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CONSERVATION OF WILDLIFE IN GAUTAM BUDDHA SANCTUARY

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The Gautam Buddha Wildlife Sanctuary (GBWS) was constituted in 1976 on the line of the Project Tiger and is located in the South-East part of Gaya District of Bihar State. It is one of the best faunal and floral area of Bihar. The GBWS is rich in term of biodiversity due to its unique biogeographic location in the Gangetic Plain and the Chhotanagpur Plateau. The Sanctuary shows ecodiversity with different types of habitats (local forest types) inhabiting a number of wild animals like *Axis axis* (Cheetal / Spotted Deer), *Cuon alpinus* (Wild Dog), *Boselaphus tragocamelus* (Blue Bull), *Muntiacus muntjak* (Barking Deer), *Bungarus caeruleus* (Common Krait), *Gallus gallus* (Jungle Fowl), *Pavo cristatus* (Pea Fowl), *Naja tripudians* Cobra) etc. The presence of Tiger (*Panthera tigris tigris*) is the special feature of the Sanctuary. But unfortunately these species specially Tiger are fighting great battle for their existence due to rapid loss in habitat and habitat fragmentation caused by severe anthropogenic pressure on the natural resources of the sanctuary. So, at present the GBWS needs an immediate and sound conservation plan to conserve its biodiversity. The present paper deals with important conservation strategies for the Sanctuary.

Wildlife is synonymous with the wild biodiversity and its status is directly linked to maintenance of the life supporting processes of the nature. Wildlife conservation means "the maintenance of a reasonable number of members of every species in their own habitat without destroying that habitat." It involves extensive policing for protection of wild animals and their habitat as well as maintaining good will and seeking cooperation of the local communities. In a broader sense, conservation implies the field of knowledge concerned with the coordination and practical application of data from science with a view to increasing and sustaining the availability of natural resources[1-9]. The conservation today has became a highly debatable issue. According to WRI (World Resources Institute), IUCN and UNEP, successful action to conserve biodiversity must address the full range of causes of its current loss and embrace the opportunities that genes, species and ecosystems provide for sustainable development [4]. India is one of the few countries of the world, whose constitution makes specific references to the need for conserving the rich wild heritage of the country. The Indian Wildlife (Protection) Act, 1972 is the first legislation that provides legal protection to wildlife over the country except J.& K[8]. The ideal system for wildlife conservation is in situ, i.e. in reserved forests and protected areas (PAs).These include National Parks, Sanctuaries, Biosphere reserves etc. The country has more than 500 PAs covering about 4.6 % of the geographical area. However, biodiversity is declining even in these PAs owing to tremendous anthropogenic pressure mainly due to habitat loss[4].

The Gautam Buddha Wildlife Sanctuary (GBWS) was created in 1976 on the line of the Project Tiger. The GBWS is located in the South-East part of Gaya District on either flanks of the G.T. Road (National Highway No.2) covering an area of about 259 Sq. Km. Previously the Sanctuary was a protected private hunting reserve and was known as Dhanua - Bhalua Forest [5,10]. The GBWS is one of the best faunal and floral area of Bihar State. It is rich in term of wild biodiversity due to its unique biogeographic location in the Gangetic plain and the Chhotanagpur plateau.The main forest of the GBWS is the northern tropical dry deciduous type, although it shows ecodiversity

with six local types of forests viz. (i) Dry peninsular Sal forest (ii) Northern Dry mixed deciduous forest (iii) Dry deciduous scrub forest (iv) Boswellia forest (v) Butea forest (vi) Dry Bamboo brakes [1,3,10].

These forests serve as habitats for a variety of wild animals. The presence of Tiger (*Panthera tigris tigris*) is the special feature of the Sanctuary. But is last few decades the GBWS lost a part of its biodiversity and at present also a number of its wild animal species specially Tiger are fighting great battle for their existence due to rapid loss in habitat and habitat fragmentation caused by severe anthropogenic pressure by over exploitation of the natural resources of the Sanctuary. So, at present the GBWS needs an immediate and sound action plan for conservation of its wild biodiversity.

MATERIALS AND METHODS

For the survey of different local forests and inventorisation of wild species, the area (GBWS) has been visited time to time during the year 1999- 2002, 2003-2004 and in 2007 with the help of local people and personnels of Gaya Forest Department . The aim was to point out causes of habitat depletion affecting the status of wildlife . It was also noted the fact whether the specified habitat could preserve the threatened species. Local people were also interviewed and existing literatures on the study area were also consulted.

RESULTS AND DISCUSSION

During the study and survey of the GBWS a number of wild vertebrate species have been reported such as *Axis axis* (Cheetal), *Canis lupus* (Wolf), *Elephas maximus* (Asian Elephant), *Panthera tigris tigris* (Tiger), Cuon alpinus (Wild Dog), Boselaphus tragocamelus (Blue Bull), *Muntiacus muntjak* (Barking Deer), *Bungarus caeruleus* (Common Krait), *Gallus gallus* (Jungle Fowl), *Pavo cristatus* (Peacock), *Naja tripudians* (Cobra) etc[5]. The study reveals that most of these species are threatened due to over exploitation of natural resources leading into habitat fragmentation and impoverishment. The main causes of loss of wild biodiversity and habitat in the GBWS are habitation, cultivation, overgrazing, forest fire, poaching and hunting, vehicular pressure on the G.T. Road, illicit felling, activities of MCC (Maosist Communist Centre) militant, expansion of NH-2, infestation of Lantana weed, Kendu (*Diospyros* sp.) leaf collection, man- animal conflict etc[3]. No satisfactory effort have been made by the Govt. or any NGO(Non Govt. Organisation) to improve such deteriorating condition of wildlife and habitat of the Sanctuary. Thus, it needs urgently an action plan to conserve its wildlife for which the ultimate tool is habitat conservation[3].

The depletion of habitats ultimately affecting the ecosystem. If habitat become depleted, they signify the degradation in the environment which may threaten human's own existence. Mere establishment of PAs does not ensure socio-economic development and conservation of wildlife and habitats. Any conservation policy or programme to succeed requires the cooperation of the people around the sanctuaries and national parks whose life they threaten. Local people who consider themselves as the primary stakeholders must be involved in the use and management of the natural resources [4,6]. Based on this theme, a programme entitled ecodevelopment of in situ conservation of biological diversity involving local communities has been initiated in recent years. The basic concept of ecodevelopment includes conservation of PAs along with the economic development of the people living in the

fringe areas, while at the same time reducing man-animal conflicts[2,4,7]. Obviously, under Joint Forest Management (JFM), the Ecodevelopment programme must be applied in the GBWS for sustained conservation of its wild biodiversity and habitats. Other than Ecodevelopment programme a number of conservation strategies should also be applied in the GBWS, few important are -

1- Displacement of local people from core area of the Sanctuary such as Sabalpur, Tetaria, Nagarcholia, Singhpur, Sankhawan, Chhotki Chanpi etc.
2- Better enforcement of Indian Wildlife (Protection) Act, 1972.
3- Multiplication and breeding of threatened species.
4- Discouragement of monoculture.
5- Restricted enterance of outer and untrained people within the Sanctuary.
6- Eradication of militants.
7- Support for protecting traditional skills and knowledge for conservation.
8- Well equipped vehicles, latest weapons, fire arms and wireless communication facilities for forest personnels.
9- Restriction on introduction of exotic species.
10- Maintenance of corridors between adjacent nature reserve i.e. Betla National Park (Palamau) for possible migration of wild animals especially elephant.
11- Strict restriction for stagnation of traffic on the G.T. in the Sanctuary area.
12- Regular census of wild animals.
13- Heavy plantation in the margins of the G.T.Road in the vicinity of the Sanctuary to reduce sound pollution.

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