



United Nations  
Educational, Scientific and  
Cultural Organization

Organisation  
des Nations Unies  
pour l'éducation,  
la science et la culture

# World Heritage Patrimoine mondial

## 32 COM

Paris, 20 May / 20 mai 2008  
Original: English

Distribution limited / limitée

UNITED NATIONS EDUCATIONAL,  
SCIENTIFIC AND CULTURAL ORGANIZATION  
ORGANISATION DES NATIONS UNIES  
POUR L'EDUCATION, LA SCIENCE ET LA CULTURE

CONVENTION CONCERNING THE PROTECTION OF THE WORLD  
CULTURAL AND NATURAL HERITAGE

CONVENTION CONCERNANT LA PROTECTION DU PATRIMOINE  
MONDIAL, CULTUREL ET NATUREL

WORLD HERITAGE COMMITTEE / COMITE DU PATRIMOINE MONDIAL

Thirty-second session / Trente deuxième session

Quebec, Canada / Quebec, Canada  
2 -10 July 2008 / 2-10 juillet 2008

**Item 7 of the Provisional Agenda: State of conservation of properties inscribed on the World Heritage List and/or on the List of World Heritage in Danger.**

**Point 7 de l'Ordre du jour provisoire: Etat de conservation de biens inscrits sur la Liste du patrimoine mondial et/ou sur la Liste du patrimoine mondial en péril**

**MISSION REPORT / RAPPORT DE MISSION**

**Manas Wildlife Sanctuary (India) (N 338) / Sanctuaire de faune de Manas (Inde) (N 338)**

**12 – 18 February 2008 / 12 – 18 Février 2008**

This mission report should be read in conjunction with Document:  
Ce rapport de mission doit être lu conjointement avec le document suivant:

WHC-08/32.COM/7A

WHC-08/32COM/7A.Add

WHC-08/32.COM/7B

WHC-08/32.COM/7B.Add

# UNESCO World Heritage Centre – IUCN

## MISSION REPORT

### Reactive Monitoring Mission to the Manas Wildlife Sanctuary, India

From 12 to 18 February 2008



Crédit photographique: EMC<sup>2</sup>I-LETHIER

Guy DEBONNET (UNESCO World Heritage Center)  
Hervé LETHIER (IUCN Consultant)

April 2008

## TABLE OF CONTENTS

<b>1</b>	<b>EXECUTIVE SUMMARY</b>	<b>3</b>
<b>2</b>	<b>ACKNOWLEDGEMENTS</b>	<b>6</b>
<b>3</b>	<b>BACKGROUND TO THE MISSION</b>	<b>7</b>
<b>4</b>	<b>INSTITUTIONAL AND LEGAL FRAMEWORK</b>	<b>8</b>
<b>5</b>	<b>ASSESSMENT OF MANAGEMENT AND CONSERVATION ISSUES</b>	<b>8</b>
5.1	MANAGEMENT ISSUES	
5.2	CONSERVATION ISSUES	
<b>6</b>	<b>ASSESSMENT OF THE STATE OF CONSERVATION OF THE PROPERTY</b>	<b>22</b>
6.1	ASSESSMENT OF THE OUV OF THE PROPERTY	
6.2	STATUS OF THE IMPLEMENTATION OF THE CORRECTIVE MEASURES ADOPTED BY THE COMMITTEE	
6.3	OTHER CORRECTIVE MEASURES TAKEN BY THE STATE PARTY	
<b>7</b>	<b>CONCLUSIONS AND RECOMMENDATIONS</b>	<b>24</b>
7.1	CONCLUSION	
7.2	CORRECTIVE MEASURES AND POSSIBLE TIMEFRAME FOR REMOVAL OF THE PROPERTY FROM THE LIST OF WORLD HERITAGE IN DANGER	
7.3	ADDITIONAL RECOMMENDATIONS	
	<b>BIBLIOGRAPHY</b>	<b>28</b>
	<b>ANNEXES</b>	<b>29</b>
	<b>ACRONYMS</b>	<b>40</b>

## 1 EXECUTIVE SUMMARY

From 11 to 19 March 2008, a joint UNESCO/IUCN monitoring mission visited the Manas Wildlife Sanctuary World Heritage Property, State of Assam, in accordance with **Decision 31 COM 7A.11** adopted by the World Heritage Committee at its 31 session (Christchurch, 2007).

The mission was able to visit the different parts of the Property and the Manas National Park (MNP) during 3 days of intensive field visits. The mission also held discussions with various stakeholders, including officials of the Bodoland Territorial Council (BTC), park staff, scientists, national NGO representatives, local NGO representatives and members and inhabitants of local villages. At the end of the mission, two debriefings were given, one in Guahati, to Assam State authorities in presence of NGOs and scientists, and the other in New Delhi to the Secretary and Deputy Inspector General of the national Ministry of Environment and Forests, at which the findings of the mission were discussed

The mission reviewed progress in the implementation of the corrective measures, adopted by the Committee at its 29<sup>th</sup> session (Durban, 2006):

### Accelerating efforts to re-build park infrastructure

The mission acknowledges the huge efforts made in the past few years to re-build the park infrastructure and concludes that these can probably be completed in the next one to two years if the necessary funding is available.

### Filling of vacant positions within the park

With more than 100 positions still vacant, the mission considers this recommendation not yet fully implemented. The mission acknowledges the efforts by the park authorities and BTC to address this issue through the volunteer scheme it has set up in together with local NGO, but sees the need to make this staff increase sustainable by integrating the best volunteers within the permanent park staff.

### Ensuring timely release of funds by the Assam Government

No progress was made on this matter and the mission considers that this recommendation so far has not been implemented. The park authorities were only able to advance on the building of infrastructure and ensure the running costs of the management thanks mainly to the funding provided by BTC.

### Undertaking a comprehensive wildlife survey to demonstrate recovery of wildlife populations

No reliable data on wildlife status and tendencies were made available to the mission during the visit. The mission notes that the status of conservation of most of the key species remains controversial and regrets that the recommendation made by the 2005 mission to undertake urgently a specific survey that provides the baseline to assess and monitor the wildlife and gives indications on the trends, at least of the key species, was not implemented.

### Transboundary cooperation

The mission was informed about efforts further strengthen cooperation with the management authority of the Royal Manas National Park in Bhutan, which has expressed interest in a potential World Heritage listing.

Although work remains to be done, the mission congratulates the State Party, and in particular the Park Management, the Bodoland Territorial Council, national and local NGOs for the efforts already undertaken in starting the restoration of the Property and the implementation of the corrective measures recommended by the World Heritage Committee. The mission wants to highlight the very positive contributions from the local communities and considers these as a key for the success of this endeavour.

The mission further reviewed the management and conservation issues in the Property.

The mission was informed about on-going efforts to strengthen the protection status of remaining high value reserve forests outside the MNP, in particular parts of the Manas Reserve Forest bordering the western boundary of the national park and the Ripu and Chirang Reserve Forests further to the west. This would enable the creation of a "Greater Manas", and provide the necessary conditions for the conservation of viable populations of large carnivores and herbivores,

such as tiger and elephant. The mission supports these efforts, which will greatly contribute to the integrity and long-term conservation of the OUV of the Property.

The mission notes that the existing management plan is no longer valid and stresses the need to finalize the revision of the management plan. This plan should present a clear vision for the future management of the Property and address amongst other the following questions of major importance: development of tourism, wildlife monitoring, invasive species, land use management and fire utilization. In accordance with Decision 31 COM 7.1 and 31 COM 7.2 of the World Heritage Committee, the mission also strongly recommends to address in this plan the climate change and risk reduction issues, in relation to the state of conservation of the Property.

A particular attention should be paid also in the future to the development of tourism, in the light of the local high expectations. Tourism pressures and management in the Property should be studied carefully and efforts should be deployed to build a clear vision on this issue.

The mission remains concerned about the continued reports it received on illegal logging and poaching, in particular in the Panbari range. The mission was informed about substantial efforts made to strengthen the law enforcement and to better protect wildlife and biodiversity in general. As far as it was possible to check the current situation during the field visits, the mission noted that progress has been made since the 2005 mission. However, remnant signs of illegal activities can still be found and the mission was also informed by local stakeholders of continued poaching and deforestation pressures in certain areas, in particular the Panbari range.

The mission also reviewed other threats such as announced dam construction projects, invasive species and climate change.

The mission confirms the assessment of the 2005 mission that the Outstanding Universal Value (OUV) of the Property has in a major way been impacted by the past civil strife, in particular as a result of the important reduction of the populations of the rare and endangered species, which constitute an important justification for its inscription on the World Heritage List. However, apart from the one-horned rhino, which has become locally extinct and the swamp deer, of which the remaining population seems at critical low levels, there are no indications that other key wildlife species have been lost. For the one-horned rhino, a reintroduction program is currently underway. Therefore **the mission concludes that the OUV for which the Property has been inscribed on the World Heritage list is still present and can still be fully recovered.**

Unfortunately the mission considers that it does not have sufficient data to assess the current status of wildlife populations and their recovery process, as the base line survey requested by the Committee was never implemented. Based on the observations during the field visit and discussions held with various stakeholders, the mission estimates that recovery has only just started and is still in its initial stages. The mission is of the opinion that the Property cannot be taken out of the List of World Heritage in Danger until the recovery of key wildlife populations can be assessed and demonstrated. **Hence the mission recommends to retain the Property on the List of World Heritage in Danger.**

The mission encourages the State Party to pursue its efforts to implement the corrective measures recommended by the 2005 mission and already adopted by the Committee at its 29<sup>th</sup> session:

- (a) Urgently conduct a baseline survey on recovery of wildlife populations and set up a full monitoring system which will allow monitoring and documenting the recovery of the flagship species;
- (b) Resolve the problem of fund release which did not progress significantly since the last mission;
- (c) Finalize the work well engaged for the reconstruction and improvement of the park infrastructures;
- (d) Fill the remaining vacant positions in the park by recruiting the best elements from the volunteers into permanent staff positions;

In addition to the above recommendations the mission proposes the following additional corrective measures:

- (e) Strengthen and consolidate park management operations, in particular the efforts for reducing illegal logging and wildlife poaching in Panbari Range;

- (f) Continue the efforts for the reintroduction of the one-horned rhino and assess the need and feasibility for a restoration programme of the swamp deer;

The mission considers that it is feasible for the above-mentioned corrective measures to be implemented in a timeframe of two to three years.

The mission considers however that any final decision on a removal of the Property from the List of World Heritage in Danger should be made based on a clear and demonstrated trend of the recovery of the wildlife populations in the Property. With no baseline data available, it is very difficult to estimate the timing necessary to show this trend. However, on the condition that a baseline survey is completed this year and that a monitoring system for key species is set up in connection to the survey, such a clear trend could likely be shown in 2 to 3 years.

In addition to the above, the mission also makes the following additional recommendations in order to further improve the integrity, management and long-term conservation of the Property:

- (g) Expedite the finalisation of the draft park management plan currently being prepared, adopt it and to start its implementation ;
- (h) Continue the process for a transboundary extension of the Property to include the Royal Manas National park in Bhutan and assess the possibility to develop an ambitious extension proposal for the Property, including the remaining intact habitats currently outside the Property;
- (i) Build a regional vision on tourism taking into account to the limited carrying capacity of the Property;
- (j) Elaborate and develop a capacity building programme, in order to improve the skills of the park field staff, in particular the volunteers, on biodiversity management and conservation, and to raise the level of expertise of the local stakeholders, especially in the field of tourism;
- (k) Assess the status of invasive species in the entire Property and develop and implement effective control measures;
- (l) Clarify the responsibilities between the State of Assam and BTC for the management of all resources in the Property, in particular wildlife;
- (m) While planning future dams in Assam State, ensure that no major changes in the hydrological system of the Property will take place.

## **2 ACKNOWLEDGEMENTS**

The mission would like to thank the Ministry of Environment and Forests of India, in particular Ms Meena Gupta, Secretary and M. Anmol Kumar, Deputy Inspector General Wildlife, the Forest Department of the Government of Assam, in particular M. C. Malakar, Chief Wildlife Warden and the Bodoland Territorial Council, in particular Sir Kampa Bargayari, Deputy Chief for their hospitality and organisation of the mission. The team is also especially grateful to Mr. Basumatary Head of Department Forest and Tourism of the Bodoland Territorial Council and Mr. Anindiya Swargowary, Director of Manas National Park (MNP), who accompanied the mission throughout its visit. The team would also like to express its great appreciation to the MNP staff, in particular C.R. Bhobora, Deputy Director, Ms Sonali Ghosh, zoologist and Mohan Chandra Brahma, ranger, who paid a permanent attention to the excellent organization of the mission. Lastly, the team would acknowledge with great appreciation all NGOs representatives, scientists and experts who provided it with all information, data and documents needed to report on the situation, and for their praiseworthy efforts to restore World Heritage Property with devotion and great enthusiasm.

### 3 BACKGROUND TO THE MISSION

The Manas Wildlife Sanctuary was inscribed on the World Heritage List in 1985 under natural criteria (ii), (iii) and (iv), currently criteria (ix), (vii) and (x).

The World Heritage Property provides critical and viable habitat for more rare and endangered species than any of the sub-continent in the Indian sub-continent, including 21 species listed in the IUCN red data book.

In 1992, this Property was inscribed on the List of World Heritage in Danger due to threats related to an insurgency in and around the Wildlife Sanctuary, which resulted in the depletion of forest habitat and wildlife populations, and destruction of park infrastructure.

With security conditions improving, a reactive monitoring mission was sent to the property in April 2005. Previous missions to the site were undertaken in 1997 and 2002. The 2005 mission noted that the insurgency had had a significant impact on forest and wildlife populations in the Property, in particular rhino, tiger and swamp deer, but that a comprehensive wildlife surveys would be needed to further assess this impact. This mission noted other threats such as the illegal removal of timber as well as a number of management issues such as problems with the release of funding to the property, the level of control of the park authorities over the western part of the park (Panbari range) and transboundary issues with Buthan.

Since the 2005 mission, the State party has reported progress in rebuilding park infrastructure and filling vacant positions in its staff. At its 30th session (Vilnius, 2006), the World Heritage Committee<sup>1</sup> commended the State Party, local authorities, NGOs and the Bodo Territorial Council (BTC) for the considerable efforts made to improve the state of conservation of the Property and to help to implement the corrective measures set by the Committee. However, the Committee also encouraged the State Party and local authorities to fully implement all recommendations of the joint 2005 UNESCO/IUCN mission and requested the State Party to provide the World Heritage Centre and IUCN, as soon as possible, with the results of a comprehensive wildlife survey, in particular the status and trends of the tiger, rhino, elephant and swamp deer populations in the Property.

In January 2007, the State Party submitted a rapid assessment of wildlife populations in the Property, which unfortunately produced limited and insufficient quantifiable data that could be used for establishing a baseline for the key wildlife species, especially those mentioned in the here above Committee decisions. This report which referred mostly to old figures and data from the early eighties, showed a decline in tiger numbers. The assessment found no evidence of remaining rhino and swamp deer and concluded that both species might have become locally extinct. However, a reintroduction programme for rhino was reported to be underway.

At its 31<sup>st</sup> session (Christchurch, 2007)<sup>2</sup>, the Committee noted the progress reported by the State Party especially on re-building infrastructure and filling vacancies in the Property and requested a new joint UNESCO/IUCN mission to visit the site to assess progress in achieving the corrective measures and implementing the remaining recommendations of the 2005 mission and to indicate a definite timeframe for their completion. The terms of reference of the mission can be found in Annex 4.

The mission took place from 12 to 18 February 2008. The mission team was composed of Guy Debonnet, programme specialist natural heritage at UNESCO World Heritage Centre and Hervé Lethier, consultant for IUCN. The mission was joined by Ram Boojh and S. K. Srivastava of the UNESCO Office in New Delhi, flew to Guahati and travelled by road to Barpeta, met with officials from MNP and from the BTC and then travelled to Mothanguri Lodge in the Property after short meetings with NGO representatives (WWF, Aaranyak, Wildlife Trust of India (WTI)). From Mothanguri Lodge, at the border with Bhutan, the mission was able to conduct field visits on day time and also at night to view wildlife with spotlights. The mission met again with officials of BTC and NGOs representatives, staff of MNP, young volunteers from NGOs, scientists (WTI, ATREE) and inhabitants of local villages in the surroundings of the Property. At the end of the mission, two debriefings were given, one in Guahati, to Assam State authorities in presence of NGOs and

---

<sup>1</sup> The Decision 30COM7A.13 can be found in annex 2.

<sup>2</sup> The Decision 31COM7A.11 can be found in annex 3.

scientists, and the other in New Dehli to Secretary and Deputy Inspector General of the national Ministry of Environment and Forests. A detailed program of the mission can be found in Annex 1.

#### **4 INSTITUTIONAL AND LEGAL FRAMEWORK**

The World Heritage Property "Manas Wildlife Sanctuary" is part of MNP, which is the core zone of a larger "Tiger Reserve". The Property is located inside a National Park which was set up in 1990 by enlarging the Wildlife Sanctuary. MNP is also part of a National Biosphere Reserve (since 1989) and of the Chirang-Ripu Elephant Reserve (since 2003). The Property is located at the border with Bhutan, where the "Royal Manas National Park" (RMNP) was created in 1988.

The protection of environment and the conservation of forests and wildlife are enshrined in the Constitution of India. India has a very complete legal environmental framework, of which the most relevant for biodiversity conservation are: the Wildlife Protection Act (WPA, 1972), the Forest Conservation Act (FCA, 1980) and the Biodiversity Conservation Act (BCA, 2002).

As a National Park, MNP is governed by the WPA as amended up to 2006. The present status of the Property as a National Park provides a very high degree of protection. According to Art. 35 of the Law, "*no person shall destroy, exploit or remove any wildlife including forest produce from a National Park or destroy or damage or divert the habitat of any animal by any act whatsoever or divert, stop or enhance the flow of water into or outside the National Park*". Derogations can be given in some cases but only for the purpose of improving and better managing wildlife. FCA is relevant for the management of the forests lands around the park.

In the Indian federal system, all protected areas are owned and managed by the States, in case of MNP, State of Assam. However, the legal framework and important parts of the funding for their management are provided by the federal Government, in casu the Ministry of Environment and Forest (MEF) of India, which is also the focal point for all natural areas inscribed on the World Heritage List. The management of MNP thus in principle falls under the Forest Department of the Assam State government.

However MNP is located in a tribal area, Bodoland, and strive for more autonomy was at the heart of the civil conflict that resulted in the degradation of the state of conservation of the Property in the nineties. This conflict was resolved in 2003 with the formation of the BTC, which provides a certain degree of autonomy to the Bodo people in this area. Under the 2003 agreement, BTC has executive, administrative and financial powers for the subjects transferred to it and these subjects include the management of "Forests". Forests lands are therefore managed through a BTC Forest Department. However, the accord and legislation do not mention explicitly that these powers also extend to "Wildlife". In addition, under the provision of the WPA, the Chief Wildlife Warden (CWLW) of the State has the authority to control, manage and maintain all sanctuaries, including national parks<sup>3</sup>. There is thus some potential conflict of authority between the Assam State Forest Department and BTC. Although some minor conflicts were mentioned by BTC representatives during the visit<sup>4</sup>, in practice there seem to be little problems and BTC has taken on a clear responsibility for the management of MNP and adjacent forest lands. This is reflected by its commitments on providing budgetary assistance for the management and conservation activities in the site.

*Nevertheless, the mission suggests that the responsibilities between the Assam State and BTC be clarified in the future, in order to facilitate the management of the Property.*

#### **5 ASSESSMENT OF MANAGEMENT AND CONSERVATION ISSUES**

The mission identified the following management and conservation issues.

##### **5.1 MANAGEMENT ISSUES**

---

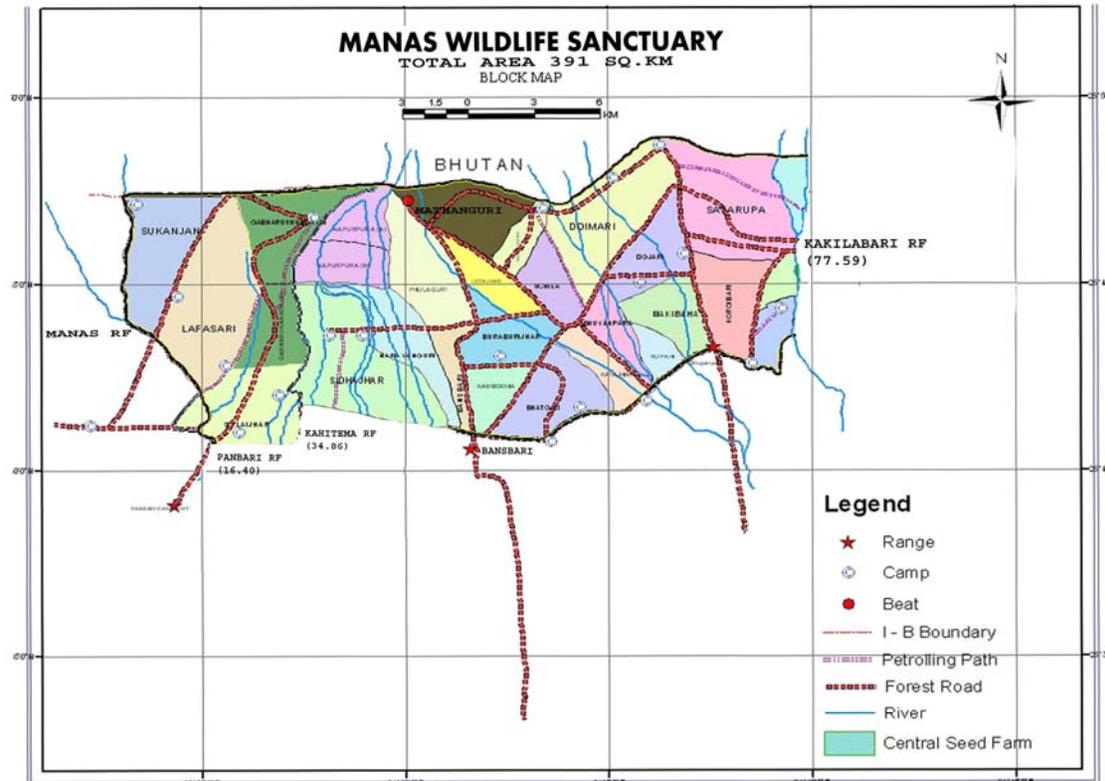
<sup>3</sup> At the same time, WPA also provides for the possibility of the powers of the CWLW to be delegated, and as the authority over the forests as a whole was entrusted to BTC, this can be interpreted that through this, also the authority to manage Sanctuaries and National Parks was already delegated. A more thorough review of the legal implications of forest and wildlife conservation in Bodoland can be found in Menon V., Kaul R., Dutta R., Ashraf NVK and Sarkar P. (in press), Chapter 2.

<sup>4</sup> The example was given of a conflict over the granting of research licences in MNP.

### 5.1.1 Delimitation of the Property

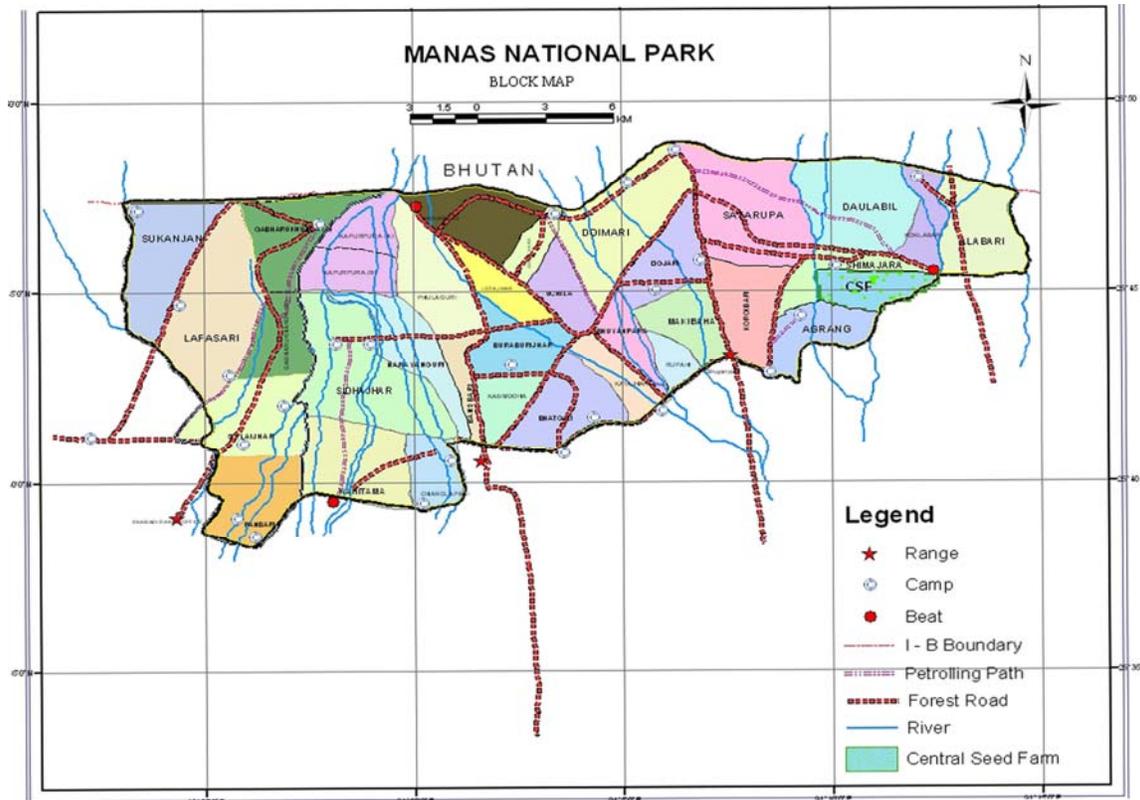
Already in 1907, Manas was declared reserve forest where hunting and trapping amongst others activities, were forbidden. In 1928 the area was extended to 360 km<sup>2</sup> and designated as a "Sanctuary". The Sanctuary was further extended in 1955 to 391 km<sup>2</sup>. In 1973, Manas became the core zone of a larger Tiger Reserve (2 387 km<sup>2</sup>), including the Sanctuary itself and a buffer zone (2 446 km<sup>2</sup>).

Manas was inscribed on the World Heritage List in 1985, as delimited in 1955 (Map 1).



**Map 1** – Manas WH Property, 1985.

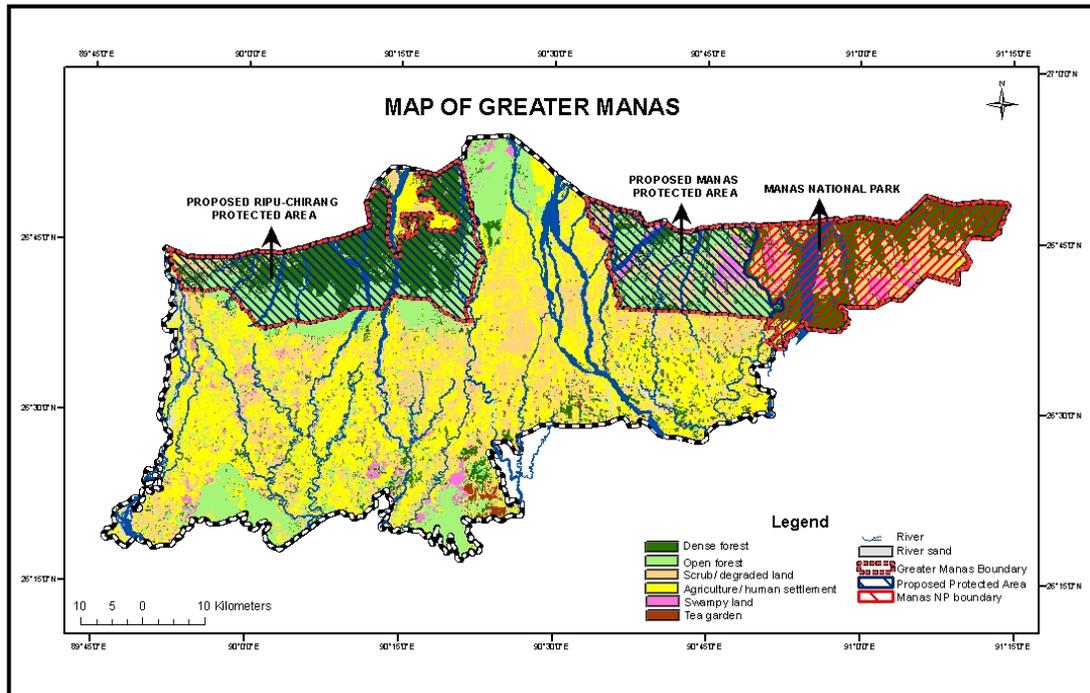
In 1989, MNP was declared, covering 519 km<sup>2</sup> and including the 1955 Sanctuary (the 1985 World Heritage Property), together with the Kokilabari, Kahlilama and Panbari Reserve Forests (Map 2). However so far the State Party did not requested the extension of the Property to reflect these new boundaries.



**Map 2 – Manas National Park, 1989.**

The mission considers the need to clarify the boundaries as an important issue, especially due to the presence of a large encroachment located in the Panbari Range (1 600 ha), in the South Western border of the Park. This area is very much degraded from a biological point of view with 5 000 people living in the encroached area (see 2005 mission report and Map 5) which however seems not to be located within the Property. In addition to this issue, the question of the rehabilitation of the seed farm situated on the South East, outside the Property, should also be raised (see 5.2.2).

Furthermore, there have been recent discussions on an enlargement of MNP and the creation of new wildlife sanctuaries. A recent survey conducted by the WTI revealed that there are several quasi intact forest areas to the west of MNP, in particular parts of the Manas Reserve Forest, immediately adjacent to the western border of MNP, and the existing Ripu and Chirang Reserve Forests, further to the West (see Map 3).



**Map 3** – Proposed extension of the Property (Source: WTI).

The surveys revealed that these forest areas still maintain important wildlife populations, in particular of some key species that were part of the motivation of the inscription of the Property. Evidence of tiger was found at various locations and the areas are also extremely important for the conservation of the Manas elephant population, which was demonstrated to use the whole stretch of forests from the Sankosh river eastward to Chirang district. Furthermore, the forests contain a substantial population of the rare and endangered golden langur<sup>5</sup>. With increasing population pressure, it is doubtful that these forest areas will remain intact without additional protection. Furthermore, the disappearance of these areas might affect the values of the Property, as some of the wider ranging large mammal species such as the elephant and also tiger, depend on them for their long-term survival. As a result of these surveys, WTI has proposed the concept of a “greater Manas”, which would increase the area of the existing MNP to approximately 950 km<sup>2</sup>. As the Ripu-Chirang forest complex has no forest connection to the Manas complex, it will be important to envisage as part of this reflection, the development of a corridor between the two areas. During the mission, the Deputy Chief of BTC affirmed the willingness of the Council to upgrade the protection status of the concerned Reserve Forests to Wildlife Sanctuaries and eventually to National Parks. On 24 February 2008, just after the mission, the BTC Deputy Chief officially announced these plans in an event organised with WTI, which was attended by over 1 000 tribal people.

The mission considers that the creation of a Greater Manas National Park, together with the existence of RMNP in Bhutan, adjacent to MNP, will provide important guarantees for the integrity of the Property and the long-term conservation of the values for which it was inscribed on the World Heritage List.

*The mission recommends to clarify the question of the boundaries of the Property. This clarification should take into account the possibility to extent the current Property to concur with the boundaries of MNP but also to review if the encroached and degraded areas be could reclaimed and restored. The mission strongly supports the plans of BTC to extend MNP to include parts of the Manas and Ripu-Chirang Reserve Forests into the National Park, creating a “Greater Manas”, as*

<sup>5</sup> For a detailed description of the results of the surveys, see Menon V., Kaul R., Dutta R., Ashraf NVK and Sarkar P. (in press), chapter 6.

*this will greatly contribute to securing the long-term conservation of key values of the Property and to improving its integrity. The mission recommends that the State Party, in cooperation with the State Party of Bhutan, considers the possibility to develop an ambitious extension proposal for the Property, including the proposed "Greater Manas" and the proposed transboundary extension to the RMNP in Buthan (see 6.3.5).*

#### 5.1.2 Management Plan

The major problem to the effective management of the Property is the lack of clear overall vision of its future development. The park is still facing a number of threats, partly related to illegal activities, but also to the development of new activities like tourism, which may put a heavy pressure on the Property in the near future, and in the long term affect its integrity. Various other problems like amongst others, invasive species, reclamation of encroached areas and rehabilitation of the seed farm (see here above), were mentioned during the visit. All these problems must be tackled in the MNP management plan.

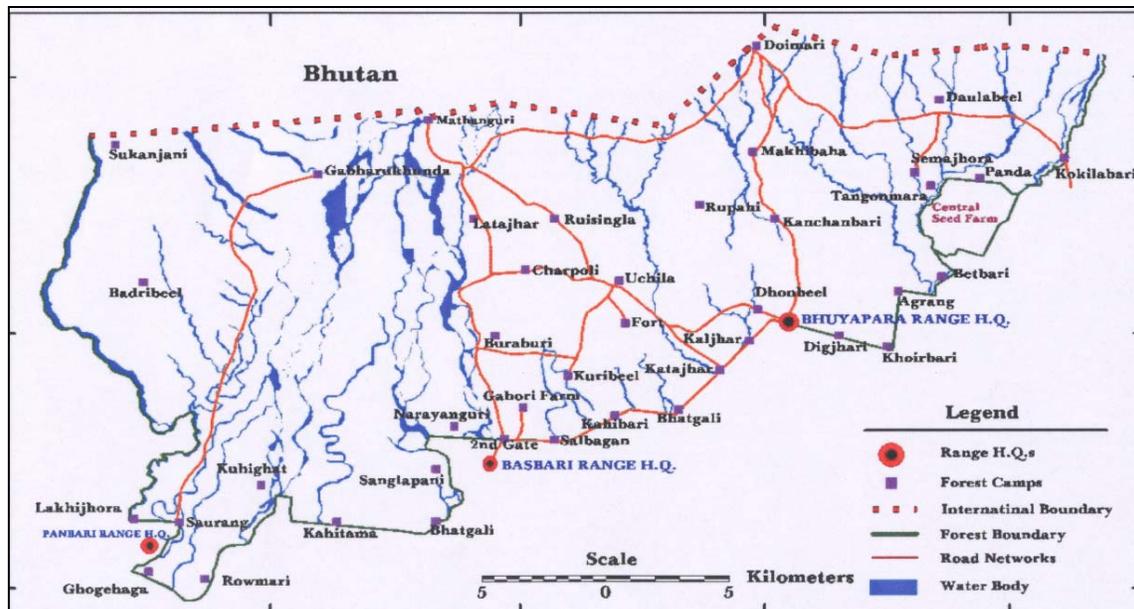
The 2005 mission reviewed the 2002-2007 management plan and noted that it contained much useful material. However, that plan is no longer valid and out of date. The lack of an integrated management process that addresses all usual problems faced by a protected area manager should be corrected as soon as possible. While so far, park management has focused mainly on restoring an effective control over the park through the development of infrastructure and reviving park surveillance activities, the mission feels that it will be important to develop at this stage a comprehensive management vision for the Property and MNP. The mission was informed that a new management plan is being prepared but did not get a copy of the draft.

*The mission considers the development of a new management plan a key issue and strongly recommends the concerned authorities to complete the on going process in the near future.*

*The mission recommends the 2003 IUCN guidelines for management planning of protected areas to be used for the elaboration of the new MNP management plan. This plan should present a clear vision for its future management and address amongst others the following questions of major importance: development of tourism, wildlife monitoring, invasive species, land use management and fire utilization. In accordance with Decision 31 COM 7.1 and 31 COM 7.2 of the World Heritage Committee, the mission also strongly recommends to address in this plan the climate change and risk reduction issues, in relation to the state of conservation of the Property.*

#### 5.1.3 Infrastructure reconstruction

Important efforts were undertaken to rebuild anti-poaching camps destroyed during the insurgency. Currently 31 camps are operational. Some were also conceived to host visitors occasionally. Additional camps (7) are being constructed in the sector where the rhino release is planned, as part of the India Rhino Vision 2020 (IRV 2020) project with support from WWF and IRF. These camps are spread over the Property and regular forest rangers are posted on full time, equipped with rifles (N 71) and wireless handsets (N 70 + 28 base stations) (Map 4). They dispose of cars (N 9), cycles (N 50 + 30 being purchased in 2008), motorcycles (N 5), boats (N 10) and captive elephants (N 27) to patrol in the Property (7 camps were under construction and/or not yet manned in December 2007).



Map 4 – Manas National Camp, roads and camps (Source: Aaranyak).

Approximately 130 km of tracks and 100 km of foot trails have also been re-opened to allow surveillance activities, connecting all camps. Further progress is needed in certain areas, in particular in the Panbari range, where camp rehabilitation has just started and the improvement of the southern boundary road. While certain bridges have been repaired, some were reconstructed with “non durable” materials (bamboo bridges) and will need to redone every year.

The main obstacle to complete the infrastructure has been the unavailability of funding (see further).

*The mission congratulates the State Party for the remarkable work done since the 2005 mission in rehabilitating the park infrastructure and building additional ones. The mission considers that the 2005 recommendation on site management issues, as far as the development and the restoration of infrastructures is concerned, progressed satisfactory and can be finalised in the near future if sufficient funding is available. The mission also considers that the system of communication within the Property has improved significantly since the 2005 mission, both from a territorial and technical point of view and permits an appropriate control of the Property.*

#### 5.1.4 Staffing and budget

According to figures provided by the park management, of 445 sanctioned posts, there are currently still 123 vacant staff positions in the park, down from the 140 vacant positions reported in the 2007 report by the State Party. To address the staffing problem, the park authorities in cooperation with BTC and local NGOs have set up an interesting volunteer scheme. Under this scheme, around 90 volunteers are assisting the park on a permanently basis with conservation and management activities. Volunteers are recruited from local youth and include former poachers who surrendered. As volunteers are rotating, an even larger number of youth is actually involved. The volunteers received some basic training, are wearing uniforms, carrying arms and manning the newly constructed or rehabilitated anti-poaching camps. They are also receiving rations and a small allowance (1 500 R/month), which is funded by the BTC budget. The mission was informed by the park management that volunteers are highly motivated and therefore very effective in the field.

In addition to this volunteer force, the park has 252 regular park staff, 70 full time equivalent casual staff as well as 50 additional young volunteers recruited under the Indian Rhino Vision Programme. An additional 50 guards and 11 rangers from the Assam Forest Protection force were working for the park at the time of the mission.

*The mission considers that while little progress was made in filling formal vacant staff positions, considerable efforts were made by the park management with support from the local NGOs and*

*funding from BTC to address this issue by setting up the volunteer scheme. The mission acknowledges these efforts and congratulates BTC and NGOs for their highly valuable support. It notes that the volunteer scheme presents a very good opportunity for the Forest Department to fill the vacant staff positions by recruiting the best suited elements from the volunteer scheme. This will also provide a clear incentive and reward to the volunteers and further strengthen the cooperation with local communities.*

With regard to the budget available for MNP, serious problems remain. No progress was made on the timely release by the State of Assam of funds sanctioned by the central government to the park. The central government provides MNP with important funding through a number of central funding schemes such as Project Tiger, Project Elephant and funding under the biosphere reserve scheme. For the current budget year ending in March 2008, so far only 312,900 Rupees (approximately USD 7,900) have been received from the Project Elephant, whilst the 9,300,000 Rupees (approximately USD 335,000) sanctioned for the current budget year under Project Tiger have still to be released to the park by the State Government before the end of March. Park authorities also acknowledged that, in the past, not all the possibilities to raise funds from central government sources had been optimally used. For example, the mission was told that in 2005, 2006 and 2007, the park did not apply on time for support under the national biosphere scheme, although it is eligible for funding under this scheme as a national biosphere reserve.

It is remarkable that the most important funding source for management activities in the current budget year has been BTC, which has provided 4,504,500 Rupees (USD 114,000) from its own budget. This funding has supported the rehabilitation of infrastructure (construction of anti-poaching camps, construction of bamboo bridges, opening of patrol tracks), purchase of important equipment such as vehicles as well as the rations and allowances for the volunteer park forces. Whilst this financial commitment from BTC for the management of the site is extremely encouraging, it is very worrying that the issue of the release of central funds to the park by the Assam government is still not solved.

The mission discussed this issue in detail with both national and State officials and reiterated the necessity of finding a satisfactory solution in the very near future. The central government is well aware of these issue and hopes to resolve these problems by imposing the creation of independent foundations for each park, which would make it possible for funds to be channelled directly to the sites. It expects this system to be operational by next year. Another solution may come from the creation of a "Tiger Foundation" which would permit the National authorities and other donors to provide the park directly with adequate resources; this process is on going and the mission was told that the decision to set up this foundation might be taken in a few months.

The late release of funding has again weighted heavy on the park management every year since 2005. The budget of the park remains mainly dependent on the BTC and on project funding sources. The mission considers that is not a suitable situation.

*In relation to the budget issue, while the mission is very much encouraged by the strong commitment of BTC to provide funding to the Property, it feels that no substantive progress was made since the 2005 mission in addressing this issue of the timely release of central funds. This situation recurrently highlighted by the 1997 and 2002 missions and insistently by the 2005 mission, has not significantly improved during the last few years (in spite of the decision of the Supreme Court of India that funding must be released by the State government within 15 days of receipt from the National government). The mission concludes and regrets that the recommendation made in 2005 was not followed and emphasises again the necessity to secure the park budget in the future. The mission considers this issue as being of particular importance for the decision to remove the Property from the list of World Heritage in danger.*

#### 5.1.5 Involvement of the local authorities, NGO and local communities in the management of the Property

The mission had the opportunity to meet local officials during the visit and had a very fruitful discussion with the Deputy Chief of BTC. in charge of environment. Furthermore, the BTC Head of Department Forest and Tourism also accompanied the team throughout its visit. The mission was

encouraged by the level of commitment of BTC for the restoration and long-term conservation of the sites. On several occasions, BTC officials expressed the view that they regarded Manas as a key asset for their territory and were committed for restoring its integrity and former glory.

The mission further wants to note the substantive support the site is receiving from national and international NGOs. NGOs like WWF India, Aaranyak, WTI and Ecosystems India have important support programmes and are involved in research and monitoring, infrastructure development, providing field equipment, wildlife rehabilitation and reintroduction, capacity development, community conservation and education. Furthermore, Ashoka Trust of Research on Ecology and Environment (ATREE) also will provide support to the Property as an implementing agency of the UNESCO India Biodiversity Programme, funded by United Nations Foundation, Ford Foundation and Suri Sehgal Foundation.

The mission also had discussions with several local NGO representatives, including volunteers manning the anti-poaching camps as well as in villages surrounding the park. Not less than 6 local NGOs (Manas Maozigendri Ecotourism Society, Swmkhwr Mithinga Onsai Afat, Manas Agrang Society, Manas Bhuyanpara Conservation & Ecotourism Society, Panbari Manas National Park Protection and Ecotourism Society and the Dolphin Foundation) support the park. The mission was very impressed by the devotion of the local people to the rehabilitation of the Property. All people met were very keen to assist the conservation of the park values and widely supportive to the restoration of wildlife in Manas. They were very proud of Manas and desirous to support all necessary measures for rehabilitating the integrity of the Property, in order to get it as soon as possible removed from the List of World heritage in Danger. The mission was also informed that many former poachers have been surrendering and now willing to support the conservation of MNP (see 5.2.1).

The mission sees the effective involvement of local communities and in particular young people in the park management as a very positive and encouraging progress. Most of the local NGOs see a clear opportunity to develop alternative livelihoods in particular based on the tourism potential of MNP, and have started developing tourism initiatives such as the creation of local lodges, local visitor services, handy craft shops and other.

The skills of the local communities in new fields of activities, like tourism needs to be raised. The mission feels that the local capacities to develop adequate socioeconomic activities compatible with the long-term preservation of the values of the Property, do not fully meet so far the standard of expertise expected in a World Heritage Property. In line with its discussions with local people eager to develop tourism activities, the mission recommends to build up the local capacities and to complete a clear vision on tourism, at the Bodoland Territory level, which would give clear responses, amongst others questions, on what activities should be developed by the local communities to get long term profit from the park, how they can be balanced with wildlife conservation, and how the park can also benefit from these activities. Measures especially addressing this issue should be elaborated.

*The mission wishes to congratulate the Bodoland authorities for their commitment to the conservation and restoration of the Property and to thank the national and local NGOs for the high quality conservation work they perform brilliantly in Manas.*

*The mission urges the State Party, in particular the park administration, BTC, the national NGOs involved in Manas, local NGOs and communities to build a comprehensive tourism Vision for the park that would balance the values of the Property with the potential for ecologically sound tourism. The mission recommends that as part of the management plan, an access policy is established for tourists and tour operators paying attention to the limited capacity of the Property and to its high sensitivity. It will be crucial to organise visits of the Property in a compatible way with the maintenance of its Outstanding Universal Value (OUV) and respecting its integrity. The mission strongly recommends that the IUCN guidelines on sustainable tourism in protected areas (2002) be used to build the vision mentioned above and to develop a long-term strategy on sustainable tourism, at the Bodoland Territory level, which contributes to the local economy and strengthens the conservation of the Property.*

#### 5.1.6 Transboundary cooperation

As mentioned in the 2002 mission report, an effective working relationship exists with RMNP and there is regular contact between site staff of both protected areas to discuss common management

issues. This cooperation is still continuing and was reported to have intensified since the 2005 mission. In January 2008, a joint workshop was held in cooperation with Traffic on ways to curb illegal wildlife trade. Following this workshop, a separate meeting of both site managers was organised, facilitated by WWF, to discuss transboundary cooperation with Bhutan, in particular the proposal for a transboundary extension of the Property as recommended at the time of its inscription and reiterated by the 2005 mission (see 5.1.1). The Buthanese partners expressed their interest for the proposal and the meeting decided that the Park Director from RMNP would take up this issue with its higher national authorities and that the Chief Wildlife warden of Assam State would contact the Director of the National Conservation Department of Buthan to make further progress. Furthermore, the India and Bhutan offices of WWF were requested to assist the respective Governments in this endeavour.

The Mission was also informed that the Government of India has identified a number of protected areas situated in border regions, for which they want to set up a cooperation programme with the concerned neighbouring countries, and that MNP was one of the sites for which this process would start soon. Furthermore, the UNESCO office in New Delhi, which is also in charge of Bhutan, has an interest to take up this issue and facilitate the discussion on the preparation of a transboundary extension to the Property.

This on going transboundary cooperation is highly valuable and even necessary for the conservation of the values for which Manas was inscribed on the World Heritage List. The mission is persuaded that it will contribute in the long term to facilitate and improve wildlife conservation and management, issues that need to be addressed at a large ecosystem level, in particular as far as large herbivores and large carnivores are concerned.

*The mission congratulates both State Parties for their common efforts to initiate cooperation for a transboundary extension of the Property and encourages them to further intensify their technical cooperation. The mission recommends UNESCO New Delhi Office to assist the State Parties in facilitating the discussion on and developing the proposal for a transboundary extension of the Property to include RMNP in Buthan in cooperation with all organizations concerned. The mission notes that this proposed extension should be considered together with the on-going reflection to create a "Greater Manas" and the possibility to further extend the Property also in India (see 5.1.1).*

## 5.2 CONSERVATION ISSUES

### 5.2.1 Status of the insurgency and security

The mission confirms the observations made by the 2005 mission on this issue. Since the 2003 Bodoland agreement and the establishment of the Bodoland Territorial Council, the armed conflict has ceased in the area of MNP. The political situation seems to be more and more stable, although a few local difficulties remain.

The return of security had a positive impact on the property and progressively, park authorities have regained control over the entire MNP. They were able to extend their control from the central Bansbari Range to the Kokilabari Range in the East and more recently to the Panbari Range in the West.

The mission was provided with a security assessment report of December 2007 in the framework of the IRV 2020 programme. This report assessed the security in the park, in particular in Bhuyapara Range, where the rhino introduction is planned and concluded that this area is now 80% secured and that with completion of the additional measures planned, the translocation programme could start early this year.

To illustrate this positive tendency, 130 poachers have surrendered their guns to the park and the BTC authorities in 2006 and were rehabilitated and a further 61 other poachers did the same late February 2008, (see article annexed). These are positive signs of the slowly on going recovery process.

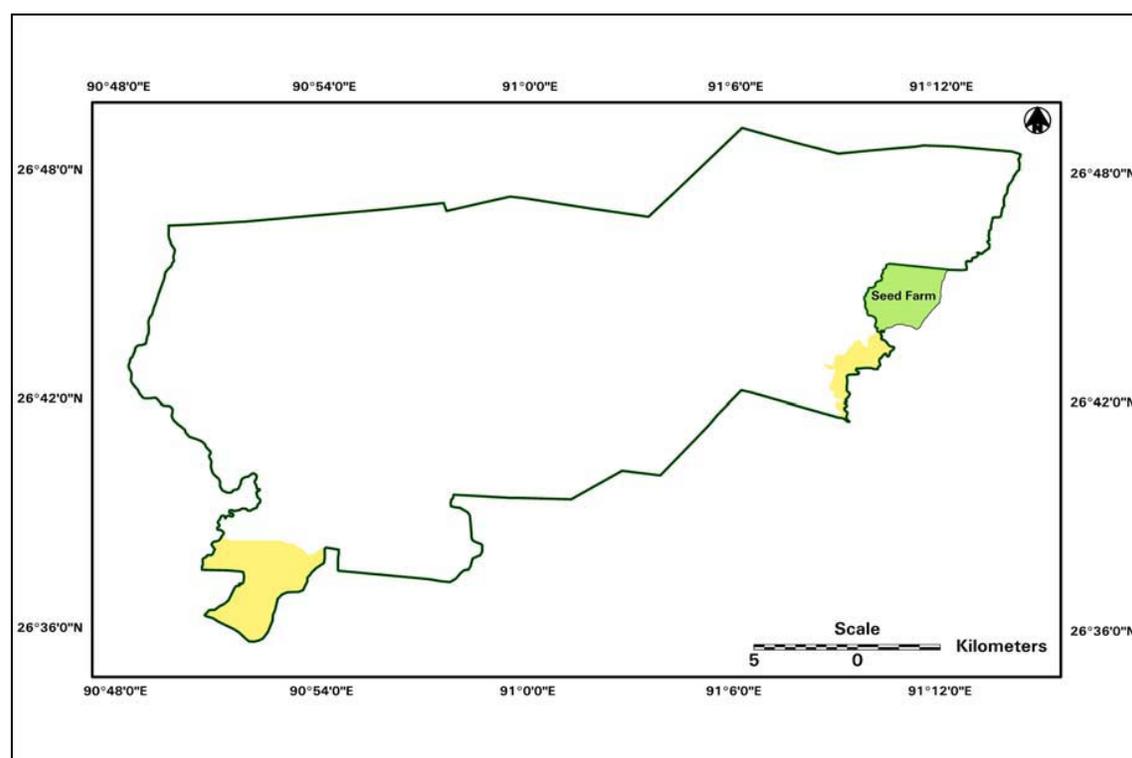
As observed in 2005, the discussions with BTC members revealed a clear and strong local commitment to the rehabilitation of Manas. The recent announcement by BTC to seek the extension of the park to two forest reserves of high biological values and interests (see 5.1.1), together with the continuous financial support of BTC to the park management, are clear

demonstrations of this commitment. The enthusiasm observed during the mission from local NGO and community groups prove that they feel very much concerned with Manas and strongly wish to secure the Property and obtain as soon as possible the removal of the Property from the List of World Heritage in Danger.

*The mission applauds improvement of the security in the region and the progress made in regaining control over the MNP. In view of the mission, this has laid the basis that will allow for the future fulfilment of the other conditions to remove the Property from the List of World Heritage in Danger.*

### 5.2.2 Encroachment

The issue of encroachment was already mentioned in the 2005 mission report (see 5.1.1). Two major encroachment areas are located inside MNP (Map 5).



**Map 5** – Encroachments in Manas National Park (Source: Aaranyak).

As shown on the map, the most significant encroachment is located in South Western part of the park, on Pambari Range, covering approximately 1600 ha. The 2005 mission visited this encroachment; unfortunately, due to lack of time, the present mission was unable to visit the area. According to the park administration and BTC officials, the situation has not progressed since 2005. Approximately 5 000 people continue to live in this area from traditional rural activities. Another more minor encroachment is located in the Bhuyanpara range, near Bethari. Park authorities told the mission that it would be possible to negotiate a settlement with the people living in these areas and that provided they are compensated for and are allocated other land outside MNP, they would be willing to evacuate the area. However, these discussions have not yet started.

Even this encroachment is situated outside the Property as inscribed in 1985, its proximity may have significant effects on the integrity of the Property and influence negatively the rehabilitation efforts.

The mission did visit the area of the seed farm, covering 890 ha also situated inside the National Park but outside the Property. (Map 5). This seed farm closed operations some years ago, creating economic hardship for the local villagers who were employed in the farm and the lease of the land has in the mean time expired. Whilst the area is ecologically degraded and profoundly transformed,

it has become an important breeding area for the Bengal florican, a very rare and endangered species of bustard, as the transformed habitat has similar conditions to the short grasslands where it usually occurs. For the moment, no decision has been taken with regard to the future destination of the seed farm.

*The mission urges the State Party to assess both situations carefully, to appraise the potential for reclaiming the areas for MNP and restore these natural habitats and to report on the situation to the Committee.*

### 5.2.3 Poaching

No official records and statistics on poaching have been made available to the mission. However, there are consistent reports that poaching and other illegal activities, though probably reduced over the past years, remain an issue. (see also Press article 3). The main problems seem to be situated in the Panbari range, which was only brought under control of the park management fairly recently. During the visit, some cases of armed poaching and also illegal fishing in Panbari were reported to the mission by local NGOs. A sign of illegal hunting was also observed by the mission during the field visit.

However, the mission observed wild animal rather easily in the park, in particular in the central Bansbari Range and wildlife was not particularly afraid of cars and people. From these observations and based on the fleeing distance of the observed animals, it can be estimated that poaching pressure is currently low, at least in the central range, in comparison with the past time where 64 rhinos were killed in fifteen years (8 on the same pond), as well as a lot of elephants, deer and large carnivores.

According to the park management, poaching is now largely under control, in particular thanks to the efforts of the volunteer forces and the support of the local communities and surrendered poachers, who have constituted an intelligence network for the park.

It remains however very difficult to have a clear overview on the current situation. Poaching pressure has brought rhino and swamp deer populations to extinction or the brink of extinction, and populations of many other species declined dramatically because of illegal hunting during the insurgency. It was reported to the mission that a poacher was caught inside the park with a hand made gun (gaziman) in November 2006 and 5 others were caught in March 2007 (pers. com.). Whilst clearly such cases are more and more rare, they are still recorded and can have significant effects on the already weakened animal populations.

Poaching remains also a major concern for the reintroduction of the rhino and in general for all the vulnerable, rare or endangered species present in the Property (tiger, pygmy hog, swamp deer, elephant, bears, etc). Special efforts have been deployed to further increase security in the proposed rhino release sector, between Basbari and Bhuyapara, including the construction of additional camps, improving the tracks in this area, increasing patrolling equipment and providing additional manpower.

*The mission congratulates the State Party for its on going efforts to curb poaching in MNP and the Property. However, the mission recommends staying very attentive to this issue where releasing the rhinos in the wild. It also recommends to further reinforcing controls in the Western part of the park (Panbari Range) and along the park boundaries. Finally, the mission recommends to strengthen the park staff capacities, in particular also of volunteer forces, and to develop further cooperation with other police forces.*

### 5.2.4 Deforestation

During its field visits, the mission observed two or three years old signs of tree felling near the riverside, as well as signs of ancient illegal camps.

The mission was ensured by the park administration that illegal logging has been stopped for a few years now, except in certain problematic localities. Local people reported to the mission more than 30 cases of illegal logging, from November 2006 to December 2007 in the Panbari Range. The mission was told that wood cutters are still frequently caught in this part of the park, transporting illegal logs by boat on the Burisuti river. It can be assumed that the Panbari Range is probably the most affected part of the park by illegal deforestation.

*The mission notes that while a considerable improvement in tackling illegal logging and deforestation since 2005 was reported, it still remains a threat to the integrity of the Property in certain areas. It recommends efforts are continued by the park administration together with the forest and police forces, to curb these illegal activities, in particular in the Panbari range.*

#### 5.2.5 Wildlife status and tendencies

No clear and reliable data showing the recovery of wildlife populations compared to the benchmark of population status at the time of inscription of the Property were presented to the mission. The mission regrets that no baseline survey has been conducted as recommended by the 2005 mission and therefore no data seem to be available to document the possible recovery of the populations of key wildlife species. The mission was only referred to the Rapid Assessment prepared by the Wildlife Institute of India (WII) and presented to the Committee in 2007, but this contains mainly a compilation of old data. Moreover, some of these data do not show positive trends and even seem to rather confirm that the wildlife did not yet recover from the past period characterised by rampant poaching. In addition, it needs to be noted that the methodologies used for some of the older surveys were not adapted to the situation and resulting data do not present a clear overview of wildlife status and tendencies.

It needs to be mentioned that a representative of the WII explained to the mission that during the 2006 tiger survey, data on a variety of species were collected in the Manas region (but not necessarily confined to MNP or the Property). These data seem to be available and it was claimed that they could be used as a baseline to monitor future recovery of key wildlife species. The mission was promised that a report with a compilation of these data would be prepared and sent to the team members in time for the preparation of the mission report, but at the time of writing of this mission report, the promised data have not been received.

However, all people met by the mission (park staff, conservation NGOs working at the Property and representatives from local NGOs) reported to the mission that according to their personal observations, wildlife populations are starting to recover.

The mission was able to view some wildlife during the mission, in particular in the Bansbari range and mostly large herbivores. Pawmarks of tiger and leopards were also observed during the field visits. The **status of tiger** is currently very controversial, both at national level and in Manas (see press article 1). The 2006 national wide tiger survey implemented by WII, of which results were released during the mission, estimates the national tiger population at 1400 animals, down from the previous estimates dating to 2002 of 3700 animals. However, the new survey used a completely different survey design, which is told to be more accurate and WII claims that tiger numbers have been grossly overestimated in the past. The 2006 survey used a 5 step methodology, going from basic transects up to genetic analysis, with only areas with significant tiger populations and densities moving up to the next stage of the survey. For Manas, only the two first steps of the survey were completed, as tiger densities were too low to be considered in the remaining steps. This in itself demonstrates that while tiger is still present in Manas, densities remain low. However, as mentioned before, no detailed results on Manas of the 2006 survey, were presented to the mission. There is no other recent reliable data available. Only a very few signs of tiger (4) were collected by photo trapping during another recent survey on conservation and monitoring of tiger population in Property, due partly to inadequate methodology. The mission at present therefore considers that it has no accurate information to assess the current state of conservation and trends of this flagship species. Even the survey results quoted by the 2005 mission report and the 2007 rapid assessment refer to ancient data, these are currently disputed and are sometimes inconsistent. Further census work and the establishment of an appropriate monitoring system are definitely required to build the baseline of a wise conservation and management programme on the Manas tiger population.

In relation to **Asian elephant**, the population was estimated in March 2008 at around 780 specimens in MNP, compared to 500 in 2006 and 562 in 2003. However, IUCN and UNESCO quoted inconsistency in the figures provided by the State Party in its reports to UNESCO for the years 2006 and 2007. It was explained to the mission that as elephants roam widely beyond the boundaries of MNP, elephant surveys need to consider the much larger Elephant Reserve and also include RMNP in Bhutan to produce reliable and comparable data. Such a large survey has not been conducted in

recent years. The mission therefore feels that the status of the Asian elephant in the Property also needs further clarification.

Based on the 2007 rapid assessment, two key species were reported to be probably locally extinct in Manas, swamp deer and one horned rhino. For **one horned rhino**, a reintroduction project is underway, based on the translocation of Rhino from other protected areas in Assam as part of the IRV 2020 project and the release of rescued rhinos (see 5.2.6).

The mission was also informed about two recent sightings of **swamp deer** (respectively 6 and 5 animals) in the Panbari range (Kuribeel and Garuchara) in December 2007.

Park ranger, biologists and researchers reported that they observe regularly the **Pygmy hog**; 93 specimens were mentioned in the last Manas periodic report but lower estimates (N 50/60) were given to the mission during its visit. On the brink of extinction at the turn of the century, this species is still threatened by poaching as well as by degradation and loss of habitats. The mission was told that the small Manas population is still breeding in the wild. A monitoring programme is on going funded by the Durrell Wildlife Conservation Trust. One female was rescued in Bhuyanpara Range in October 2007. A recovery Plan for the Pygmy hog is also underway, supported by the US Fish and Wildlife Service.

Some rare species of birds, considered as extinct and/or unknown in the park, were also observed in the Property, in 2006 and 2007 (Manipur bushquail and White winged wood duck). A small population of Bengal florican was mentioned in the discussions. In 2007, the BTC supported a conservation project for this very endangered species. A small population is located at the Southern Eastern border of the Property, partly in the disused seed farm mentioned here above. The park is studying the possibility to strengthen the protection of this area to guarantee the security of the birds. The necessity to reclaim this area into the park still has to be assessed.

In conclusion, the mission clearly considers that it currently does not have sufficient data to make conclusions on the status of the recovery of wildlife populations in the Property. While wildlife recovery has probably started, it seems likely that this recovery is still in a very early stage and needs to be confirmed in the coming years with accurate data and monitoring surveys.

*The mission considers that the data so far presented to the mission cannot serve as baseline, as they mostly refer to ancient data for many species and are not based on recent field census and inventories. Whilst the data collected in the 2006 tiger survey might provide some useful hints, the survey design is considered to thin to be used as a real baseline for the monitoring of the further recovery of wildlife populations. The mission reiterates the need to undertake urgently a comprehensive baseline survey focused on key wildlife species in priority and to start developing a global comprehensive monitoring system for the Property, which will allow monitoring the recovery of wildlife populations and enable the development of clear conservation benchmarks.*

#### 5.2.6 Restoration of wildlife populations

The main restoration effort is currently concentrated on the one horned rhino. In 2007, the Forest department of Assam in collaboration with WTI pre-released 3 female rhino rescued in Kaziranga National Park in an enclosure established in Manas. Another female was transported to the enclosure late March. It is planned to release these animals from their enclosure as soon as they have reached a sufficient age and independence and are less vulnerable to predation. The release of the first animals is expected this year.

Furthermore, a first "wild to wild" release of 4 rhinos was planned in early February 2008 and shortly before the mission in the framework of the IRV 2020 programme for the State of Assam. Unfortunately, the operation had to be postponed due to the unavailability of the tranquillising drug. Finally, 4 more rhinos are planned to be translocated from Pobitara Wildlife Sanctuary in 2008. In the medium term, the objective of this project is to translocate 20-30 rhinos to Manas where they will be protected and monitored. To date, no rhino was released in the wild and it is too early to conclude on the success of this restoration programme.

A rescue programme for elephants is also on going, financed by the International Fund for Animal Welfare (IFAW), as well as various conservation activities partly funded by the US Fish and Wildlife Service. This conservation and management programme aims at strengthening the Manas elephant population while reducing their impacts on private properties in the fringe villages of Manas and

enhancing conservation measures. The status of conservation of the Asian elephant is much better than the rhino's one. The demography of the Manas population is however depending upon the development of this species at the Chirag Ripu Elephant Reserve and necessitates monitoring at a larger scale than Manas. This monitoring has been initiated, financed by the Asian Elephant Conservation Fund. It will study the habitat pattern of this species in Manas within the Chirang-Ripu Elephant Reserve. This initiative will certainly provide the local stakeholders with a very useful information and data for the conservation and management of the Property, as far as this species is concerned.

So far, no reintroduction programme for swamp deer has been set up. Whilst this species was recently rediscovered in the Property, the mission feels that status of the remaining population needs to be assessed and the feasibility of a complementary reintroduction programme to strengthen the remaining population nucleus needs to be studied.

*The mission acknowledges efforts made since 2005 to restore the status of both rhino and elephant, which will contribute to restoring the values for which the Property was inscribed on the World Heritage List. The mission recommends as part of the restoration programmes and in addition to the on going surveys to assess the capacity of Manas to carry viable populations of these species and, if necessary, to work on the constitution of a functional ecological network which will guarantee their status of conservation in the long term. The mission also recommends assessing the feasibility of a reintroduction programme of swamp deer to facilitate the recovery of this key species.*

#### 5.2.7 Other conservation issues

##### **Dam construction**

The 2005 mission report mentioned the construction of a dam in neighbouring Bhutan, which could adversely affect water flow into the property. During the January meeting with the park management of RMNP, the participants from Bhutan clarified that no dam was built on the Bhutanese side, and therefore this issue no longer seems of concern.

The Government of India recently revealed ambitious plans to substantially increase the production of electricity through hydropower to cover its increasing energy needs. Assam State is seen as one of the potential States where large dam projects could be developed. For the moment, these projects are not very concrete and it is unknown if they would affect the river system of Manas.

*The mission requests that the State party takes into account the World Heritage values when planning any future dams in Assam State and to ensure that no major changes in the hydrological system of the Property will take place at the watershed level.*

##### **Invasive species**

The issue of invasive species was mentioned to the mission during its visit and is of major concern in all protected areas in northeast India. In Manas, invasive species affect both forest areas and grasslands. In forest areas, the main weed species is *Mikania ssp.*, a vine that invades forest clearings. As past deforestation opened up the forest canopy in the park, proliferation of *Mikania* is a serious problem. Another important problem is the occurrence of *Chromolaena ssp.* (also called *Eupatorium*), a herbaceous perennial that forms dense tangled bushes. Other weed species, such as *Mimosa ssp.* are reported to degrade the quality of grassland habitat, reducing food availability for grazing species such as the rhino. However, a habitat assessment of the grasslands in the proposed rhino release area was done, which concluded that the habitat was in good condition (pers. Com.). The mission did not receive the report of the assessment.

*The mission was able to observe invasive plant occurrence at many parts of the Property and recommends doing a thorough assessment of this threat in the entire MNP and to develop and implement effective control measures.*

##### **Climate Change**

The mission was unable to collect specific information on the risk related to climate change to the values of the Property. However, given the importance of the river systems in the ecology of the

Property, it can be expected that major changes in rainfall patterns in the Himalaya region could have important impacts on the Property.

*The mission suggests to undertake monitoring, mitigation and adaptation measures to climate change where appropriate and to assess the capacity of the Property to be involved in sequestration activities as part of the national effort.*

## **6 ASSESSMENT OF THE STATE OF CONSERVATION OF THE PROPERTY**

### **6.1 ASSESSMENT OF THE OUTSTANDING UNIVERSAL VALUE (OUV) OF THE PROPERTY**

Manas Wildlife Sanctuary was inscribed on the World Heritage List under natural criteria (ii), (iii) and (iv) (currently criteria, (ix), (vii) and (x)). The nominated Property was evaluated to meet these criteria on the following basis (see evaluation report by IUCN, March 1985):

- (ix) The Manas River is an outstanding example of geological processes and biological evolution with its huge depositional load and shifting river channels;
- (vii) The reserve also contains superlative natural features of exceptional natural beauty in terms of its scenic attractions of forested hills, alluvial grasslands and tropical semi-evergreen forests;
- (x) Manas provides critical and viable habitat for more rare and endangered species than any other of the Indian subcontinent's protected areas. It is the only or best remaining natural area where sizeable populations of several species can continue to survive.

While there is no Statement of OUV or Statement of Significance approved by the Committee, the following Statement of Significance was proposed by the State Party as part of the periodic reporting exercise:

*"Manas is an outstanding example of a rare combination of Sub-Himalayan Bhabar Terai formation with riverine succession leading up to Sub-Himalayan mountain forest. Biodiversity is expressed through as many as 21 species which are present in the park and listed in the IUCN Red Data Book and habitat mosaic."*

The mission confirms the assessment of the 2005 mission that the **OUV of the Property has in a major way been impacted by the past civil strife**. While deforestation led to a loss in forest values and reduced management over the years of conflict to degradation of the grassland quality, the major impact of the conflict has been on wildlife populations, including the endangered and rare species, which were key to its inscription under criterion (x). So far one species was demonstrated to have become locally extinct (the one-horned Rhino), whilst one other key species, the swamp deer, seems to be present in critically low numbers. There are no indications that other key wildlife species have been lost, although data on some species are very sparse.

Whilst the OUV of the property has clearly been seriously affected, the mission is of the view the Property has potential to be brought back to its state at the time of inscription. Apart from the one-horned Rhino, no species seem to have been lost, and although remaining populations of many species seem much reduced, with adequate protection they probably still can recover. It is unclear if the remaining swamp deer population, which was only re-discovered in December 2007, is viable, but this seems unlikely. Further research has to look into this. Even if it is not, it should be possible to strengthen the remaining population by translocation of additional animals from other protected areas in Assam. For one-horned Rhino, a reintroduction program is already underway, and there are good hopes that a viable population might be re-established in the Property in the long term. The mission further notes that for the long-term conservation of some of the key wildlife species, such as tiger and Asian elephant, the current efforts to increase the protection status of important remaining habitat outside the Property is of key importance.

**Based on the above, the mission concludes that OUV for which the Property has been inscribed on the World Heritage list, though badly affected, is still present and can still be fully recovered.**

The mission feels that the State Party has made important efforts to put in place the enabling factors that will allow for a recovery of wildlife populations, in particular by ensuring adequate

protection. Not only the efforts to restore infrastructure and ensure an adequately protection force, but also the support from the Bodoland authorities and local communities are key to achieving this. While these efforts need to be continued and on certain issues further strengthened, **the mission feels that conditions are currently being created to allow for a progressive recovery of the OUV of the Property.**

While the mission feels that the recovery process has already been engaged, it does not have sufficient data to assess the recovery process. The mission has the impression based on the observations during the field visit and discussions held with various stakeholders, that recovery has only just started and is still in its initial stages. **The mission is of the opinion that the Property cannot be taken out of the List of World Heritage in Danger, until the recovery of key wildlife populations can be assessed and demonstrated.**

## 6.2 STATUS OF THE IMPLEMENTATION OF THE CORRECTIVE MEASURES ADOPTED BY THE COMMITTEE

Following the 2005 mission, the Committee at its 29 session (Durban, 2005) recommended a number of corrective measures to be implemented in view of a possible removal of the Property from the List of World Heritage in Danger. The mission assessed the status of implementation of these corrective measures.

### 6.2.1 Accelerating efforts to re-build park infrastructure

The mission acknowledges the huge efforts made in the past few years to re-build the park infrastructure as mentioned under 5.1.3. However, at the time of the mission, some construction works were still on going and some anti poaching camps were not yet manned (7). Moreover, additional constructions are planned for 2008.

**While the mission considers that these efforts are well engaged and was very impressed by the work done since 2005, it cannot conclude that these efforts are fully completed.** They will probably be completed in the next few years if the necessary funding is available. The mission notes that some bridges are constructed with non-durable materials and will need to be renewed every year. It further notes that the road situated on the Southern border of the Property is not yet rehabilitated and that it is crucial to guarantee the security of the Property.

### 6.2.2 Filling of vacant positions within the park

The mission acknowledges the efforts by the park authorities and BTC to address this issue through the volunteer scheme it has set up together with local NGOs, but sees the need to make this staff increase sustainable by integrating the best volunteers within the permanent park staff. As mentioned under 5.1.4, more than 100 posts are still vacant, and so **the mission considers this recommendation not yet fully implemented.**

### 6.2.3 Ensuring timely release of funds by the Assam Government

As described under 5.1.4, no substantial progress was made on this matter. The park authorities were only able to advance on the building of infrastructure and ensure the operational costs of the management thanks mainly to the funding provided by BTC. **The mission therefore considers that this recommendation so far has not been implemented.**

### 6.2.5 Undertaking a comprehensive wildlife survey to demonstrate recovery of wildlife populations

No reliable data on wildlife status and tendencies were made available to the mission during the visit, except for the rhinoceros considered as extinct. The only scientific data published since the last mission come from recent publications that conclude on the necessity to review the situation in further details and to use more adequate methodologies in the future. The 2006 Rapid Assessment did not produce any new data and merely compiled existing data.

The mission feels that in the present time, accurate data on most of the key species are still missing and cannot conclude on the recovery of the wildlife in the Property.

- the status of the tiger population is unclear; the presence of the species is confirmed but densities seem low;
- to date, no rhino is living in the wild and it is too early to conclude on the success of the rhino restoration programme;
- the recent sightings of swamp deer must be considered very positively but it is also too early to assert that this species is recovering and is henceforth safe. More data are needed and additional field investigations should be done in the future in order to know better the state of conservation of this species in the Property. The need for a augmentation of the Manas swamp deer population through relocation of specimens from outside, should be assessed;
- the pygmy hog population is still very endangered; this endemic species should also be monitored in a systematic way, in order to take further appropriate decisions for conservation and management of its habitats.

**The mission notes that the status of conservation of most of the key species remains controversial and regrets that the recommendation made by the 2005 mission to undertake urgently a specific survey that provides the baseline to assess and monitor the wildlife and gives indications on the trends, at least of the key species, was not implemented.**

#### 6.2.6 Transboundary cooperation

While significant progresses have been made in this matter since 2005, the mission considers this to be a long-term process, which is independent from the restoration of the OUV of the Property. However, it regards the extension of the Property, not only the transboundary extension to include RMNP in Bhutan but also an extension on the Indian side, to include key remaining habitats currently outside the Property, a key issue for the long term conservation of its OUV.

## 7 CONCLUSIONS AND RECOMMENDATIONS

### 7.1 CONCLUSION

The mission concludes that OUV for which the Property has been inscribed on the World Heritage list, though badly affected, is still present and can still be fully recovered.

The mission congratulates the State Party, and in particular the Park Management, the Bodoland Territorial Council, national and local NGOs for the efforts already undertaken in starting the restoration of the Property and in implementing the corrective measures recommended by the World Heritage Committee. The mission wants to highlight the very positive contributions from the local communities and considers these as a key for the success of this endeavour.

However, the mission considers that the situation in the Property has to be further consolidated and that a clear recovery of the key wildlife values has to be demonstrated before the Property is taken out of the List of World Heritage in Danger. **Hence the mission recommends to retain the Property on the List of World Heritage in Danger.**

### 7.3 CORRECTIVE MEASURES AND POSSIBLE TIMEFRAME FOR REMOVAL OF THE PROPERTY FROM THE LIST OF WORLD HERITAGE IN DANGER

The mission encourages the State Party to pursue its efforts to implement the corrective measures recommended by the 2005 mission and already adopted by the Committee at its 29<sup>th</sup> session:

- (a) Urgently conduct a baseline survey on recovery of wildlife populations and set up a full monitoring system which will allow monitoring and documenting the recovery of the flagship species;***

This recommendation is the most urgent to implement. Such a baseline survey will not only facilitate a future decision on the removal of the Property from the List of World Heritage in Danger but also will also provide important information for the management of the Property and facilitate management decisions. It is therefore important to organize as soon as possible

census and inventories of the key species in the Property, with appropriate methodologies and protocols. It will be equally important to use this baseline survey work to set up a monitoring system for the key flagship species in order to follow up the recovery of their populations.

***(b) Resolve the problem of fund release which did not progress significantly since the last mission;***

The availability of sufficient funding is key to ensuring a proper management of the Property and thus to enable the recovery of all its values. The current situation, with funding sanctioned under central funding schemes such as Project Tiger not arriving at the Property or only arriving in the last weeks of the budget year is highly unsatisfactory and does not allow for a proper budgetary planning of conservation activities. Without the support from outside donors and from BTC, park authorities would not have been able to continue management activities. This issue has to be addressed urgently. The mission hopes that this can be resolved in the very near future through the creation a specific foundation for the protected area that would be able to receive funding directly from the central Government, as announced by the State Party.

***(c) Finalize the work well engaged for the reconstruction and improvement of the park infrastructures;***

The mission considers that the on going infrastructure works can be completed in the next few years, if necessary funding is available. It recommends the State party to pay particular attention to the durability of infrastructure, in particular bridges, to avoid recurrent re-building cost and to pay additional attention to a clear delimitation of MNP, including the rehabilitation of the southern boundary road to control encroachment and access. The mission recommends that more efforts should be made in the future on improving the general aesthetic of the camps and on the promotion of traditional materials to build them.

***(d) Fill the remaining vacant positions in the park by recruiting the best elements from the volunteers into permanent staff positions;***

The Park authorities successfully addressed the staffing problems at the Property by setting up the volunteer scheme with local NGO. To make this system more sustainable, the mission recommends recruiting from the volunteers, the frontier staff necessary to fill the remaining 123 vacant positions.

In addition to the above recommendations the mission proposes the following additional corrective measures:

***(e) Strengthen and consolidate park management operations, in particular the efforts for reducing illegal logging and wildlife poaching in Panbari Range;***

The mission estimates park authorities successfully regained control over the central and eastern Ranges of the park, but also concluded that there is a need to further strengthen law enforcement in the western Panbari range, where the mission received reports on continuing poaching and deforestation. With the on-going construction of patrol camps and the opening of access roads, the recent posting of more staff in the range and the recent surrendering of poachers in that area, the mission considers that this can be achieved in the next few years.

***(f) Continue the efforts for reintroduction of the One-horned Rhino and assess the need and feasibility for a restoration programme of the Swamp Deer;***

With the one-horned rhino locally extinct in the Property, the reintroduction programme for this species is of capital importance for the restoration of the OUV of the Property. This reintroduction is now underway and tangible results should be available in the next few years. The recent re-discovery of swamp deer creates hope that a viable population is still present in the Property but this needs to be assessed further and it might be necessary to strengthen the remaining population through the translocation of additional specimens.

The mission considers that it is feasible for the above-mentioned corrective measures to be implemented in a timeframe of two to three years.

**The mission considers however that any final decision on a removal of the Property from the List of World Heritage in Danger should be made based on a clear and demonstrated trend of the recovery the wildlife populations in the Property.** With no baseline data available, it is very difficult to estimate the timing necessary to show this trend. However, on the condition that a baseline survey is completed this year and that a monitoring system for key species is set up in connection to the survey, such a clear trend could be shown in 2 to 3 years.

### 7.3 ADDITIONAL RECOMMENDATIONS

In addition to the above, the mission also makes the following additional recommendations in order to further improve the integrity, management and long-term conservation of the Property:

***(g) Expedite the finalisation of the draft park management plan currently being prepared, adopt it and start its implementation;***

The mission considers the finalisation and updating of the management plan a key issue. This plan should present a clear vision for the future management of the Property and address amongst other the following questions of major importance: development of tourism, wildlife monitoring, invasive species, land use management and fire utilization. In accordance with Decision 31 COM 7.1 and 31 COM 7.2 of the World Heritage Committee, the mission also strongly recommends to address in this plan the climate change and risk reduction issues, in relation to the state of conservation of the Property.

***(h) Continue the process for a transboundary extension of the Property to include the Royal Manas National park in Bhutan and assess the possibility to develop an ambitious extension proposal for the Property, including also the remaining intact habitats currently outside the Property;***

Several of the larger mammal species which are important for the values of the Property, such as tiger and elephant, need wide ranges to survive and therefore the inclusion of additional undisturbed habitats and their connectivity through ecological corridors is important for the integrity and long-term conservation of the values of the Property.

***(i) Build a regional vision on tourism taking into account the limited carrying capacity of the Property;***

This vision should pay attention to the high sensitivity of the Property, in terms of biological and landscape diversity.

***(j) Elaborate and develop a capacity building programme, in order to improve the skills of the park field staff, in particular the volunteers, on biodiversity management and conservation, and to raise the level of expertise of the local stakeholders, especially in the field of tourism;***

***(k) Assess the status of invasive species in the entire Property and develop and implement effective control measures;***

***(l) Clarify the responsibilities between the State of Assam and BTC for the management of all resources in the Property, in particular wildlife;***

As mentioned under § 4, there is some ambiguity as regards to the responsibility for the management of the site and its resources, as the 2003 Bodoland accord clearly attributes responsibility for the management of forests to BTC, but not for wildlife. This needs to be clarified.

***(m) While planning future dams in Assam State, ensure that no major changes in the hydrological system of the Property will take place.***

## BIBLIOGRAPHY

Das, J.P., Nath, N.K., Braahma, S.D., Lahkar, Devi, P, Barman, R. and Talukdar, B.K., 2007 – Conservation and monitoring of tiger population in Manas National Park through field techniques and capacity building of local stakeholders, Conservation report Series 2007. Final Project Report under Rufford Small Grant Programme. Published by Aaranyak, 33 p.

Department of Environment & Forests (Assam, India) and Nature Conservation Department (Royal Government of Bhutan), 2008 – Report on the meeting between the park manager of Manas National Park, Inida and Royal Manas National Park, Bhutan, 8 January 2008, meeting facilitated by WWF, 3 p + annexe.

Jefferies, B.E., 2002 – Conservation Status of Manas and Kaziranga National Parks, State of Assam, India. Mission report for UNESCO and the World Heritage Committee, 27 p.

Jhala, Y.V. and al., 2008 – Status of tigers, co-predators and prey in India. National Tiger Conservation Authority, Govt. of India, New Dehli, and Wildlife Institute of India, Dehradun, TR os/001 pp-151.

Lahkar, B.P., Das, N.K., Dey, S., Brahma, N. & Sarma, P.K., 2007 – A study of habitat utilization patterns of Asian elephant *Elephas maximus*, and current status of human elephant conflict in Manas National Park within Chirang Ripu Elephant reserve, Assam. A technical report prepared by Aaranyak, 74 p.

Letter from the Ecotourism Society to Guy Debonnet, UNESCO, 13 February 2008, on the subject of "Prayer for taking initiative steps for reconstruction of World Heritage Site Manas", 1 p + annexes.

List of sanctions of accorded by the Council for wildlife wing since February 2005 till date, 2 p.

Manas National Park, Power Point Presentation, 25 screens.

Mathur, V.B. & al., 2007 – Rapid Assessment of Wildlife Values in Manas World Heritage Site, Assam, India, Wildlife Institute of India for Ministry of Environment and Forests, Government of India, New Dehli, January 2007, 51 p.

Menon V., Kaul R., Dutta R., Ashraf NVK and Sarkar P, in press - Bringing back Manas, Conserving the forests and wildlife of the Bodoland Territorial Council, Conservation Reference Series 7, Wildlife Trust of India. 247p.

Ministry of Environment and Forests, 2001 – Manas tiger reserve, 5 p.

Rahba,A., 2007 - Report on the application of the World heritage Convention, section II, state of conservation of specific World Heritage properties, India, Manas National Park, 24 p.

Ranganathan. J and al., 2007 – Where can tigers persist in the future ? A landscape scale, density based population model for the Indian subcontinent, 42 p.

Rao K. and Sheppard, D., 2005 – Report on the UNESCO-IUCN Mission to the Manas WH site, India, UNESCO/IUCN, 12 p + annexes.

Talukdar, B., Bhattacharjee, R., Sharma, A., Barman R. a,d Aziz Tariq, 2007 – Update report on security assessment, Indian Rhino Vision 2020, Security Assessment Group, 5<sup>th</sup> meeting of the task Force, WWF/IRF, Department of Environment and Forests, Assam, 5 p + annexes.

Tiwari, S.K. and al., nd – Fauna of Manas Tiger Reserve, *in* Alfred J.R.B., Ramakrishnan and Rjesh Gopal (Eds), Faunal diversity of tiger reserves in India. Volume – II. Published by Director Zool. Surv. India and Director Project Tiger, New Dehli, 621-670.

TRAFFIC India, 2008 – Curbing illegal Wildlife Trade : Indio-Bhutan Training Workshop, TRAFFIC India,/WWF-India, 26 p.

## ANNEXES

**PROGRAMME OF THE MISSION**

**11 February**

Flight to New Dehli, arrival at 00.15 h.

**12 February**

Flight New Dehli – Guahati

Travel by road to Barpeta, meet with Park Director and head of the forest and tourism department of the Bodo Territorial Council

Travel to park and short meeting in the Bansbari lodge with NGO representatives (WWF, Aaranyak, Wildlife Trust of India).

Proceed to Mothanguri lodge in the park (nocturnal drive with wildlife viewing with spotlights).

**13 February**

Early morning drive to border with Royal Manas National Park (border with Bhutan).

Meeting with Deputy Chief of Bodo Territorial Council.

Rest of the day visit of the central Bansbari Range (infrastructure, rhino enclosure, rhino release site).

**14 February**

Visit to eastern Kokilabari range. Meetings with representatives of two local NGO.

Visit of the seed farm included in the park.

**15 February**

Visit to western Panbari range (on elephant back). Return to Guahati.

Late evening meeting in Guahati with Chief Wildlife warden of Assam, Wildlife institute of India, representatives of environmental NGO (WWF, WTI, Aaranyak), ATREE and other stakeholders to discuss preliminary mission findings.

**16 February**

Travel to Kaziraha National Park. Lunch with park authorities.

Evening visit to the western part of the park and game drive.

**17 February**

Early morning visit on elephant back followed by game drive in Kaziranga Range. Return to Guahati. Evening flight to New Delhi.

**18 February**

Discussion of mission recommendations by mission team.

Visit to UNESCO New Dehli office.

Debriefing meeting in Ministry of Environment and Forests with and Secretary of the Ministry and Deputy Inspector General. Meeting at head office Wildlife Trust of India.

**19 February**

Return flight.

**DECISION 30COM 7A.13**

The World Heritage Committee,

1. Having examined Document *WHC-06/30.COM/7A*,
2. Recalling Decision **29 COM 7A.9**, adopted at its 29th session (Durban, 2005),
3. Commends the State Party, local authorities, NGOs and the Bodo Territorial Council for the considerable efforts made to improve the state of conservation of the Manas Wildlife Sanctuary and to help meet the benchmarks set by the Committee, and for submitting an updated progress report;
4. Encourages the State Party and local authorities to fully implement all recommendations of the joint 2005 UNESCO/IUCN mission;
5. Requests the State Party to provide the World Heritage Centre and IUCN as soon as possible with the results of the comprehensive wildlife survey, in particular the status and trends of the tiger, rhino, elephant and swamp deer populations in the WH Property;
6. Further requests the State Party to provide the World Heritage Centre with an updated report by **1 February 2007** on the state of conservation of the property, specifically on progress made in relation to the benchmarks set by the Committee for the removal of the property from the List of World Heritage in Danger, along with the timeframe for their achievement, as well as progress made on implementing the recommendations of the joint 2005 UNESCO/IUCN mission, for examination by the Committee at its 31st session in 2007;
7. **Decides to retain Manas Wildlife Sanctuary (India) on the List of World Heritage in Danger.**

## DECISION 31 COM 7A.11

The World Heritage Committee,

1. Having examined Document WHC-07/31.COM/7A ;
2. Recalling Decision **30 COM 7A.13**, adopted at its 30th session (Vilnius, 2006) ;
3. Notes that the State Party has conducted a rapid assessment of wildlife values and made progress on re-building infrastructure and filling vacancies in the property ;
4. Requests the State Party to invite as soon as possible a joint World Heritage Centre/IUCN mission to the property to assess progress in achieving the corrective measures and implementing the remaining recommendations from the 2005 monitoring mission, and to indicate a definite timeframe for their completion ;
5. Also requests the State Party, in consultation with the World Heritage Centre and IUCN, to develop a draft Statement of Outstanding Universal Value for the property, including the conditions of integrity, for examination by the Committee at its 32<sup>nd</sup> session in 2008 ;
6. Further requests the State Party, in consultation with the World Heritage Centre and IUCN, to develop a draft statement of the desired state of conservation for the property based on its Outstanding Universal Value ;
7. Requests the State Party to provide the World Heritage Centre with an updated report by **1 February 2008** on the state of conservation of the property and on progress in addressing the corrective measures set by the Committee at its 29th session (Durban, 2005) and the other recommendations of the 2005 mission report, for examination by the Committee at its 32<sup>nd</sup> session in 2008 ;
8. **Decides to retain Manas Wildlife Sanctuary (India) on the List of World Heritage in Danger.**

### TERMS OF REFERENCE OF THE MISSION

The mission will review the following issues:

- (i) Assess the state of conservation of this property and the factors affecting its Outstanding Universal Value and its integrity, in particular in relation to management and the status of key wildlife populations;
- (ii) Hold consultations with the Indian authorities and relevant stakeholders in assessing the progress made in relation to the recommendations of the 2005 joint UNESCO/IUCN mission and the relevant decisions by the Committee (see Decision 31 COM 7A.11 and previous Decisions);
- (iii) In particular, the mission should assess the following key issues:
  - Obtain and evaluate the relevant recent surveys of wildlife within the property, in particular for tigers, elephants, rhinoceros, swamp deer and other threatened species and assess progress in the recovery of the populations;
  - Assess progress on the re-introduction of rhinoceros as well as the possibilities of re-introduction of other species that have become locally extinct since its inscription;
  - Assess the integrity of the site, in particular the levels and impact of reported poaching and deforestation;
  - Assess progress in the rebuilding park infrastructure, in particular patrol camps, roads and bridges and communication systems;
  - Assess the current level of management of the property (management planning, funding and budget situation, staffing numbers, capacity to counter threats etc);
  - Assess the capacity of the management agency to effectively manage the property (in particular the Panbari range) and the threats to its integrity;
  - Assess the involvement of the local communities, in particular the Bodo people, in the management of the property and assess the level of support of the local communities for the conservation of the property;
  - Assess progress in developing a transboundary cooperation with the Royal Manas National Park in Bhutan, including progress in developing a transboundary World Heritage property;
  - Assess cooperation with the State Party of Bhutan in relation to the management of water resources.
- (iv) Determine with local authorities how effectively the issues of risk reduction and climate change are incorporated in planning and management and specific actions implemented on this if any;
- (v) Based on the results of the above mentioned assessment, discuss with the State Party representatives which measures remain to be taken and set a timeframe for their completion and subsequent removal of the property from the List of World Heritage in danger;
- (vi) Propose additional recommendations to the Government of India and the World Heritage Committee to further improve the conservation and management of the property;

Prepare a concise mission report in English on the findings and recommendations of this Monitoring Mission following the standard format.

## PRESS ARTICLES

Press article 1

**Census shows sharp fall in tiger numbers**

24 May, 2007, TIMES NEWS NETWORK

NEW DELHI: The tiger is on the run, with nowhere to hide. Enumeration figures for the big cat in central India released on Wednesday show that it has been severely depleted in its ranges, with Madhya Pradesh registering a precipitous fall in tiger population — now standing at 265 instead of the 700 claimed till two years ago.

But while the census showed that the tiger is being pushed to the margins in Chhattisgarh, Maharashtra and Rajasthan, the ministry of environment and forests' decision to release only partial data has stirred fresh controversy. The argument offered was that since the study was compiled by Wildlife Institute of India, it was not necessarily "official".

WII and the ministry held a meeting to share tiger enumeration numbers with a select gathering. What then came out reflects the dire straits that the tiger is in: Madhya Pradesh has 265 of the animals, Chhattisgarh has 25 tigers left, Maharashtra 95 and Rajasthan 32 (in the state's last pocket of Ranthambore).

A senior environment ministry official said, "MP's case is symptomatic. It's clear that India at best has just half of the tiger numbers earlier claimed."

Environment secretary Prodipto Ghosh, who is due to end his service in government soon, said, "These are not official figures, it's WII's work...we will not discuss policy here."

The apparent caution left some experts wondering why the census was being presented in a hurry when the estimates for tigers in the core habitats were apparently not ready. "We must know the health of the source population inside these critical breeding areas because if these are in bad shape, the rest don't matter so much," said Raghu Chundawat, an independent tiger ecology expert.

But even if final figures are yet to be compiled, WII scientist Qamar Qureshi admitted that there was a declining trend in tiger population and that the animal was under severe threat, especially in areas just outside protected zones.

Seeking to cushion the impact of the falling tiger count, the ministry argued that official figures would be released only in December and data released on Wednesday was not complete. This got at least one state wildlife official demanding more concrete answers and experts openly asking why conservation policy could not be discussed in the wake of the starkness of the figures.

Rajesh Gopal, member secretary of the newly-created National Tiger Conservation Authority, which has devised a new tiger estimation method along with WII, pointed out that the crisis was getting serious in regions outside the parks where tigers disperse.

The only positive story to emerge was that of Jim Corbett Tiger Reserve, where tiger population has been found at a healthy 112 in just 500 square kilometres.

As a senior official present at the meeting pointed out to TOI, "It's not about comparing methods. What this methodology has shown is that data was systematically fabricated over the past decades and the field officials were left with no option but to keep feeding increasing numbers into a system that only wanted better figures."

Press article 2

### **Two rhinos released into Manas National Park in India.**

January 2007. The International Fund for Animal Welfare (IFAW), and its partner, WTI (Wildlife Trust of India), have successfully released two one-horned Asian rhinos back to the wild in India with support from Assam Forest Department.

The rhinos, female calves nicknamed Manasi and Roje, were rescued from the floodwaters that annually spill over the banks of the Brahmaputra River. The pair, both three years old, were rescued in the summer of 2004 and rehabilitated at the Centre for Rehabilitation and Conservation (CWRC) in North East India.

The new arrivals will join a four year old female rhino that was released by IFAW and WTI in February 2006 - the first rhino in Manas National Park in more than a decade. Wild rhinos in Manas, a World Heritage site, once numbered more than 100.

"The rhinos will wear radio collars for post release monitoring," said Dr. Ian Robinson, who heads up IFAW's Emergency Relief team. "We want to do everything possible to assure a successful transition back to the wild for these animals".

"We are confident that the rhinos will do well in Manas as we are involving not just governments but also the local people," said M.C. Malakar, Chief Wildlife Warden of Assam. "The CWRC rescue centre has helped us rescue and rear more animals than before. I thank IFAW for setting up the rescue centre with WTI".

"Manas once supported a lot of rhinos; however certain problems wiped them out. Now, it is good to release these rhino calves in Manas as it is conducive to rhino populations," said D.M. Singh, Director of Kaziranga National Park. "Earlier we would rescue animals and take them to the zoo and that was the end. But now the CWRC rescue centre has made rehabilitation into the wild a possibility".

Press article 3

### **Illegal activities may cost Manas its status**

From Kalyan Barooah, NEW DELHI, Dec 1 2007.

Faced with the prospect of World Heritage Committee dropping Manas National Park from the list of heritage sites, following reports of rampant poaching and illegal felling of trees, Union Tourism and Culture Minister, Ambika Soni has sought Chief Minister Tarun Gogoi's personal intervention in putting a halt to the illegal activities. Soni's reaction came after a TV channel reported rampant felling of trees and poaching inside Manas Park by organised mafia. Since long the activities in the Park has been under close scrutiny of UNESCO as well as the Centre. The latest report has rattled officials at the Centre.

The Union Tourism and Culture Minister lost no time in dashing off a letter to the Chief Minister, a copy of which is with this newspaper.

"I saw a report on television two days ago regarding Manas, which showed illegal felling of trees and other such activities. This is of very serious concern for all of us. I will request your personal intervention in the matter to check the illegal activities in Manas National Park," wrote the Minister.

"The Government of Assam is required to take strong measures so as to get the Manas Park removed from the Danger List. I assure you full support of my Ministry in the efforts of Government of Assam in doing so," said Soni.

Manas Park continued to be placed in the Danger List of the World Heritage Site. "The World Heritage Committee has continued to keep the Park in the Danger List of the World Heritage Sites," wrote the Minister.

"I have directed the Archaeological Survey of India to take whatever steps necessary on their part to enable us to get this World Heritage Site off the Danger List," said the Minister.

Soni, however, did not forget to appreciate the measures taken by the State Government protect the Park. Manas was inscribed on the World Heritage List in 1985 in recognition of its unique position as a natural site.

However, due to disturbances during the Bodo movement, it was put in the Danger List of World Heritage Site in 1992. The Park was out of bounds for a long period after Bodo militants took over control. Home to a number of endangered species, the militants' wreaked havoc, slaughtering animals and felling trees.

Soni noted that the Government took certain corrective measures like establishment of Bodo Autonomous Council to improve the conditions in the Park.

The UNESCO itself has reported that the Committee decided to include the Site on the World Heritage in Danger List in 1992, when it was invaded by Bodo militants. Damage to the Park was estimated at more than 2 million.

The site's infrastructure suffered considerable damage during 1992-93. Political instability seems to have led to poaching during this period of thirty-three rhinos during 1989-1992. A monitoring mission jointly undertaken by the Government of India and the UNESCO World Heritage Centre in January 1997 confirmed the extensive damage to Park infrastructure and decrease in the population of some species, particularly the greater one-horned rhino, UNESCO reported.

The Government of India, the State Government of Assam and the Park authorities have elaborated a 2.35 million rehabilitation plan which began to be implemented in 1997 and is progressing satisfactorily. And while security conditions in and around Manas have improved, the threat of insurgency still prevails in Assam and militants often traverse the sanctuary. Nevertheless, conditions for site protection and the relationship with local villagers appear to be improving.

However, the TV report claimed rampant poaching, indiscriminate felling of trees, illegal encroachment have hit the India's biggest biological reserves. The news report showed

indiscriminate felling of trees, cattle left free to graze, illegal settlements on the forest range, and evidences of rampant poaching and blatant indifference of the authorities.

The report quoted President of Green Manas Organisation, Debeswar Patowary, as claiming that almost 90 per cent of valuable trees were missing from the reserve.

Press article 4

### **61 poachers surrender in Assam**

Posted February 26th, 2008 by Sahil Nagpal

Guwahati, Feb 26: Sixty-one poachers have surrendered before wildlife authorities at the Manas National Park in Assam.

They deposited 26 country-made weapons before the Deputy Chief of the Bodoland Territorial Council (BTC), Kampa Borgoyari, at the Bansbari range of the park in Baksa District.

This is the second biggest surrender of poachers in the National Park during the last two years. In 2006, over 130 poachers had surrendered before the authorities.

Borgoyari said the reformed poachers would be rehabilitated.

Located on the north bank of the Brahmaputra, the Manas National Park has a core area of 500 square km and was declared a national park in 1990. It straddles Baksa and Chirang districts, both now administered by the BTC.

A section of the park stretches beyond the Indo-Bhutan border, where it is known as the Royal Manas National Park.

Almost the entire rhino population of Manas was wiped out by poachers and militants, prompting UNESCO to downgrade the park's status to that of a World Heritage Site in Danger.

As many as 64 rhinos were killed for their horns between 1980 and 1995. Sustained conservation initiatives over the past few years have rejuvenated the park, but poaching remains a problem.

The park, famous for its tiger, elephant and rhino population, is likely to regain its past glory with the newly constituted BTC taking keen interest on conservation efforts.

Meanwhile, the conservationists are expecting the possibility of the wildlife habitat getting back the World Heritage Site tag that it lost because of poaching. (ANI)

## Manas may regain UNESCO recognition

By Sivasish Thakur  
 GUWAHATI, Feb 16 - The picturesque Manas National Park - a World Heritage Site is now on a recovery path following a prolonged period of social unrest in the 1990s - could get back the coveted title in a couple of years.

Park officials said that a visiting delegation of the UNESCO's World Heritage Committee was satisfied with the recent corrective measures aimed at restoring the Park's infrastructure and security. It is the animal population that remains an area of serious concern, with the number

of several key species plummeting during the troubled period.

The delegation visited Manas extensively from February 12 to 15, taking stock of the developments. It is likely that a healthy population of different species would be critical to the Park regaining its status.

"The UNESCO team was quite satisfied with the ongoing augmentation work on infrastructure and security. However, they have sought an up-to-date database of the animals, which we are trying to provide as soon as possible,"

Anindya Swargiary, Field Director, Manas Tiger Reserve (Manas National Park forms the core zone of Manas Tiger Reserve) told the *Assam Tribune*.

Swargiary said that an authentic animal database was being prepared from various sources including the Wildlife Institute of India (WII), WWF-India, Aaranyak, etc. "The population of several species dwindled during the disturbed period, and it would take some time for these animals to attain a sizeable population again," he said.

(See page 12)

## Manas may regain UNESCO ...

(Contd from page 1)

"The wounds inflicted by the turbulent period are still there. But of late improvements have been made, and we are confident of restoration of the World Heritage Site status within one or two years," Swargiary asserted.

On the infrastructure front, forest roads inside the Park have been repaired for facilitating unhindered movement of forest security staff. Several footbridges and bamboo bridges have also been constructed, he said.

Of the lost camps, 13 have been rebuilt and some others repaired to make those fit for accommodation. "We have ensured the presence of security staff in all the 31 camps," Swargiary said, adding that regular vigilance apart, around 90 special recruits were doing patrolling on bicycles, especially along the bounda-

ries.

Swargiary said that river patrolling also got a boost with the addition of four rubber boats. "We will also be getting three-four vehicles soon," he added.

Seventy posts, mostly guards and game watchers, have been lying vacant in Manas. "Some of these would be immediately filled up, as 28 persons have been selected for Manas and Orang in the first phase of an ongoing recruitment drive," Swargiary revealed.

It may be recalled that the decade of social disturbance during the height of the Bodo movement had left the Park's infrastructure in a shambles besides taking a heavy toll on the wildlife. The rhino was the worst-affected, as its entire population comprising around 100 was decimated. In 1992, the UNESCO declared

the park to be a World Heritage Site in Danger.

A welcome development, however, has been the reintroduction of three rhinos in Manas under the ambitious Indian Rhino Vision-2020 translocation project. Another batch of four rhinos from Pobitora is scheduled to arrive within a month.

The main road to Manas continues to be a big irritant. The all-important bridge on the Kalpani river, which was washed away in 2004, is yet to be restored.

The recent boom in tourism also augurs well for the Park's future. Manas is witnessing a considerable flow of tourists since the last three years.

Manas, acclaimed for its rich biodiversity and unparalleled scenic grandeur, shelters the country's highest number of endangered animals with as many as 22 species.

Assam Tribune February 17/21/08

## ACRONYMS

<b>ATREE</b>	Ashoka Trust of Research on Ecology and Environment
<b>BCA</b>	Biodiversity Conservation Act
<b>BTC</b>	Bodo Territorial Council
<b>CWLW</b>	Chief Wildlife Warden
<b>FCA</b>	Forest Conservation Act
<b>IRV</b>	India Rhino Vision
<b>MNP</b>	Manas National Park
<b>MTR</b>	Manas Tiger Reserve
<b>NGO</b>	Non Governmental Organization
<b>OUV</b>	Outstanding Universal Value
<b>RMNP</b>	Royal Manas National Park
<b>USD</b>	US Dollars
<b>WH</b>	World Heritage
<b>WII</b>	Wildlife Indian Institute
<b>WPA</b>	Wildlife Protection Act
<b>WTI</b>	Wildlife Trust of India