

Nawabganj Bird Sanctuary: An Emerging Ecotourism Hub

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Introduction

Ecotourism is a new concept in tourism, which was originally idea of making harmonious co-existence with nature. Overall scenario of Ecotourism industry is changing at a fast rate to be an increasingly important source of income and employment in many countries. Ecotourism is a subset of broad nature based on tourism that includes several components like community benefits, education, sustainability and ethics (Bandaxa 2009; Buckley 2003; Fennell 1999; Honey,2008).

According to the World Tourism Organization, ecotourism is recorded as the highest growing market in the tourism industry with an annual growth rate of 5 per cent worldwide and representing six per cent of the world's GDP and 11.4 per cent of all consumers spending (Fernando *et al.*, 2013).The purpose of Ecotourism involves visiting natural areas with the objectives of learning, studying or participating in activities that do not bring negative effects to the environment; whilst



Fig.1: Map of NBS



Fig. 2: Some of views of NBS

protecting and empowering the local community socially and economically. The study was performed in Nawabganj Bird Sanctuary (NBS), Unnao district during April 2012 to March 2015.

Purpose of Study

- The objectives of study are to identify and examine the potentiality of ecotourism development in the Nawabganj Bird Sanctuary.
- To identify the issues and challenges of the ecotourism development in the Nawabganj Bird Sanctuary and wetlands of associated areas.

Nawabganj Bird Sanctuary

The study was performed in Nawabganj Bird Sanctuary (NBS), Unnao district. Nawabganj Bird Sanctuary (NBS) is situated in Tehseel Nawabganj of District Unnao at National Highway- 25. This sanctuary got established in year 1984 under Wild Animal Protection Act 1972. NBS covers the 224.60-hectare area which provides the breeding ground to multiple populations of flora and fauna (Fig.1). There is a canal near the sanctuary which is a permanent water source for wildlife. “Moti Lake” has scenic beauty of tourists concern which further inflicts the great economic value (Fig.2).

Methodology: Surveys are being carried out and observations are being with the interaction with tourist, local people, sanctuary staff and interviewed them. Data has been supported with the aid of 10x50 binoculars and Canon EOS 70 D SLR camera.

Observation and Result: NBS and its lake are very wealthy in terms of floral diversity as well as faunal diversity. Nawabganj Bird Sanctuary is well known as popular tourist destination because of the diverse assemblage of avifauna especially migratory water birds that congregate at the Nawabganj Bird Sanctuary in winter. It is a favorable place for residential as well as migratory birds for the breeding and feeding purposes.

Attractions of Nawabganj Bird Sanctuary

- Dear Park
- Children Park
- Migratory Water birds
- Cycle track

Facilities at Nawabganj Bird Sanctuary

Nawabganj Bird Sanctuary is a good ecotourism destination and provide many facilities to the tourists such as boating, watch towers, interpretation centre, rest house, visitor centre, cycle path, deer park and restaurant etc. (Fig.3A, 3B,4,5,6,7,8,9,10,11 and 12).

Biodiversity of Nawabganj Bird Sanctuary

Nawabganj Bird Sanctuary is an ideal habitat for flora and fauna and includes 150 species of birds



Rest House facility for tourists



Boating: the easy option for sighting wildlife

Fig.3 A: Rest house in NBS Fig.3 B: Boating facilities in NBS



Watch Tower: for easy watch of wildlife



Fig.4: Watch tower in NBS for birding



Visitor centre: essential information about the Sanctuary is provided here

Fig.5: Visitor Centre in NBS



Fig.6 : Interpretation Centre in NBS



Fig.7: Interpretation Centre in NBS



Fig.8: Cycle Track in NBS



Fig.9: Children park in NBS



Fig.10: Ticket Counter in NBS



Fig.11: Deer Park in NBS



Fig.12: Display board depicting flora and fauna in NBS



Fig.13: Migratory birds are the main attraction of tourists.

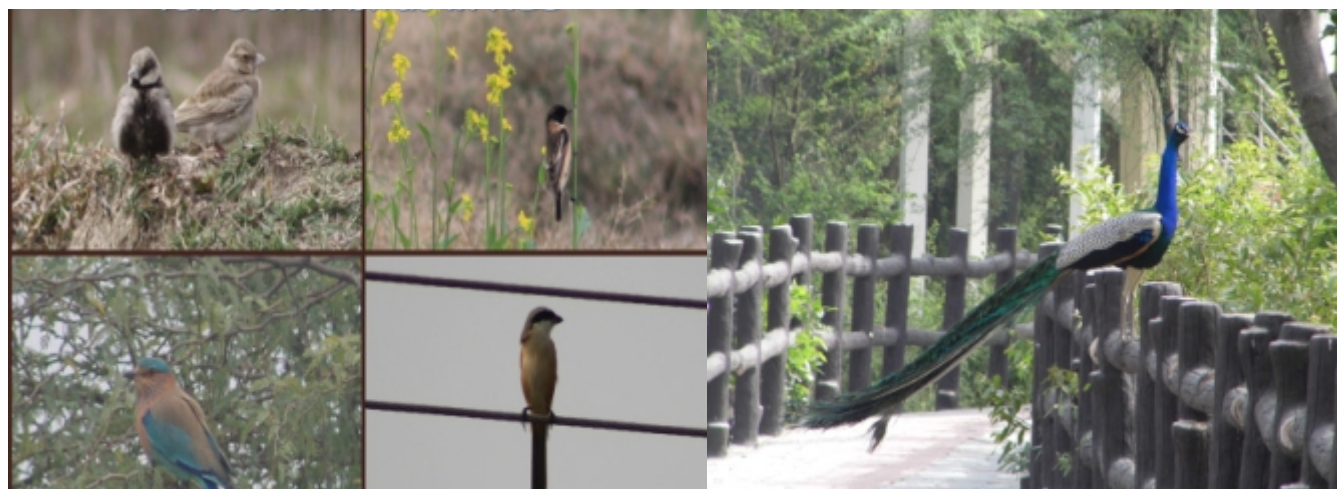


Fig. 14: Terrestrial birds in NBS



Fig. 15: Raptors in NBS



Fig. 16: Others Fauna in NBS



Fig. 17: Breeding colony of Asian open bill storks in NBS

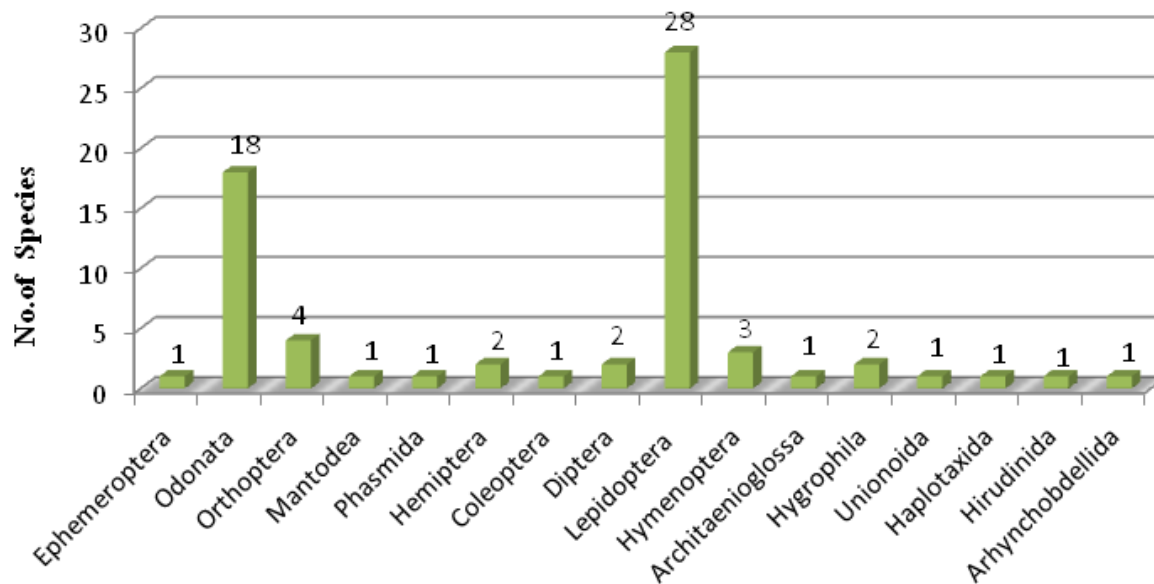


Fig.18: No. of Invertebrates species identified by order in Nawabganj Bird Sanctuary.

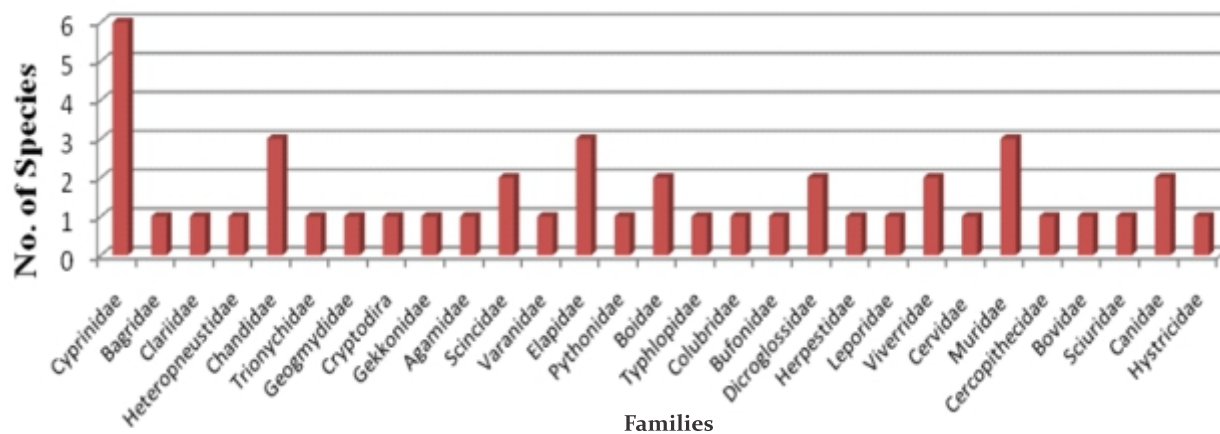


Fig.19: Family wise species composition of vertebrate in NBS.

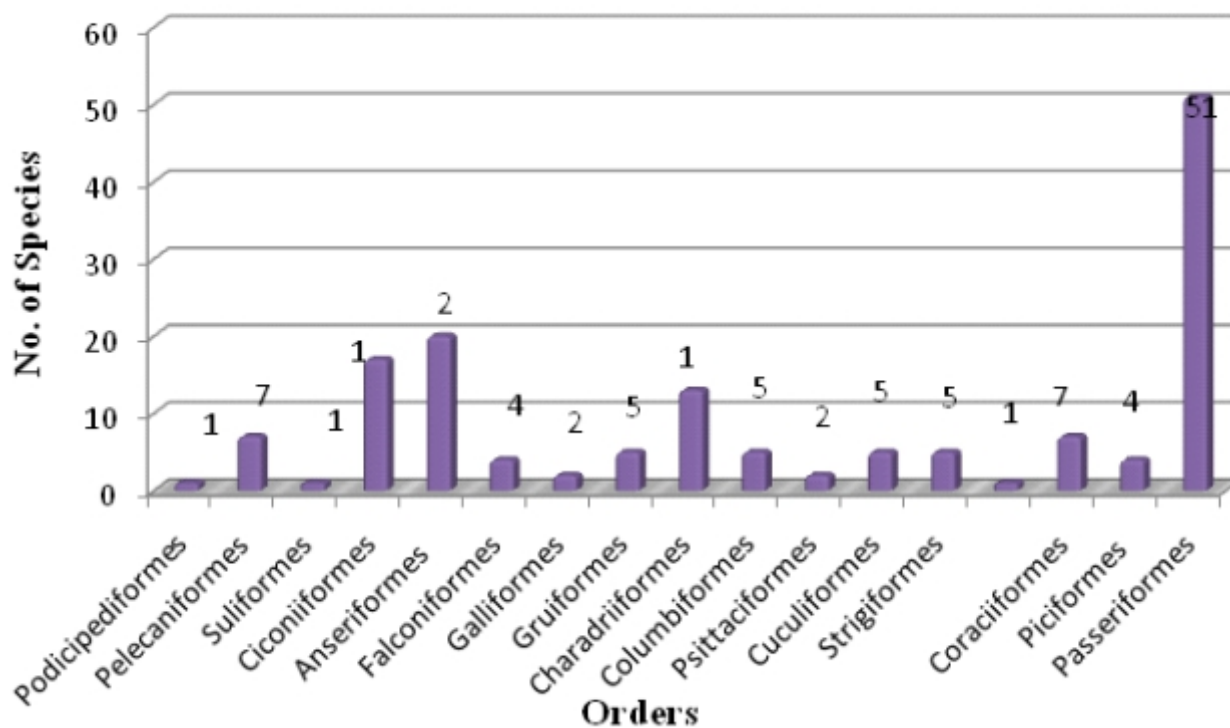


Fig. 20: Order wise species composition of birds in NBS, Unnao.

Families

- | | | | |
|--------------------|---------------------|-----------------|---------------------|
| ■ Podicipedidae | ■ Phalacrocoracidae | ■ Ardeidae | ■ Threskiornithidae |
| ■ Anhingidae | ■ Ardeidae | ■ Ciconiidae | ■ Threskiornithidae |
| ■ Anatidae | ■ Accipitridae | ■ Phasianidae | ■ Rallidae |
| ■ Gruidae | ■ Jacanidae | ■ Charadriidae | ■ Scolopacidae |
| ■ Recurvirostridae | ■ Laridae | ■ Columbidae | ■ Psittacidae |
| ■ Cuculidae | ■ Tytonidae | ■ Strigidae | ■ Caprimulgidae |
| ■ Alcedinidae | ■ Meropidae | ■ Coraciidae | ■ Upupidae |
| ■ Bucerotidae | ■ Capitonidae | ■ Picidae | ■ Hirundinidae |
| ■ Motacillidae | ■ Campephagidae | ■ Pycnonotidae | ■ Irenidae |
| ■ Laniidae | ■ Paridae | ■ Nectariniidae | ■ Zosteropidae |
| ■ Estrildidae | ■ Passeridae | ■ Sturnidae | ■ Oriolidae |
| ■ Dicruridae | ■ Corvidae | | |

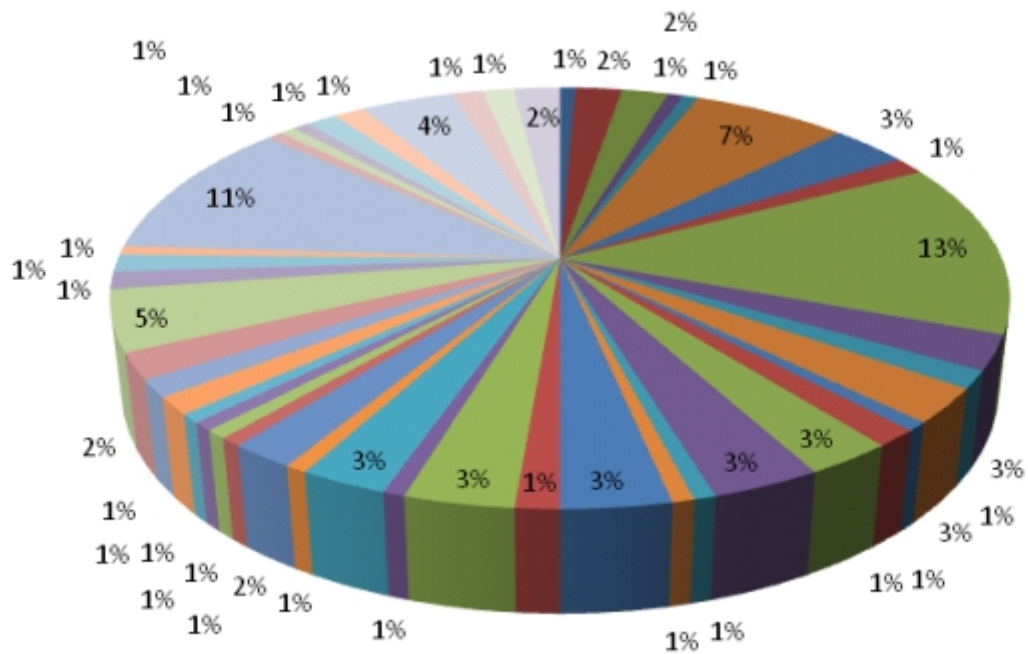


Fig .21: Family wise percentage composition of birds in NBS.

Table 1: overall scenario of domestic tourists and income during 2012-2015 at Nawabganj Bird Sanctuary

Season	Year 2012-13		Year 2013-14		Year 2014-15	
	No. of Tourists	Income (in Rs)	No. of Tourists	Income (in Rs)	No. of Tourists	Income (in Rs)
Summer	3,040	91,200	3,311	99,330	2,892	86,760
Monsoon	3,111	93,330	2,875	86,250	3,121	93,630
Post-monsoon	4,455	1,33,650	2,771	83,130	4,003	1,20,090
Winter	5,640	1,69,200	4,306	1,29,180	5,402	1,62,060
Total	16,246	4,87,380	13,263	3,97,890	15,418	4,62,540

Fig. 22: Overall scenario of tourists in NBS

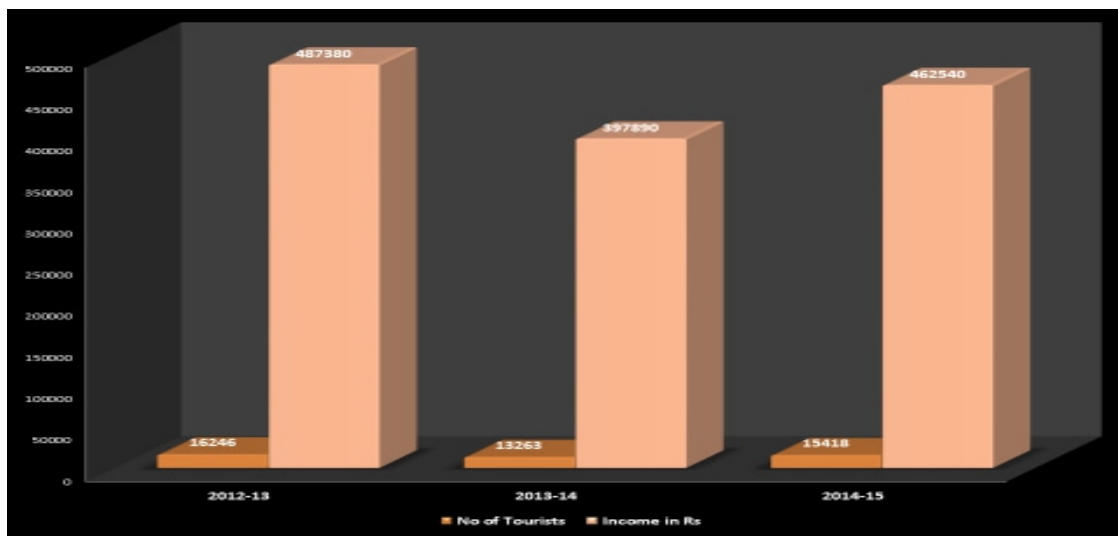


Fig. 23: Scenario of number of tourists and income in NBS



Fig. 24: Tourist enjoy the bird watching at NBS

belonging to 17 orders and 46 families, 10 orders of insects with 61 species, 12 species of fishes belonging to 5 families, 16 species of reptiles, 3 species of amphibians belonging to 14 families, 4 species of mollusks belonging to 3 orders, 3 species of annelids belonging to 3 orders and 12 species of mammals belonging to 10 families from Nawabganj Bird Sanctuary (Fig.13,14,15,16,17,18,19,20,21). All these faunal species depend on the wetland flora and fauna and nearby agriculture fields (Kanaujia et al., 2014).

The forest in NBS with Babul (*Acacia nilotica*), Safeda (*Eucalyptus*), Arjun tree (*Terminalia arjuna*), Gurhal (*Hibiscus rosa-sinensis*), Neem (*Azardiachta indica*), Jungle Jalebi (*Pithecello biumdulce*), Baugainvella, khair (*Acacia catechu*), Kadamba (*Anthocephalus cadamba*) and Bamboo. It is also infested with vegetation like Jal khumbhi (*Eichornia crassppes*), Water chest nut (*Trapa natans*), Jussiaea (*Jussiaea repens*), Water meal (*Wolfia globosa*), Sacred lotus (*Nelumbo nucifera*), Water lily (*N. pubescens*), Coon tail (*Ceratophyllum demersum*), Hydrilla (*Hydrilla verticillata*), Cyprus (*Cyprus alopecuroides*), Pond weed (*Potamogeton nodasus*), Patera cuttail (*Typha lotifolia*), Big duck weed (*Spirodela polyrhiza*), Gerga grass (*Zizania acuatica*), Water spinach (*Ipomea aquatic*) and Smart weed (*Polygonum limbatum*) are common water weeds species in Nawabganj Bird Sanctuary.

Scenario of Ecotourism in Nawabganj Bird Sanctuary

During study period 16257, 13277 and 15424

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foreign as well as domestic tourists recorded in 2012-13, 2013-14 and 2014-15 respectively. The annual income from the tourists is Rs. 491230, Rs.402790 and Rs.464640 in the year 2012-13, 2013-14 and 2014-15 respectively (Fig.22,23,24). This shows that NBS has emerged as an excellent ecotourism place and have great economic value on revenue aspect.

Conclusion

Study reveals that NBS is an excellent ecotourism place and have great economic value on revenue aspect. The involvement of local communities in Ecotourism activities is a step in the right direction. It provides alternative sources of income to local communities, who live in and around protected areas, thus decreasing their dependency on forest resources and increasing their commitment in keeping the forests intact.

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