The Blacknecked stork *Ephippiorhynchus asiaticus* has declined steeply in the Indian subcontinent (Rahmani 1989). A review of historical and recent (until 1989) finding shows that this decline has involved a general reduction in abundance but not a major contraction of range. In India, the BNS is still very but thinly distributed, with north and north-west regions forming its main strongholds (Rahmani 1989).

The Blacknecked stork is not a threatened species on the global scale but in the Indian subcontinent it may have reached a critical population levels (see Hancock 1989). Except for some comparative account of the breeding behaviour (Kahl 1970, 1973), there has been no study of the ecology, behaviour and movements of the BNS before this study was started in 1994. Among the countries of the Indian subcontinent, the largest population of the Blacknecked storks are found in India and Sri Lanka.

A detailed survey to identify the important wetlands and the breeding sites should be attempted in all the countries of the Indian subcontinent. Once the important wetlands and nesting sites have been located, they should be strictly protected. Special attention should be given to the protection of the wetlands where the nests are located.
Though most of the wetlands in India are under severe pressure due to human over use, for birds like BNS and other fish eating birds finding quality food become a great concern. Especially during their breeding they have to feed upon more food in order to maintain their broods.

Wetlands in India supply crucial human and animal needs such as drinking water, protein production, fodder, water purification, wildlife habitat, and flood storage (Foote et al., 1996). But these wetlands are degraded to the worst condition which in no way can support both human and the animal needs. Most problems in India’s wetlands are related to human population. India contains 16% of the world’s population, yet the Indian subcontinent constitutes only 2.42% of the Earths’ surface (Foote et al., 1996).

The worst affected are the wetlands which earlier supported birds and animal. And these days they supports human needs beyond its capacity. Automatically all wildlife which earlier depended on these wetlands suffered. The wetlands which are situated inside protected areas to some extend support waterbirds and animals. These water bodies faces severe problems due to habitat destruction and tree cutting. This will in feature be more catastrophic than any other man made destruction. The loss of wetland forests, whether coastal or riverines, reduces the ability of wetlands to slow water and trap suspended sediments (Foote et al., 1996). This results in siltation and most of the
wetlands become more shallow unable to carry enough water which in turn greatly affects
the presence of dependent species. In Dudwa National Park this problem has started long
time ago. Unless urgent conservation practices are taken up immediately, within a short
period (5 to 6 years) all wetlands of Dudwa will disappear. Apart from this, growth of
pernicious weeds like *Sesbania aculiata* in all wetlands of Dudwa National Park causes
great concern among biologists.

Changes in the floristic composition of wetland vegetation normally results from
(i) the destruction of all or some of the existing vegetation by pathogens, herbivores or
man; (ii) changes in the physical or chemical conditions of the habitat (e.g. a change in
water nutrient levels) that favour the growth (competition, allopahy); or (iii) the invasion
and establishment of new species.

Two basic types of wetland species are recognized on the basis of their propagule
longevity: (i) species with long-lived propagules that are present in the wetland’s seed
bank that can become established whenever suitable environmental conditions occur, and
(ii) species with short-lived propagules that can only become established in a wetlands if
the propagules reach the wetland during a period when environmental conditions can
change particularly in response to change in water levels, and this allows different types
of species to become established in the wetland. The extirpation of a species from
a wetland in the model is due either to all individuals of the species reaching the end of their normal life-span before any new individuals can be added to the population, or to a radical shift in the environment that can not be tolerated by individuals of the species.

In a wetland a species can be found in one of threes states: (i) can be present in the form of long-lived propagules in the seed bank; (ii) it can be present in the form of vegetatively and/or sexually reproducing adults; or (iii) it may not be present at all; i.e., it may be locally absent or extinct. This (Sebania aculiata) (Fig. 7.1) unpalatable weed proliferate like anything even after being removed from their respective wetlands manually (Fig. 7.2). In order to stop them completely from regeneration the whole plant should be up-rooted and burned. And all wetlands should be deepened if its growth is mainly by means of siltation. This work can be taken up in the peak summer months as all wetlands of Dudwa are almost dry and no waterbirds will be there. By this way we can prevent the disturbance which birds and animals will be facing if we undertook this task of clearing wetlands in earlier seasons. Immediately after removal all these weeds wetlands should be deepened so the rain water can be stored effectively which will last long till the next monsoon. Though the rainy season starts from late May and extends upto last week of August, all wetlands gets filled up completely. But before the rainy season, due to severe summer all wetlands become partially dry. In Dudwa this is some
Fig. 7.1 *Sesbania aculiata* weed in Banketaal of Dudwa National park.
Fig. 7.2 Labourers uprooting the *Sesbania aculiata* weed from Banketaal of DNP.
extend controlled by pumping out water with the help of engines (Fig. 7.3). For huge wetlands like Badhitaal this water will not lost long and two to three engines should be used simultaneously to pump out more water. This task should be taken up right from the last week of March and should continue till the rainy season begins.

Another problem the wetlands of Dudwa N. P. are facing is illegal fishing by local tribes. They used to come in the night hours and in some remote wetlands even in day time illegal fishing is going on. Some of the cases are very well known to the forest department people and this aggravates the existing condition. These tribes use different techniques to catch fish and they greatly affect the fish abundance that has to be available for the fish eating birds like the Blacknecked and the Lesser Adjutant storks. The tribes throw away hollow wooden logs (Fig. 7.4) in to the wetlands especially in summer months mainly in the night hours. May be after two or three days again they will come in night hours and collect the trapped fish from the logs. The fishes like *Heteropnestus fossilis*, (Fig. 7.5) and *Punna chuctatus* mainly gets trapped into such logs. Apart from this I have seen tribal peoples using mosquito nets to catch fishes. Even though I have not seen them catching fish by this technique inside the Park this would greatly affect the prey availability when ever fish eating birds like BNS and other birds go out of their permanent feeding territory in search of food.
Fig. 7.3 Pump set used to pump out water to fill the wetlands during summer months.
Fig. 7.4 Hollow wooden logs used for illegal fishing by tribes in Banketaal of DNP.
Fig. 7.5 *Heteropnuster fossilis* fish which mostly gets trapped in the wooden logs.
Though the Blacknecked stork is a highly territorial bird and prefer to spend most of its time in a particular wetland, the condition of the wetland should be more appropriate in providing required food and shelter. Especially in the breeding season their (BNS) territoriality increases further and this will last long only if the habitat can support the bird by providing enough food. Otherwise for this huge bird finding another wetland which is situated in far away places (from their nest) may not be good and chances are there that the bird may lose its permanent territory.

Though the Blacknecked stork is considered as a species which indicates the habitat quality, special emphasis should be given while conducting surveys for tiger and other big animals in National Parks and Sanctuaries. As far as the nest site is concerned soon after the identification of nest sites (either with or without birds) that particular spot should be protected from local villagers and predators.

As far as the nest (which I studied) in Kaima area is concerned, disturbance due to local villagers during grass cutting season is more. Some forest guard should be appointed to prevent the flow of villagers who approaches nesting tree. At least during the breeding season, no one should be allowed within 200 m of the nest. According to my findings Dudwa National Park has some very good wetlands which can support good
population of this species. Rules and regulation for the researchers should be some what liberal and which in no way should affect their work. So that they can freely carry out their work. The BNSs always prefer to build their nest in some of the tall trees therefore, to study their breeding biology tall watchtowers should be built. Later on the whole structure can be modified as a fire watch tower or an observation tower in case if the bird leave the nest completely or shifts the nest site from one place to another.