine national park. WWF-Pakistan.

Scott, D.A.(ed) 1989. A Directory of Asian Wetlands. IUCN, Gland, Switzerland & Cambridge.

APPENDIX –1**FOLLOWING FLORA WERE OBSERVED DURING THE VISIT TO ASTOLA ISLAND**

Order	Rosales	
Family	Leguminosae	
Sub-Family	Papilionaceae	
Species	Trigonella anguina	Shimsh
	Lotus gracinii	--
	Astragalus fatmensis	--
	Medicago laciniata	--
Sub-Family	Caesalpinaceae	
Species	Senna holosericea	--
	Senna italica	Kaspind
		Nilthak
		Dhidwal
Order	Tubiflorae	
Family	Solanaceae	
Species	Lycium makranicum	--
Family	Convolvulaceae	
Species	Seddera latifolia	Tussu
	Convolvulus glomeratus	Richak
	Convolvulus prostratus	--
	Convolvulus microphyllous	--
Family	Boraginaceae	
Species	Heliotropium ramosissimum	--
Order	Geraniales	
Family	Euphorbiaceae	
Species	Euphorbia granulata	Shimsh
	Phyllanthus rotundifolius	--
Family	Polygalaceae	
Species	Polygala erioptera	--
Family	Zygophyllaceae	
Species	Tribulus terrestris	khorbar
		Tahkandi
		Gohind
		Gohindwal
		Skroundki
Order	Rhoedales	
Family	Capparidaceae	
Species	Capparis cartilaginea	Kirap
	Maerua crassifolia	
Order	Centrospermae	
Family	Aizoaceae	
Species	Clinus lotoides	Katok
	Zaleya peniandra	Indarkhah Wahu
	Aizoon canariensis	
Family	Caryophyllaceae	
Species	Spergula fallax	--
Family	Nyctaginaceae	
Species	Commicarpus helenae	--

Family	Chenopodiaceae	
Species	Suaeda fruticosa	Soraglanni
	Chenopodium murale	Bathua, Gorago
	Haloxylon recurvum	
	Atriplex griffithi	
Family	Amaranthaceae	
Species	Aerva javanica	Balishto
Order	Companulatae	Buh, Boh
Family	Compositac	
Species	Inula grantioides	Naro
	Launaea procumbens	Kharsa, Bhatti
	Launaea remotiflora	Shamahur
	Echinops echinatus	Gurgaj
		Chingam wali
Order	Glumiflorae	
Family	Cyperaceae	
Species	Cyperus sp.	--
Family	Poaceae	
Species	Dactyloctenium scindicum	
	Cenchrus pennisetiformes	Khurnal
	Sporobolus tentrophyllus	--
Order	Malvales	
Family	Malvaceae	
Species	Abutilon fruitocosum	Jhangber
	Abutilon indicum	--
	Abutilon pakistanicum	--
	Sida tiagii	--
Family	Tiliacea	
Species	Corchorus depressus	Munderi
Order	Contortae	
Family	Asclepiadacea	
Species	Pentatropis nivalls	
Group	Thallophyta	
	Crustose lichens	
	Foliose lichens	