

**Introduction**

The Islamic Republic of Pakistan is located in South Asia, bordered by Afghanistan to the northwest, China to the northeast, Iran to the west, India to the east, and the Arabian Sea to the south. The country's 1050 km of coastline is highly variable with sandy beaches and rocky cliffs/headlands found mostly to the west in Balochistan with bays, lagoons, mangroves and estuaries along the entire coast. Much of Sindh's coastline is Indus River Delta and tidal mudflats, which are often inundated during monsoon season. Smaller seasonal river deltas are found in Balochistan.

**At Risk Wildlife**

**Avian Species** – Numerous waterfowl species (waders, shorebirds, ducks, and geese) migrate through, or overwinter in, Pakistani wetlands. Pelicans, flamingos, spoonbills, storks and ibis are also common. Critically endangered Siberian cranes are present October through April and critically endangered sociable lapwings are occasional winter residents. Other species of concern include the Dalmatian pelican, marbled teal, Indian skimmer, white-headed duck, great knot, and greater adjutant.

Large concentrations of wintering waterbirds, including significant populations of flamingos, are found in the area between Karachi and the border with India, which includes the Pakistani portion of the Rann of Kutch, the large monsoon season salt marshes along the India Pakistan border. In Balochistan, Miani Hor is an important stopover for waterbirds.

**Mammals** – A variety of whales and dolphins are found offshore but strandings are rare. Of possible concern is the Indo-Pacific humpback dolphin (a nearshore species). The endangered Indus River dolphin is rarely seen south of Hyderabad but a spill along the river could impact this species. Land mammals of possible concern are the smooth-coated otter and the fishing cat, both of which may forage in tidal areas.

**Marine Reptiles** – Four species of marine turtle are found in Pakistan- green, leatherback, hawksbill and Olive Ridley. Green (year round) and Olive Ridley (March to October) are known to nest on beaches along much of Pakistan's coast with important areas in Balochistan at Astola (Haft Talar) Island and the Ormara Beaches. Hawksbills may nest in these areas as well but this is less well documented. Marsh crocodiles, Indian Gharial and a variety of sea snakes are present as well.

**Regional Seas**

Arabian Sea (northwestern Indian Ocean)

**Past experience**

In 1998 the MV Yashika 6 sinking spread furnace oil over 35 km. No oil reached the shore but fish kills and damage to nearshore habitat was reported. In 2003, the marine tanker Tasman Spirit spilled an estimated 30,000 tonnes of crude oil near Karachi. There were reports of fish kills, dead turtles and damage to mangroves but no wildlife rehabilitation appears to have been undertaken. Avian impacts were likely limited as the spill occurred before the main migration season.

**Response: the role of the authorities**

Under the National Marine Disaster Contingency Plan, the Chairman of the Pakistan Maritime Disaster Management Board (PMDMB) is authorised to initiate a response. The Director General of the Pakistan Maritime Security Agency (PMSA) is the Coordinator of the Marine Disaster Response Committee (MDRC), which manages response at the operational level.

Harbour and port authorities are responsible for spills within their areas and provincial governments are responsible for local coastal clean up. Both have limited resources and would likely require assistance

from PMSA in most cases.

In larger (Tier III) spills, members of the South Asia Cooperative Environment Programme (SACEP) MoU may be called in to assist.

### **Oiled wildlife response**

#### Formal guidelines?

There is no reference oiled wildlife response in the National Marine Disaster Contingency Plan.

#### Response objectives and strategy

N/A

#### Euthanasia or rehabilitation?

It is not clear whether wildlife rehabilitation would be allowed, however, the history of national and regional governments working on marine wildlife conservation suggests that it would.

#### Impact assessment

The Pakistan Environmental Protection Agency, Balochistan's Environmental Protection Agency, and Sindh's Wildlife Department and Environmental and Alternate Energy Department have participated in regional oil spill training. These agencies would likely be involved in any impact assessment.

#### Notification and early response

There is no procedure in place for notification of personnel likely to be involved in oiled wildlife response or for initiating an early response.

### **Wildlife responders**

There are no organisations with experience responding to oiled wildlife in Pakistan and no wildlife rehabilitation NGOs. WWF Pakistan has been involved in conservation work with sea turtles, otters and inshore dolphins, and may be able to assist should permission be given to initiate a response. The Province of Sindh Wildlife Department has some experience raising hatchling sea turtles and tagging adults at nesting sites. They would likely be involved in any response to oil-affected wildlife.

### **Cooperation between stakeholders**

WWF Pakistan has worked cooperatively with the Sindh Wildlife Department on sea turtle conservation projects.

Pakistan is a signatory to the South Asia Cooperative Environment Programme (SACEP) with Bangladesh, India, the Maldives, and Sri Lanka and to the MoU for Co-operation on the Response to Oil and Chemical Pollution in the South Asia Seas Region with Bangladesh, the Maldives and Sri Lanka (India signature pending).

### **Permanent facilities**

There are no permanent wildlife rehabilitation facilities and no oiled wildlife response experience in the country.

### **Current processes**

There are no current processes in place to respond to oiled wildlife.

### **Documentation and references**

General references

General References

ITOPF Country Profile 2015

SACEP Country Profile

Birdlife International Country Profile

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