

Impact of Border Fence along India-Bangladesh Border on Elephant Movement

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Abstract

The barbed wire fence that has been erected along the India-Bangladesh border has become a barrier to the movement of wild elephants at a number of locations in Assam, Meghalaya, Mizoram and Tripura. While the animals continue to move across by breaking the fence at places, there is possibility of injury besides creating problems in their normal movement. Such disturbance could increase human-elephant conflict, which has already taken a serious turn. This article discusses the issue, the problems arising out of the same and also recommends potential solutions.

Introduction

The north-eastern (NE) India is an important habitat of the Asian elephants *Elephas maximus* in its entire range (Bist 2005; Choudhury 1999; Choudhury & Menon 2005). The region comprises the states of Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Tripura, Sikkim and the northern West Bengal (21°58'-29°27'N, 88°00'-97°24'E) covering about 274,680 km² of geographical area (Fig. 1). The NE India is part of a global biodiversity hotspot (Myers *et al.* 2000). The elephant habitat in the region is contiguous with Bhutan, Bangladesh, Myanmar and to some extent Nepal. The animals move between these countries at different times (Choudhury 1999). To prevent influx of illegal human population and also to check movement of various insurgent groups, the Government of India has started construction of fencing with barbed wire all along the India-Bangladesh border. It has been observed that this fence has already posed serious problem for some elephant population while for some others it is going to be a problem in the near future. The total length of the border is 4894 km, of which more than two-third already fenced.

This short paper discusses the problems area by area and also suggests potential solutions.

Methods

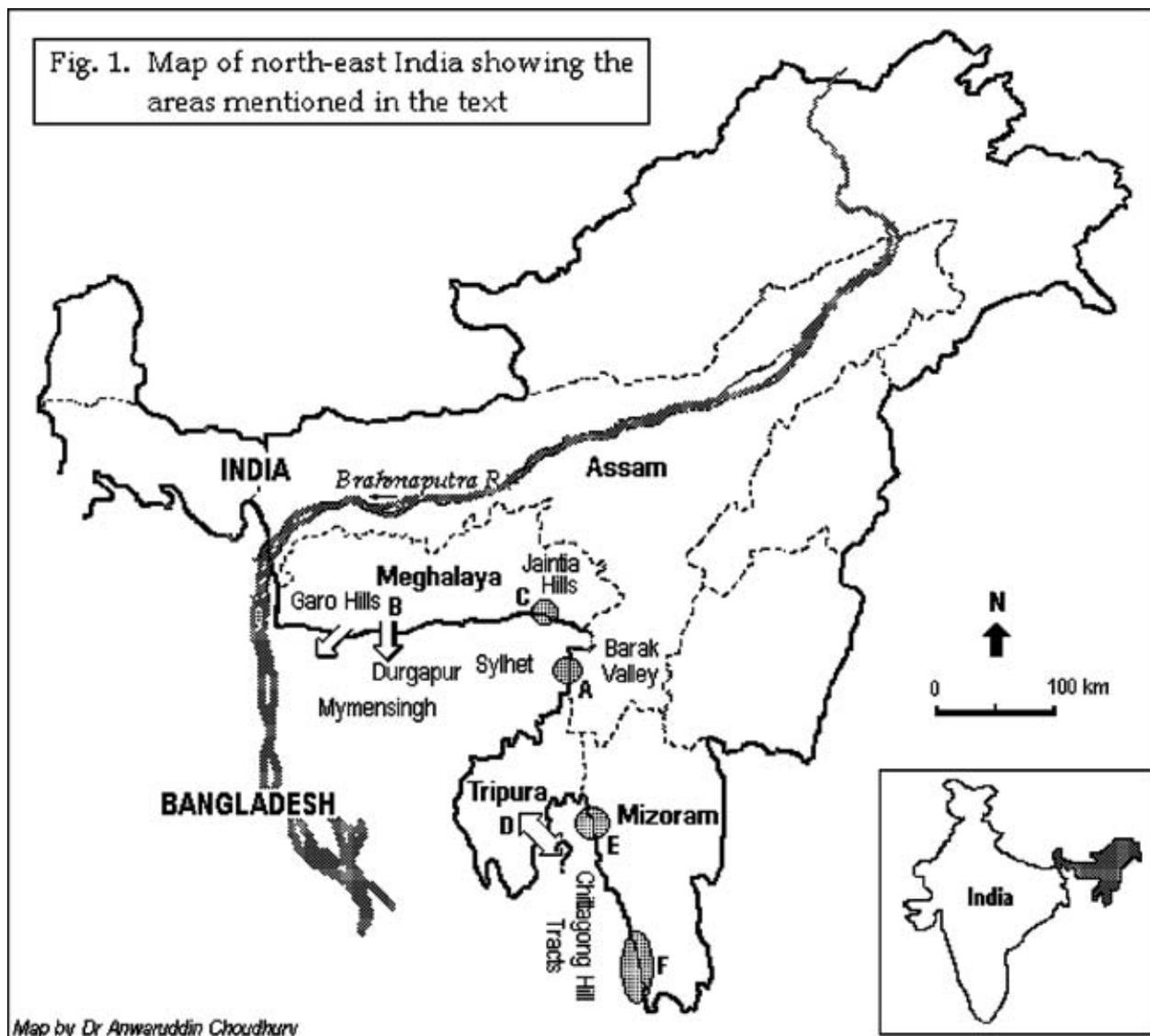
The data was obtained during general field study in different parts of north-east India to determine the distribution and status of different species of wildlife including the elephant since 1985. Since the fencing is a recent phenomenon, the areas likely to be affected were also visited for first hand observation of the problem. The field study, besides ascertaining the presence or absence of elephants, interviewed border villagers, forest staff and the security staff posted was taken.

Results

Patharia Hill (24°33'-47'N, 92°15'-16'E) (marked 'A' on map in Fig. 1). This north-south running low hills falls partly in India and partly in Bangladesh. The approximate area on Bangladesh side is >100 km² while on Indian side, the area of the reserved forest is 75 km². It is located in Karimganj district of Assam and Moulvi Bazar district of Bangladesh. A small isolated population of eight elephants survives in this small habitat. The number was 18 in mid 1980s including Longai-Tilbhum forests (Choudhury 1991), which came down to eight in 1993 (Choudhury 1999). In this sector, the boundary fencing was completed a few years back but the elephants regularly damage it to cross over and vice versa. The movement of elephants between the forests of two countries is not seasonal but a regular one as the fence is right across the heart of the habitat. This is the last herd of elephants in the Barak valley region of southern Assam. The Cachar population was extirpated in 1988 (Choudhury 2001a) while in Hailakandi, only three survived.

The link with the nearest population (Hailakandi) ceased in the mid 1970s (Choudhury 1991), due mainly to deforestation, encroachment, and large-scale cultivation of sugarcane, and jhum cultivation by the Reangs tribe, coupled with poaching by the Mizo tribe. Similar disturbance prevented it from dispersing towards the south (Mizoram). The gap between Tilbhum and Patharia Hill Reserved Forests is widening but the elephants occasionally use the clearings and tea plantations for movement. The total area of the habitat is about 140 km² (Assam 80 km², Tripura 20 km² and Bangladesh 40 km²).

Southern Garo Hills (25°12'N, 90°12'E / 25°05'N, 90°42'E) (marked 'B' in Fig. 1). This is part of a large population that lives in Garo Hills- Khasi Hills of Meghalaya and adjacent areas of Kamrup-Goalpara of Assam. Every year 40 to 50, very rarely up to 70-80 elephants move down to the plains of Durgapur in Netrakona district (earlier a part of Mymensingh district) of Bangladesh. The elephants move down from Balpakram National Park – Baghmara Reserved Forest through the stretch between Baghmara and Maheshkhola. They mainly go down at the advent of winter just before harvesting of paddy and are back once the harvest is over.



A news report came up with a figure of about 100 elephants in Gozni area of the northern district of Sherpur, about 125 miles from the capital, Dhaka (Anon 2004). The animals

reportedly killed 13 people and injured around a hundred during a period of two years. These elephants moved across through a different route from or west of Angratoli Reserved

Forest. Islam (2005); however the report did not mention this movement although there is mention of the Durgapur area.

Jaintia Hills (25°07'N, 92°12'E) (marked 'C' in Fig. 1). A small population of elephants is found in the southern areas of Jaintia Hills district of Meghalaya. This was the Barail-Jaintia Hills population of Choudhury (1999); however, with the complete disappearance of elephants from Barail foothills in Cachar, the only survivors of that population is now confined to Meghalaya only, mainly moving in Narpuh Block I Reserved Forest and adjacent forests of Lakadong. Lone males have been found to follow the Prang River (known as Hari River in Bangladesh) up to the plains where it spreads out from the hills. Thus they occasionally cross the international boundary. The Bangladesh part is in Sylhet district.

Tripura (approx. 23°30'-40'N, 92°00'E) (marked 'D' in Fig. 1). The number of elephants in Tripura is fast declining due to insurgent activities. Nobody knows exactly the number of present animals and they wander about a large forested / degraded area, bulk of which is unguarded by Forest staff due to presence of heavily armed underground guerillas. Occasional movement between Tripura's Dhalai, North and South districts and Chittagong Hill Tracts (Khagrachari and Rangamati districts) could still be there as there is habitat contiguity. From an estimated 184 elephants in 1995 (Choudhury 1999), the current numbers could be as low or less than 30.

Dampa Tiger Reserve (23°30'-40'N, 92°18'E) (marked 'E' in Fig. 1). The largest protected area in Mizoram with 500 km² of area has a very small elephant population numbering four in 1999-2001; down from five in 1997-98 and >10 in 1980s (Choudhury 2001b). This reserve is right on the India-Bangladesh border and the elephants are known to move across occasionally to Rangamati district in Chittagong Hill Tracts, Bangladesh.

South Mizoram (22°00'-40'N, 92°33'-36'E) (marked 'F' in Fig.1). Unlike other populations or herds, which mostly go from the Indian side, in this case, some elephants (up to 20-25) from

Chittagong Hill Tracts (Rangamati district) in Chittagong Hill Tracts of Bangladesh occasionally enter Mizoram, affecting the forests and paddy fields of Lawngtlai and Lunglei districts (Choudhury 2001b).

Discussion

The border fence that has been erected and is being erected is quite strong with several strings or iron wire. Although the Patharia experience suggests, that in the Garo Hills and Mizoram sectors as well the pachyderms will damage the fence for crossing over and this remains a matter of concern. The fence certainly is a disturbing agent for the elephants and they break after repeated attempts. Secondly, there is a chance of injury to the elephants.

In Garo Hills – Bangladesh sector, there is no habitat across the border and the animals go for the crops. Although the fence in this sector will help stop crop loss but it being a tradition, which these elephants are following since time immemorial it may be difficult to prevent breaking of fence in places. In Bangladesh, the reaction was against the animals (Anon 2004). An NGO once demanded absurdly that the Indian government “takes back about 100 elephants”. They even urged for elimination of the elephants for “attack on people, destruction of trees, roads and houses.” There were reports of at least 13 human deaths and 100 were injured in two years (2000-2002) in Sherpur area. Elephants killed 162 people and injured 157 in Bangladesh, mostly in the Chittagong Hill Tracts, in the five years to 2002, says the World Conservation Union.

Suggested actions

In the known corridors in all these sites, there should be provision for gates or openings so that the elephants can migrate without any problem. In Garo Hills sector, such openings may not be possible as there is no suitable habitat across the border in Bangladesh. However, in Patharia and the Mizoram sector, both sides of the border is forested and forms an elephant habitat. Wide openings should be provided at suitable locations, especially along the elephant tracks. In case of Patharia and Dampa, the main fence could be realigned

along the reserved forest and sanctuary boundary so that even if any human infiltrator crosses the border through the gates, he could be detected. In the process, the reserves would get protection from encroachment and tree felling. Patharia Hill should be declared a transborder wildlife sanctuary as has been done in many parts of Africa. Patharia has many other rare species of wildlife such as pig-tailed macaque *Macaca nemestrina*, Phayre's leaf monkey *Trachypithecus phayrei*, hoolock gibbon *Hoolock hoolock* and clouded leopard *Neofelis nebulosa*.

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