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ASSESSMENT OF BIOWEALTH AVAILABLE IN AND AROUND DERAS DAM, ODISHA, INDIA

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ABSTRACT

Wildlife inventories form the foundation for selecting sites for conservation and to identify priority species and the relevance has become even more paramount because of the alarming rate of specie extinction. The present study reports the biowealth available in and around Deras Dam. About 21 dominant flora along with thorny bamboos were enumerated. The recorded fauna includes about 13 species of birds, about 5 species of mammals, about 4 species of reptiles and about 10 species of amphibians. The present study showed the importance of the Dam for the region.

INTRODUCTION

Deras reservoir (**85.68 83° E 20.31 53° N, Elevation 74 m**) is situated in Chandaka Dampara Elephant Sanctuary. The sanctuary lies partly within Khordha and partly in Cuttack districts of Odisha state and in close proximity of the state capital, Bhubaneswar. It is one of the main water reservoir inside the sanctuary. It was built in 1967 as a minor irrigation project but also serves as a water body for animals in the sanctuary (**www.chandakawildlife.in**) .The climate of study area is sub-tropical having semi-evergreen forest with bamboo breaks. The region has deep sandy loam soil which holds sufficient soil moisture to promote good forest cover. Dense vegetation always supports both terrestrial and aquatic fauna like mammals, birds, reptiles, fish, insects etc. (**Daily et al. 2009; Santos et al. 2008**). The people living inside are mostly tribal, dominated

by "Shabar", who depend on the reservoir for their livelihood. But the ever-increasing anthropogenic activities like urbanization, cultivation, deforestation is resulting in the destruction of ecological values of the wildlife. Keeping the importance of biowealth available around Deras Dam, a survey of the forest cover of Deras and its adjoining areas was conducted in the months of May and June, 2019 **(Figure 1.3)**. The exploration studies were conducted based on the information gathered from the local inhabitants of nearby rural village. Plant specimens were observed and noted. Presence of mammals, different track paths were also surveyed. Observation was made during day and evening time. Indirect evidences of animals such as droppings, scats, and feeding signs were identified. [Birds were spotted and counted with the help of binoculars. They were identified using physical features with the help of field guide (Grimmett et al. 1998)]. The shed feathers were observed and identified. Random surveys were conducted in almost all parts of the study area to document amphibian and reptile species. The pond and adjoining marshy areas were surveyed for amphibians and reptiles. The species sighted were identified and photographed.

RESULT AND DISCUSSION

The results revealed that the major portion of the reservoir is covered by semi-evergreen forest. Species composition is heterogenous. The dominant species in this type of forest were *Lagerstroemia parviflora, Cassia fistula, Cassia occidentalis, Azadirachta indica, Madhuca indica, Pavetta indica, Combretum decandrum, Alstonia scholaris, Schoenoplectus articulatus, Neolamarckia cadamba etc.* The forest floor is very rich in herbaceous species and notable among them were *Cyacas sphaerica, Mimosa pudica, Crotolaria striata, Lipia nodiflora, Rauwolfia serpentina* **(Figure 1.1)**, *Monochoria vaginalis, Cissus quadrangular, Cassia tora.* Common weeds include *Synedrella nodiflora* and *Eupatorium odonatum*. Thorny bamboo-*Bambusa arundinaceae* occur as pure formations in valleys and mixed with tree growth on hill slopes. They were found along the dam providing nesting for avifauna. The bamboos form dense clumps and hardly allow any other plant to come up underneath except some shrubs and grasses. The study area is equally rich in avifauna. Various birds were seen near the shore and gliding over the water such as Cattle egret (*Bubulcus ibis)*, Booted Eagle (*Hieraaetus pennatus),* Shikra *(Accipter nisus)*, Cormorant (*Phalacrocorax niger)*, Spotted dove (*Spilopelia chinensis)*, Asian Openbill (*Anasomus oscitans)*, Intermediate egret (*Mesophoyx intermedia)*, Pond Heron (*Ardeola baccbus)*, White-breasted Kingfisher (*Halcyon smyrneevsis)*, Blue tailed green bee eater(*Merops philipinus)*, *Bulbul (Pycnonotidae)*, Myna (*Acridotheres tristis*) and near threatened species River Lapwing (*Vanellus duvaucelii*) **[Figure1.2]**. The Zoological Survey of India reported 37 species of mammals, 33 species of reptiles, 13 species of amphibians in the Chandaka Elephant Sanctuary (www.wikipedia.com). Elephant *(Elephas maximus)* is the keystone species of this ecosystem. The following species were also found in and around Deras: Hyena *(Hyaena hyaena)*, Common mongoose *(Herpestes edwardsi)*, Sambar *(Cervus unicolor)* and Spotted deer *(Axis axis*). Amphibians include about 10

species of frogs. Among reptiles, Garden lizard *(Calotes versicolor)*, Indian chameleon *(Chamaeleo zeylanicus)*, Common monitor lizard *(Varanus bengalansis)* and Peninsular rock agama *(Psammophilus dorsalis)* were observed.

CONCLUSION

Deras Dam is much significant due to ecological, biological and geomorphological background. It has rich floral and faunal diversity and has great variability at species and ecosystem levels, but the biowealth in and around Deras Dam is adversely affected by the recent extremely severe cyclone "FANI". Hence need to assess the biowealth of the region again to make plan for their conservation.

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Figure 1: 1) *Rauwolfia serpentina*, 2) River Lapwing and 3) Team in field