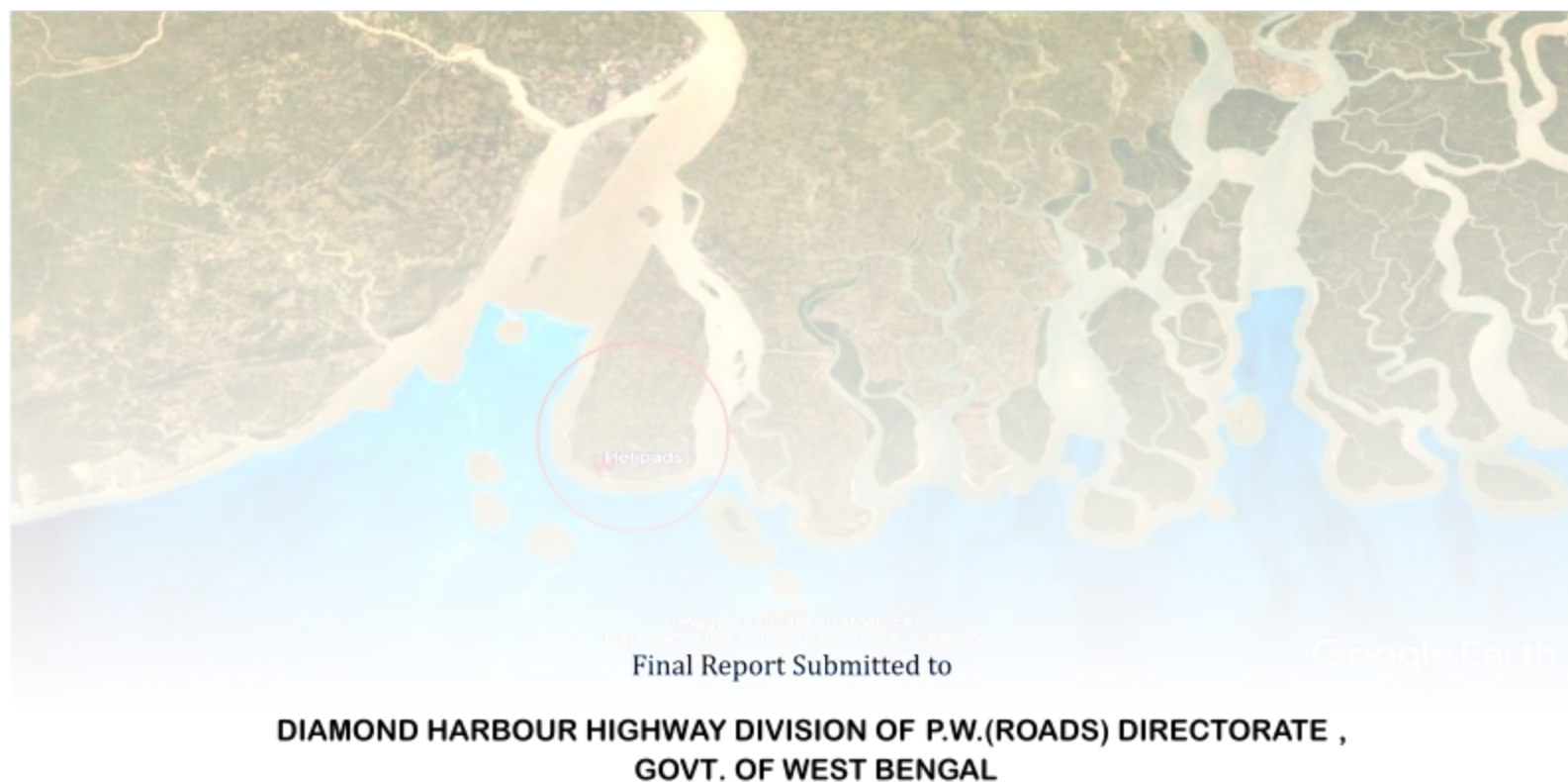


# Bird hazard assessment study for the all-weather helipad at Sagar Island in the district of South 24 Parganas, West Bengal



**Sálim Ali Centre for Ornithology and Natural History**

A Centre of Excellence under the Ministry of Environment, Forest and Climate Change,  
Government of India, Anaikatty (P.O), Coimbatore, Tamil Nadu - 641 108.

August 2021

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**BIRD HAZARD ASSESSMENT STUDY FOR THE ALL-WEATHER HELIPAD AT  
SAGAR ISLAND IN THE DISTRICT OF SOUTH 24 PARGANAS, WEST BENGAL**

Final Report Submitted to  
DIAMOND HARBOUR HIGHWAY DIVISION OF P.W.(ROADS) DIRECTORATE,  
GOVT. OF WEST BENGAL

*Investigators:*

Dr. Arun, P.R., Dr. Pramod, P., & Dr. Babu, S.

*Research Biologists:*

Mr. Riju P. & Ms. Joel Soniya



**Salim Ali Centre for Ornithology and Natural History**

A Centre of Excellence under the Ministry of Environment, Forest and Climate Change,  
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## **EXECUTIVE SUMMARY**

The present bird hazard assessment study for the all-weather helipad at Sagar Island of West Bengal was conceived to address the concerns raised by the Expert Appraisal Committee of Ministry of Environment Forest and Climate Change (MOEFCC) for projects related to coastal regulation zone held on 28<sup>th</sup> April 2020. Further to the request from the project proponent, the Diamond Harbour Highway Division of West Bengal P.W.(Roads) Directorate, in this regard, a six-month study was taken up by SACON in December 2020.

The bird hazard for aircrafts is a serious concern for aircrafts and birds alike. As it was felt by the EAC, it is essential to study and manage the potential bird hazards for developing site-specific management strategies to minimize the hazards to both helicopters and birds, while establishing a permanent all-weather helipad at the proposed site.

The proposed helipad area is located at Gangasagar, near the Southern tip of the Sagar Island located between 21 °31' N to 21 °53' N latitudes and 88°02' E to 88° 15' E. In the absence of any Road connectivity to the island, makeshift helipads had already been operational at the proposed all weather helipad site near Gangasagar primarily for emergency medical evacuation and VIP transport. Considering the need for medical emergency and the pilgrim pressure on the Sagar Island and the potential natural calamities such as cyclones in the Bay of Bengal, the proposed all weather-helipad is a crucial requirement for the island.

The present study documented the baseline status of the avifauna at the Gangasagar Helipad and its 10km radial distance zone around. A total of 93 species of birds were recorded from the area, belonging to 15 orders. Passeriformes (41%), Charadriiformes (17%) and Coraciiformes (11%) together represented nearly 70% of the avifaunal species assemblage of the area. Survey during the migratory period of winter visitors recorded 25 species of winter visitors, one passage visitor, 58 resident, two former range and six scarce birds. A total of 1,284 individuals of 58 species belonging to 51 genera spread over 33 families and 15 orders were recorded during the point count around the 2km surrounding of helipad location. Out of the total recorded



bird species in the point count, 32 were terrestrial species and 26 were wetland-dependent.

Three of the species namely, River Tern *Sterna aurantia*, Eurasian Curlew *Numenius arquata*, and Alexandrine Parakeet *Psittacula eupatria* were near-threatened as per the IUCN. Three raptor species recorded (Black Kite *Milvus migrans*, Shikra *Accipiter badius*, Western Marsh Harrier *Circus aeruginosus*) are protected under Schedule 1 of the Indian Wildlife Protection Act, 1972. Among the 37 species of birds recorded inside the proposed all-weather helipad area, Red-rumped Swallow (*Cecropis daurica*), White Wagtail (*Motacilla alba*), Indian Cormorant (*Phalacrocorax fuscicollis*), Pacific Golden Plover (*Pluvialis fulva*) and Grey-headed Lapwing (*Vanellus cinereus*), Common sandpiper (*Actitis hypoleucos*) and Barn Swallow (*Hirundo rustica*) were the seven migratory species observed.

There are no important wildlife habitats or protected area present within the island. The Expert Appraisal committee (EAC) of the MoEFCC while considering the helipad project at Sagar island had raised a concern regarding the impact of the proposed helipad on the Chinthamani Kar Bird Sanctuary (formerly Narendrapur Wildlife sanctuary). The said sanctuary is located about 95 km away in the mainland of West Bengal near Kolkata and will have no potential impact from the helipad development in Gangasagar about 95 km south of this sanctuary.

Despite the suitable habitats throughout the Island, the species diversity and abundance of the birds are lower compared to other similar habitats. Especially the soaring raptors were prominently absent in the helipad area and surroundings. Since raptor species are highly prone to collision with aircrafts, their absence in the area further reduces the bird hazard risk at this helipad. However, aspects of bird-hit as a potential threat for the helicopter services can be further minimized and effectively managed by appropriate management measures and safeguards as discussed in this report. However, the risk of bird-hits needs to be monitored on a long-term basis in the light of helipad operation patterns for better judgement of the seasonal patterns of avifauna and updating the bird hazard management practices accordingly.