INTRODUCTION
The town of Siliguri in West Bengal is one of the main entrepots in India for wildlife products. Many types of illegal wildlife items are sent to Siliguri such as rhino horns, elephant tusks and tiger bones for export to Nepal, Bhutan, China, Bangladesh, Thailand and elsewhere. These items come from north-east India, but also from other parts of India, Bhutan, China and Nepal. Siliguri is also noted for selling large quantities of consumer goods at low prices, which have been smuggled into India.

Also in West Bengal, not far from this notorious trading town, are two important rhino populations where rhino numbers have been rising in recent years (in Jaldapara Wildlife Sanctuary and Gorumara National Park). It is surprising, with so much illegal activity in the northern part of the state, that the rhinos are not poached. This has not happened due to the high priority the state government gives to rhino conservation.

However, much more attention must be focused on exposing the main trade routes in the northern region of West Bengal if the rhinos and other endangered wildlife such as the tiger, leopard, snow leopard, clouded leopard and musk deer are to be protected in the future. It is hoped that this article will help to bring more attention to the need to close down the massive illegal trade in wildlife products in and around Siliguri.

WEST BENGAL’S TRADE ROUTES FOR WILDLIFE PRODUCTS, INCLUDING RHINO HORN
In the northern part of West Bengal, the centre for the wildlife trade in north-east India, there are three main towns involved in the illicit commerce in wildlife products: Darjeeling, Jaigaon and Siliguri (see Figure 1).
elsewhere farther east, being moved from India (via Jaigaon and Phuntsholing) to Bhutan’s international airport at Paro. According to confidential sources in West Bengal, a Taiwanese resident sold ten horns (weighing 4 kilos) to two Koreans in a Phuntsholing hotel in 1995. The horns probably came from Assam’s Manas National Park. As well as rhino horn, Phuntsholing traders obtain tiger skins, tiger bones, musk deer pods, bear gall bladders and elephant ivory from Bhutan, India, Nepal and China. Almost all are eventually exported (Wildlife Protection Society of India, Menon et al., 1997, and confidential sources in India).

**Siliguri**

Siliguri is the main trading town for wildlife in the region. An extremely ugly, dirty, crowded and noisy town, it is conveniently near Bhutan, Nepal and China with good rail and road links and an airport. Siliguri is noted for large quantities of contraband consumer goods, which are usually smuggled in from Nepal. They are sold mainly by Bengalis and Marwaris in the appropriately named Hong Kong

*Figure 1. Map showing the locations of Darjeeling, Siliguri and Jaigaon.*
market, a huge retail market in the centre of the town where prices can be 40% less than in other Indian bazaars.

Certain conservationists and government officials in India are aware of Siliguri businessmen who are having a negative effect on wildlife conservation in north-east India, Nepal, Bhutan and parts of China. Siliguri is a major entrepot for elephant ivory, cat skins, musk deer pods, bear gall bladders, live leopards and especially rhino horn.

Ivory
In order to meet the demand for ivory in Siliguri, from 1979 to 1997 at least 27 elephants were poached in West Bengal (at least 15 in the Buxa Tiger Reserve) with a slight increase in the early and middle 1990s compared with the late 1980s (Wildlife Protection Society of India, pers. comm., 1998 and Raha, unpubl. 1996). As well as this ivory, more came to Siliguri from illegally killed elephants in Orissa and Bihar. In 1995 an ivory trader was arrested in Calcutta who admitted selling tusks regularly to a businessman in Siliguri who in turn sent them to Nepal (confidential source in West Bengal). This is very plausible as there is strong evidence that ivory also is moved from Siliguri to Calcutta and then exported (Menon et al., 1997 and confidential sources in Siliguri). Good quality raw ivory sold for 6,000 rupees ($165) to 9,000 rupees ($248) per kilo in 1997 in Siliguri. There is also a trade in Siliguri for fake elephant ivory made out of cow and elephant bone and also real tusks filled with white cement; these are usually made in villages between Jaldapara and Cooch Behar.

Cat skins and claws
Cat skins and claws are frequently traded in Siliguri. A snow leopard skin in excellent condition earned exporters in 1997 30,000r ($826) to 40,000r ($1,102). There have been several arrests of traders in and around Siliguri dealing in cat skins. In late 1994 police arrested four people and seized 89 leopard skins and a tiger skin which had come from Uttar Pradesh by train and were about to be taken by truck to Nepal (Anonymous, 1995 and the Wildlife Protection Society of India, pers. comm., 1998). This gang, partly based in Siliguri, had also been trading in bear gall bladders, musk deer pods and rhino horn (Anonymous, 1995 and the Wildlife Protection Society of India, pers. comm., 1998).
mous, 1995b, Anonymous, 1995c). In September 1995 four tiger claws were seized in Siliguri (Belinda Wright, pers. comm., 1999). In early 1996 20 leopard skins and a tiger skin were confiscated at New Jalpaiguri’s railway station, just eight kilometres south of Siliguri; skins probably came from Assam and were to be sent to Calcutta businessmen (Anonymous, 1996). There is even a thriving trade in live leopard cubs from the Siliguri area to Nepal and Thailand via Burma (Wright, pers. comm., 1999).

**Rhino horn**

It is with rhino horn that Siliguri traders make most money, and there is thus a network of middlemen moving them from Assam to Siliguri and then mostly to Bhutan. This network has been active since about 1985, when Calcutta traders became uneasy about handling rhino horn due to increased vigilance by the authorities (Martin, 1996). From 1983 to 1997 18 rhino horns were seized in 22 cases in and around Siliguri compared to only one seized in Calcutta during this 15-year period (in 1995).

In June 1995 three senior members of the biggest syndicate trading in rhino horn were arrested by the Siliguri police after a large quantity of horns were offered for sale. It was the first arrest of its kind in India (Breeden and Wright, 1996; Anonymous, 1995b). The group consisted of a Taiwanese, a person of Chinese origin and a Tibetan. The police also seized two rhino horns weighing a total of 680g in a Siliguri hotel. Under interrogation, the men gave a
Table 1. Numbers of rhinos in Jaldapara Wildlife Sanctuary and Gorumara National Park.

<table>
<thead>
<tr>
<th>Year</th>
<th>Jaldapara</th>
<th>Gorumara</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1985</td>
<td>14</td>
<td>8</td>
<td>22</td>
</tr>
<tr>
<td>1994</td>
<td>35</td>
<td>15</td>
<td>50</td>
</tr>
<tr>
<td>1996</td>
<td>43</td>
<td>17</td>
<td>60</td>
</tr>
<tr>
<td>1998</td>
<td>49</td>
<td>19</td>
<td>68</td>
</tr>
</tbody>
</table>

Source: Government of West Bengal, published and unpublished statistics.

Table 2. Government budgets for Jaldapara Wildlife Sanctuary and Gorumara National Park.

<table>
<thead>
<tr>
<th>Year</th>
<th>Jaldapara</th>
<th>Gorumara</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Rupees</td>
<td>US dollars</td>
</tr>
<tr>
<td>1992/3</td>
<td>8,500,000</td>
<td>281,271</td>
</tr>
<tr>
<td>1994/5</td>
<td>11,200,000</td>
<td>352,423</td>
</tr>
<tr>
<td>1995/6</td>
<td>13,400,000</td>
<td>396,098</td>
</tr>
<tr>
<td>1996/7</td>
<td>15,700,000</td>
<td>438,793</td>
</tr>
</tbody>
</table>

* Gorumara was then a wildlife sanctuary of only 8.6 km².


lot of information about their illicit operations. The Taiwanese, who was the group leader, claimed he had 62 horns weighing from 75 g to 1.4 kg each; he had recently sold ten, as mentioned above, to some Koreans in Phuntsholing. All the horns were stored in Phuntsholing, being safer there, as the Indian authorities cannot cross the border and the Bhutanese officials had allegedly been paid off. He further stated that he was planning to sell his horns over the next one or two years. He claimed he had sold 22 rhino horns in 1993 to the Bhutanese Princess, Deicky Wangchuk, in Phuntsholing. She had taken them from Paro airport to Hong Kong and then Taiwan where she was caught as was well documented at the time (Vigne and Martin, 1993).

Despite the arrest of the leaders of this major syndicate, traders in Siliguri are still selling rhino horn, but less as there has been reduced rhino poaching in Assam and West Bengal since 1994. In 1996 middlemen were offering for sale rhino horns at 100,000r ($2,837) per kilo near Siliguri; the same horns landed

Photo 5. In the village of Gairkhata between Jaldapara Wildlife Sanctuary and Siliguri, low quality musk from this musk deer pod was on sale for $25 per ten grams in December 1993.
in an eastern Asian country by an Indian trader would be three times more, priced at about $8,500 a kg (confidential source, 1998).

There is evidence that some former Siliguri rhino horn dealers have left the business because of the large number of fake horns on the market in this northern part of West Bengal. This trade in counterfeit horns started to increase in the early 1990s. They are made in the same region as the fake ivory from resins, buffalo horns and of bamboo with a heavy material inserted to increase their weight. In March 1997 a person working for the Wildlife Protection Society of India was offered a false rhino horn (made out of resin from a mould) in a house in Cooch Behar for 70,000r ($1,928). The seller said the price was cheap as he claimed he had obtained the horn from a government officer. Traders who hope to pass them off as authentic are exporting some of these spurious horns to Nepal.

THE SUCCESSFUL CONSERVATION OF THE GREATER ONE-HORNED RHINO IN WEST BENGAL

The State’s rhino population has expanded rapidly in recent years from 22 in 1985 to 68 in 1998 (see Table 1). This includes two rhinos bought from Assam in 1995 to increase the genetic pool. The Gorumara National Park population is now the highest for over 60 years at 19 animals while the Jaldapara Wildlife Sanctuary population is 49 rhinos. Only two rhinos have died in West Bengal between 1994 and 1998.

In March 1996 a poached female rhino was poisoned inside Jaldapara Wildlife Sanctuary, but its horn was not stolen. In September 1997, a rhino died of unknown causes and its horn was stolen inside the Sanctuary. Several days later, the horn was recovered in a hut nearby through an informer and the two people involved were arrested.

Several reasons for the success in almost eliminating rhino poaching in West Bengal are described below.

High budgets

The State government has allocated increasingly large amounts of money for rhino protection (see Table 2). In Jaldapara, an area of 216 km², the government budget has risen from 8,500,000r ($281,271) in 1992/3 to 15,700,000r ($438,793) in 1996/7. This latter figure works out at $2,031 per square kilometre, one of the highest in the world for a government sanctuary. The State budget for Gorumara has more than doubled over the same period from $1,400,000r ($46,327) to 4,000,000r ($111,794), while its size has increased in 1994 from only 8.6 to 80 square kilometres when it was upgraded from a wildlife sanctuary to a national park. Even with Gorumara’s considerable expansion in size, the State government is spending $1,397 per square kilometre, a considerable sum.

For Gorumara, the increased budgets are going mostly towards community eco-development projects (such as irrigation schemes, roads, bee-keeping and growing mushrooms), for the planting of 100 hectares of grasslands to improve rhino habitat, for the construction of roads and bridges within the Park, and for improved anti-poaching activities. For Jaldapara, the grassland areas have been expanded, and the electric fence has been extended to 80 km (covering 75% of the boundary) to prevent rhinos from wandering out into the neighbouring farmland and to help keep out poachers. Community eco-development projects have been increased for Jaldapara and the communications’ network for anti-poaching has improved.

Effective patrol operations

There has been a high concentration of manpower for patrol work around both protected rhino areas in West Bengal. In Gorumara there are two range officers, six deputy range officers, plus 60 forest guards and game watchers who all patrol the Park. This is almost one person per square kilometre. They have ten double-barrel shotguns and seven .315 rifles. There are also three patrolling elephants. Jaldapara has four range officers, ten deputy range officers plus 60 forest guards and watchers in the Sanctuary. They have 42 double-barrel shotguns, nine single-barrel shotguns and 18 .315 rifles and 16 patrolling elephants. In both rhino areas the patrol camps have modern radio sets to improve communications, and Gorumara has three watch tow-
ers while Jaldapara has five, manned throughout the day and night, which greatly help field staff to detect poaching gangs.

**Improved intelligence**

Due to the large number of community eco-development projects, especially in the vicinity of Jaldapara, relations between the Forest Department staff and the local people are good. The Forest Department has thus been able to set up a reasonably efficient informal intelligence network among the villagers. Occasionally, the Forest Department pays for information but not officially as there are no funds provided for informers. Senior forest officers have recently applied to the State government for official authorization for financial assistance to pay informers, as it is now considered a high priority (A.K. Raha, Conservator Forests (Wildlife) West Bengal government, pers. comm., 1998). Forest Department officials are making a special effort around Gorumara to encourage villagers to support the Park and thus the villagers are preventing poachers from passing through their land (N. Singhal, DFO, Wildlife Division, Jalpaiguri, pers. comm., 1998).

**High staff morale**

Due to the government giving priority to wildlife conservation in Jaldapara and Gorumara, staff morale is high compared with most wildlife areas of India and the field staff are hard working. The West Bengal authorities try to put their most experienced and dedicated staff into these two protected rhino areas and fully support them politically and economically (Raha, pers. comm., 1998).

Rhino poaching has been insignificant for many years in West Bengal as poachers perceive that the dedicated staff protect the State’s rhinos extremely well. Jaldapara’s 49 rhinos and Gorumara’s 19 rhinos are not worth the risk pursuing, compared with 1,250 in Assam’s Kaziranga National Park, which is close by. And recently, Kaziranga’s budget has been cut and the dedicated staff are struggling in their work, so attempts at rhino poaching there make far better sense to a would-be poacher than in West Bengal.

**Further requirements for Jaldapara and Gorumara**

There are, however, more requirements if this rhino conservation success is to continue. According to N. Singhal (pers. comm., 1998), who is the DFO in charge of Gorumara, the Park needs improved staff quarters, more vehicles to add to the existing two, two or three more domesticated elephants for patrol work, and perhaps cash rewards to give to the junior staff for outstanding work. The staff want to maintain support to the villagers by helping to alleviate their economic problems. These problems include grazing for their large number of cattle, a lack of adequate supplies of firewood and timber, plus damage by wild animals to domestic stock and crops, as well as injuries and deaths to humans. In 1997, elephants in and around Gorumara killed five people (Singhal, pers. comm., 1998). For Jaldapara, an area nearly three times larger than Gorumara with over double the size of Gorumara’s rhino population, West Bengal’s Conservator of Forests (Wildlife) believes (pers. comm., 1998) the following strategies are the topmost priority in order to conserve the rhinos. Due to the change in the course of the Torsa river, the grasslands favoured by the rhinos have dried up and have been invaded by non-palatable grasses. Water and soil moisture conservation is thus necessary to regenerate the palatable grasses as preferred by rhinos. As for Gorumara, more domesticated elephants, perhaps six, and two more vehicles to make a total of four are wanted for patrol work, and repairs are required for roads and more staff accommodation. A formal intelligence network must also be established with a fund of about 100,000 rupees ($2,500) a year to pay informers for bringing reliable information on potential poachers and rhino horn traders around Jaldapara.

**CONCLUSION**

The West Bengal government, from the Chief Minister downwards, has given much greater importance recently to rhino conservation *in situ* than in the past, and as a result the rhinos have done very well (Ashok Kumar, Wildlife Protection Society of India, pers. comm., 1998). The expansion in size of Gorumara by almost tenfold in 1994 illustrates the State’s com-
mitment. This is especially surprising considering that the human population around this Park has been rising due to the influx of many people from Bangladesh and Nepal. The population density in the district is over 350 people per square kilometre (Singhal and Gupta, unpubl.).

There is a major contradiction in West Bengal’s rhino conservation policy. The State government pays particular attention to rhino protection in situ in Jaldapara and Gorumara, but very little effort has gone into eliminating the rhino horn traders in Siliguri, Darjeeling and Jaigaon. Apart from the June 1995 arrest of syndicate members in Siliguri, which was initiated by an NGO, no traders in wildlife products in northern West Bengal have been convicted and jailed. Even the three arrested in 1995 with the two horns were not jailed for long. The West Bengal authorities are aware of these shortcomings in arresting and convicting illegal wildlife traders. The Management Plan of Jaldapara Wildlife Sanctuary West Bengal (Raha, unpubl. 1997), written by officials of the wildlife wing in 1997, recommends that a fully fledged legal cell be established to help “draw up the charge sheets and pursue the cases in court.”

Far more needs to be done to apprehend wildlife traders in India. Extremely few are ever convicted and put into prison for more than a few days. For the moment, it appears that the wildlife trade syndicates in the Siliguri area are satisfied with the numbers of rhino horns they are receiving from rhinos poached in the neighbouring state of Assam, but this may change in the future putting added pressure on West Bengal’s rhinos. It is therefore imperative that officials in West Bengal put a high priority on arresting and convicting illegal wildlife traders, as they do on protecting the 68 rhinos in Jaldapara and Gorumara.

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