

Wildlife Conservation Plan (WLCP) of the Schedule I species presented below.

***Ganges River Dolphin (Platanista gangetica gangetica)***

*Introduction*

The Ganges River dolphin (*Platanista gangetica gangetica*) is endemic to the Indian sub-continent and has a fairly extensive distribution range. It is found in the Ganges-Brahmaputra-Meghna and Karnaphuli-Sangu river systems of India and Bangladesh. Approximately 2500-3000 Ganges River dolphins are assumed to survive across their entire range. This species has been included in Schedule I of the Indian Wildlife (Protection) Act 1972, in Appendix I of the Convention on International Trade in Endangered Species (CITES), in Appendix II of the Convention on Migratory Species (CMS) and categorised as Endangered on the International Union for the Conservation of Nature's (IUCN) Red List (version 2018-2).

Ganges River dolphin was declared as national aquatic animal by Ministry of Environment & Forests, Govt. of India in 2010. The Gangetic Dolphin is also recognised as Flagship Species<sup>1</sup>.

*Habitat*

The Gangetic dolphin is fluviatile in habit, it may also be found in brackish water, and it never enters the sea. It is generally assumed that salinity defines the downstream limits of its distribution. Ganges River Dolphin is reported from the Hooghly river stretch in proximity to the LNG terminal area.

*Population*

The West Bengal State Office of World Wide Fund for Nature - India, has undertaken in-depth study (during 2011 to 2014) on the distribution of dolphins in the river stretches of West Bengal (River Bhagirathi, Hugli, Roopnarayan). As per study 120 individuals were recorded in the different stretches of the river. The study reported that in the lower stretches of Hugli River - 1 individual was recorded near Beguakhali (Sagar Island), 3 individuals near Diamond Harbour and 4 individuals at Hatania-Duania River (Source: WWF<sup>2</sup>).

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<sup>1</sup> The species that have the ability to capture the imagination of the public and induce people to support conservation action and/or to donate funds

<sup>2</sup> WWF-India, West Bengal State Office. Records noted from study undertaken during 2011 to September 2014.

## *Threats to Gangetic Dolphin*

*Accidental killing:* Entanglement of dolphins in fishing nets causes significant damage to the local population. The primary cause is believed to be entanglement in fishing gear such as nylon gillnets because their preferred habitat is often in the same location as primary fishing grounds. The problem of accidental killing is expected to worsen with increasing fishing intensity. Intense fishing activity and use of gill nets was observed in the study area. However, accidental killing was not reported in the recent times.

*Riverine resource extraction:* Increasingly heavy river traffic in the Hooghly River may result in habitat restriction, noise pollution, depletion of prey base and changes in feeding behaviour of the dolphin.

During construction phase mechanised river traffic will be increased for transport of fill material. These proposed activities may have some adverse impact on dolphin population of this stretch of river. These proposed activities may have some adverse impact on dolphin population of this stretch of river.

*Sedimentation:* Due to loss of vegetation cover in the catchment area and in floodplains, the increasing rates of sedimentation will cause a rise of the river bed, reducing the river's water retaining capacity. Sedimentation has a direct impact on the physical and biological characteristics of the river basin. It affects the other river biota, including fish, reducing the prey base of the dolphin.

*Pollution:* The concentrations of fertilizer and pesticide residues and industrial and domestic effluents are high in the Ganges River. The effects of such pollutants may be deleterious to dolphin populations, and pollutant loads are expected to increase with industrialisation and the spread of intensive modern agricultural practices (Smith and Reeves 2000<sup>(1)</sup>).

Surface runoff from the site will be treated through sedimentation tank and oil water separator and untreated runoff will not be disposed to the river directly.

*Possible impacts of river traffic:* There have been numerous proposals to utilise sections of the Ganga for inland water transport. Currently, cargo steamers carry goods from Haldia to Patna regularly, occasionally travelling up to Varanasi. There is heavy river traffic in and around Kolkata. Collisions with these vessels, and the effects of the noise they generate, are a serious problem for dolphins. Since this species depends upon echolocation for many of its activities, including foraging, sonic pollution may adversely impact their well-being. The Ganges dolphins were seen to be avoiding the river stretch with heavy traffic in the River Hooghly in and around Kolkata, preferring

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(1) Smith BD & Reeves RR. 2000. Report of the second meeting of the Asian River Dolphin Committee, Rajendrapur, Bangladesh, 22-24 February 1997. In R. R. Reeves, B. D. Smith, T. Kasuya (Eds.). Biology and conservation of freshwater cetaceans in Asia. Occasional Paper of the IUCN Species Survival Commission (No. 23, pp. 1-14). Gland, Switzerland and Cambridge, United Kingdom: IUCN.

relatively undisturbed areas where a lower numbers of mechanised vessels ply (Sinha 1997<sup>(1)</sup>).

*The depletion of prey base:* The sustained and heavy exploitation of small fishes of rivers by the wide spread use of the mosquito nets in river may affect the prey base of the Ganges River dolphin. While the rate of renewal of this resource is remarkable, there is no data on prey abundance estimates and further research is required to quantify this threat.

#### *Mitigation measures*

*Gangetic Dolphin's Habitat:* Broader investigation from competent national research institute required to establish the Dolphin's habitat, population size in Lower Gangetic stretch. This study will help to draw a site specific conservation measures for these targeted species.

*Treatment and Discharge of Waste Water:* The wastewater generated from domestic sources during construction phase will be treated in septic tank and soak pits and during operation phase would be treated in a STP.

*Awareness amongst the Local People:* With the declaration of the Ganges River dolphin as the National Aquatic Animal, there is a need to educate and increase the awareness level of all spectrums of the society about the species, its habitat requirements and its current threatened status.

Special attention should be given fishing area and dolphin habitat. Communication materials such as films, poster, etc. and media campaigns should also be given higher priority.

The project proponent will hold the awareness program among fishermen community and local people with the help of NGOs/Forest Department.

### ***Black-Winged Kite (Elanus caeruleus)***

#### *Introduction*

The Black-winged kite is a medium to small raptor of the family Accipitridae best known for its habit of hovering over open grasslands.

#### *Description*

Black-winged kites are mostly pale grey above, with white head, body and tail and black shoulders. They have forward-facing eyes with red irises. The wings are white underneath, with black wing tips. Females are larger than males.

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(1) Sinha RK. 1997. Status and conservation of Ganges River dolphin in Bhagirathi – Hooghly River systems in India. International Journal of Ecology and Environmental Sciences, 1997, 23:343-355.

### *Habitat*

Their preferred habitat is open grasslands with scattered trees and are often seen hunting along roadsides.

### *Behaviour and Ecology*

Black-winged kites form monogamous pairs, breeding between August and January. Both sexes build the nest, three or four eggs are laid and incubated for around thirty days. It prefers to hunt during the day, particularly early morning and late afternoon. Their prey includes grasshoppers, insects, lizards, rodents, birds, small snakes and frogs etc.

### *Action Plan for Conservation of Species*

Habitat degradation and fragmentation are potential threats to the species. The species is not under any major threat from the project activities. Conservation can be ensured by spreading awareness among villagers.

### ***Black Kite (Milvus migrans)***

#### *Introduction*

A large brown hawk, distinguished from all similar birds by its forked tail, particularly in overhead flight.

#### *Description*

The sexes are alike. The upper plumage is brown but the head and neck are paler. The outer flight feathers are black and the feathers have dark cross bars and are mottled at the base. The lower parts of the body are pale brown, becoming lighter towards the chin. The body feathers have dark shafts giving it a streaked appearance. The legs are yellow and the claws are black.

#### *Habitat*

Commensal of man and usually found in the neighbourhood of human habitations.

#### *Behaviour and Ecology*

Black kites are most often seen gliding and soaring on thermals as they search for food. The flight is buoyant and the bird glides with ease, changing directions easily. They swoop down with their legs lowered to snatch small live prey, fish, household refuse and carrion. Food includes earthworms, winged termites, small mammals etc.

### *Action Plan for Conservation of Species*

Black kites often perch on electric wires and are frequent victims of electrocution. Their habit of swooping to pick up animals lead to collisions with vehicles. The species is not under any major threat from the project activities. Conservation can be ensured by spreading awareness among villagers.

## **1.2 IMPLEMENTATION BUDGET**

The indicative implementation budget is provided in *Table 1.1*.

**Table 1.1** *Wildlife Conservation Plan Implementation Budget for Operational Phase (5 years)*

Sl. No.	Particular of Works	Budget (in Lakh INR)
a.	Awareness Generation Meetings at villages (Development of Brochure; Arrangement of Meeting; Development of Posters)	7.25