

AN
ACCOUNT OF THE
RELEASED RHINOS
IN MANAS NATIONAL PARK, ASSAM
[APRIL – SEPTEMBER 2008]



B.S. Bonal, Amit Sharma, Deba K. Dutta,
A. Swargowari and C.R. Bhobora
TRANSLOCATION CORE COMMITTEE
INDIAN RHINO VISION (IRV) 2020



Department of Forests, Assam



Introduction :

Indian Rhino Vision (IRV) 2020 a program for the long term conservation of the one horned rhinoceros in Assam is developed and implemented by the Forest Department, Government of Assam, initiated with the support of international conservation organizations WWF and IRF. The program aims to increase rhino population in new / potential habitats (Protected Areas) all throughout the state of Assam to three thousand by the year 2020 and is supported by a number of organizations including USFWS and BTC. As a first step, the training-cum-translocation was completed in April 2008 wherein two male rhinos captured in Pobitora WLS was translocated and released in Manas NP. Manas NP which was till the nine-tees home to a healthy rhino population was chosen as the first protected area, amongst target PA's viz.- Burachapori WLS, Laokhowa WLS, Orang NP and Dibru-Saikhowa WLS to be developed and populated with rhinos from the wild through translocation from Pobitora WLS and Kaziranga NP. The immediate plan is to populate Manas NP with at least twenty rhinos from the wild by 2009.

Two sub adult male rhinos were released in Manas National Park in the Bura Buri jhar area by about 7.30am on 12th April 2008 after covering a distance of more than 250 kms.



Photo- Amit S.

Plate1 – COO, TCC interacting with staff in Basbari

from Pobitora WLS. Even though it took some time for the rhinos to come out of their respective crates as the doors were opened, it took only a few seconds for the rhinos to disappear in the wilderness of Manas. It was a totally new environment for them and the two disappeared in two different directions to establish their individual homes. The first rhino identified as rhino1 ran southwards from the site of release and the second one identified as rhino2 ran northwards from the release site (Fig.1).

The two rhinos has been tracked and observed in Manas since the time of release jointly by the forest department personnel and a team from WWF under the guidance and supervision of the Translocation Core Committee (TCC). The present account is for the period from 12th April to September, 2008. The rhinos are fitted with radio collars and the tracking has been done currently using antennae and receiver systems. The forest department frontline staff was provided a one day training to use the system prior to release and post-release they have been provided with field orientation for independent tracking. The members of the monitoring team under Basbari range has been trained to track and monitor the rhinos all day round and maintain the data in pre-designed formats. In addition quite a few forest staff presently posted at



Photo –WWF India/ Garga

Plate2 – Orienting the frontline forest staff in Manas



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Charpoli, Gahori farm (Rhino) camp, 2nd Gate camp and Kahibari camp as well as a number of conservation volunteers from Basbari has also been trained in the field techniques. Similarly, the staff and volunteers under Bhuyapara range was also trained and oriented in the field for tracking and monitoring the rhinos and to record their behavior.

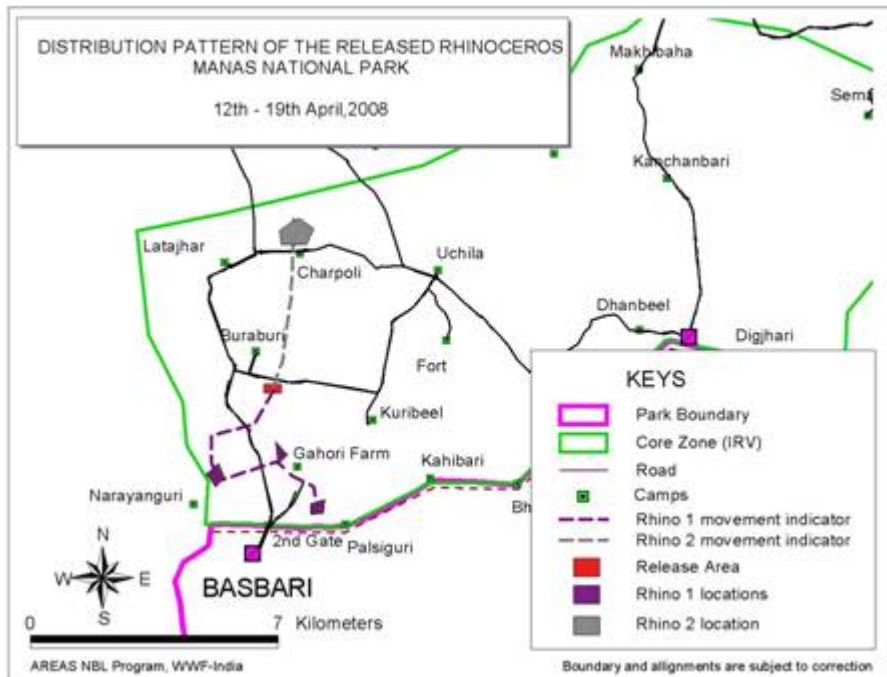


Fig.1 – Rhino movement in the first week after the release



Plate3 – Frontline forest staff in Manas



Plate4– WWF team tracking the rhinos in Manas



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Habitat Use and Ranging :

The first few days were very vital as the rhinos had to come into terms with the new environment and habitat and also get accustomed with the rich bio-diversity of Manas. The rhino1 after release moved towards the south, covering about 3.5kms aerially and the rhino2 after release moved towards the north, covering about 3.5kms aerially from the site of release. From indirect evidences and secondary sources indicating movement of the two it is estimated that both the rhinos covered an area of 5 sq.kms. on the very first day after release.



Photo – WWF-India/Deba

Plate5 – Monitoring on elephant

Till the mid of May 2008 (17th May) the rhino2 was observed to move around in the area near charpoli camp. The area to the north of the camp was preferred and the rhino spent his time eating in the grasslands or wallowing in the numerous small waterholes in the area. The rhino 1 was observed to be more dynamic moving around in the area between Manas river to the west, and Kureebel in the east. The area in and around the Gahori / Rhino camp area is seen to be more preferred and the rhino was also seen to spend a lot of time in the Kasimdoha river area near to the south boundary road in between the 2nd Gate and Palsiguri camp. At times this rhino was also observed to move westward and spend time on the banks of the manas – beki river system.

After 17th May 2008, the rhino 2 moved south from Charpoli area and both the rhinos met each other and were observed to be moving together in the areas close to the southern boundary in between Gahori / Rhino camp and Katajhar camp area.



Photo – WWF-India/Deba

Plate6 – Rhinos in their new habitat

both the rhinos still at the state of exploration in the new habitat also started to venture out of the park boundary in the evenings and night to the adjoining paddy areas. To avoid the depredation of the paddy, attempts were made to push the rhinos towards the north but it was found that they soon returned to occupy the southern areas and also come out in the night. This may be related to the reason that both the rhinos were used to straying and depredation as observed during the monitoring phase in Pobitora WLS their source PA.

By June08 it was observed that both the rhinos have recovered from whatever small superficial injuries they got during their journey to their new home in Manas NP. It was seen that both of them were moving about in the area freely, wallowing in the numerous small waterholes available in the area and feeding well. Rhino 1 often changed its wallowing locations but the rhino 2 preferred to wallow only in two / three particular locations. Both the rhinos use to range in the areas mostly within a distance of 500 mts. from the south boundary road and wandered out to the adjoining paddy fields in the evenings and nights (Fig.2). The rhinos also got accustomed to the animals in the wild



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and was also observed to move and feed along the wild buffaloes and bison. They also mixed quite a lot with the domesticated buffaloes in the fringe and were at times even located in the nearby buffalo sheds (*khuties*) in the night. This routine remained almost similar till the 10th of June 2008 when the Rhino 1 broke the electric fence to enter the enclosure where four female rhinos were kept under the rehabilitation program.

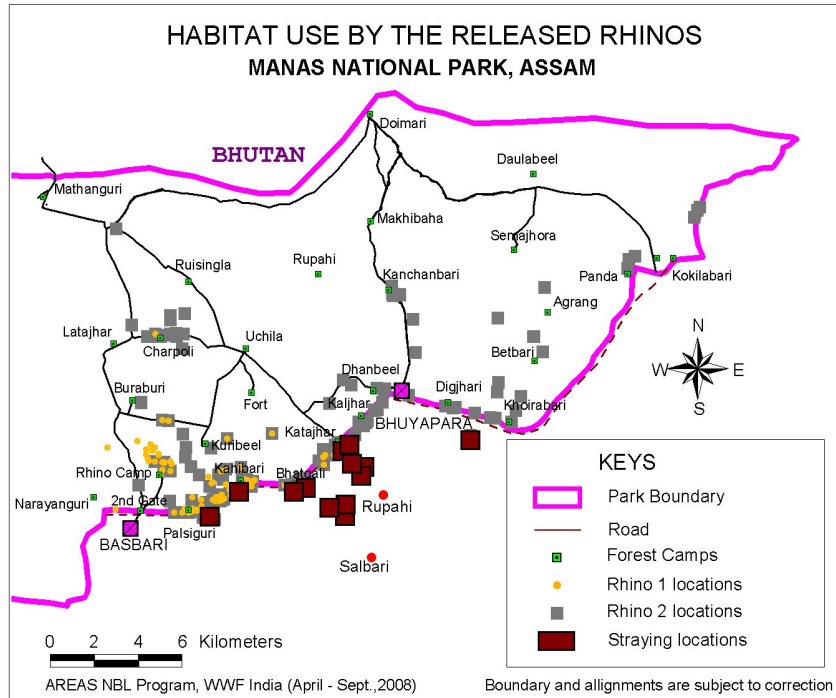


Fig. 2 – Habitat use pattern of the released rhinos in Manas NP

Since 10th June 2008 till date (Sept., 2008) the Rhino1 has remained with the female rhinos within the electric fence in an area of about 1.00 sq. kms. It has been observed all the rhinos inside the enclosure have been living together without much of a problem feeding in the grasslands and wallowing in the small water-bodies available inside.

Rhino 2 on losing the company of Rhino 1 became a bit lonely and unstable. It was observed that since the mid of June the rhino started to explore new areas within the park every day and also started to use different sections along the south boundary to stray out in the night and evenings. This rhino traveled eastwards and explored many areas under Bhuyapara range even reaching areas (Namlang) north of Kokilabari close to the Bhutan hills. The rhino thereafter moved south east and spent quite a few days in the Agrang and Betbari areas continuing its behavior of feeding in the adjoining paddy cultivations in that area till 31st August 2008. On 1st September 08 the rhino was found to have strayed out of the park in a south easterly direction and this straying in the eastern direction continued till the time it was captured on 14th September 2008. The captured rhino was released in the enclosure having the other rhinos on 15th September 2008. Since then all the rhinos are living together in the area within the fence without any remarkable tension among the individuals.



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From analysis it has been found that the Rhino 1 used a comparatively smaller area of about 50 sq. kms. for ranging and Rhino 2 utilized an area of about 150 sq.kms. inside the park as its habitat.

Behavior and Feeding

The rhinos and their daily behavior has been monitored closely by the team and recorded at regular intervals. During these six months, from observations it can be stated that the individuals are showing similar nature to the rhinos in the other known habitats. From analysis of the recorded data it was found that a healthy portion of the time was devoted to feeding, wallowing and movements. Resting was recorded to be quite low but this can be attributed to the reason that due to the habitat condition a large number of times the rhino could not be physically observed even though signals were received by the receivers from the dense and tall grasslands.

The rhinos generally preferred to wallow in the numerous wetlands distributed all around, only in very few occasions the rhinos were seen to wallow in the small rivers and nullas like Kasimdoha. Resting was observed in the mixed woodland areas but most of the time even within the tall grasslands having a bit of clearing.

The rhinos were feeding primarily in the grasslands but also had a taste of a large variety of vegetation available in the habitats of Manas. The rhinos fed on the soft leaves of the young *Oxy (dillenia pentagyna)* and *Simul (bombax cieba)* trees. *Bihlangani (amphineuron opulentum)* and *Dhekia (diplazium esculentum)* are among the favored herbs. It was also seen that the rhinos were very fond of feeding on the aquatic plants like *Puni (lemna perpusilla and limnophila spp)* to name a couple. Among the grass species some of the favored are *Kahi (saccharum spontaneum)*, *Ulu (imperata cylindrical)*, *Nal (phragmites karka)* and *Dubori (cynodon dactylon)*.

Straying and Rescue



Photo – WWF India Field

Plate7 – Guarding against stray

Rhino 1 and Rhino 2 first met in the new habitat in mid-may after the release and from that time onwards straying became a regular event in the evenings and nights. Both the rhinos mainly ranged within a distance of about 500mts from the southern boundary or from the adjoining paddy fields during the daytime and at sunset starts to venture out. Straying was prevented to the best possible extent by the frontline forest staff with the help of the conservation volunteers and fringe community but still the rhinos were able to dodge the guards and sneak into the paddy fields. Straying and subsequent raiding of crops was observed to be at its peak during the months of May and June when the two rhinos were together. It was also observed that during this raiding period the stretch from Palsiguri to



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Katajhar (Table1) was most actively used and the rhinos traveled to an average distance of about 0.5kms from the park boundary. The pattern changed in case of solitary raiding and the rhinos even reached a distance of about 2kms from the boundary in one or two cases. Since early June after losing the company of Rhino 1 who went inside the enclosure, the Rhino 2 traveled eastwards to stray out from areas under Bhuyapara range. On 1st September 2008, he strayed out through the Betbari area under Bhuyapara and continuously moved in an easterly direction till it was captured on 14th September 2008 by the Manas team under the leadership of the Field Director. The rhino traveled continuously for all the days covering an approximate distance of 97 kms. and reached a maximum aerial distance of about 57 kms. (Bogamati) in the western fringe of Bornadi WLS (Fig3).

Section	% of Straying
2nd Gate - Palsiguri	3.41
Palsiguri - Kahibari	27.27
Kahibari - Bhatgali	14.77
Bhatgali - Katajhar	23.86
Katajhar - Bhuyapara	4.55
Bhuyapara - Agrang	11.36

Table1 – Straying pattern in sections along the south boundary

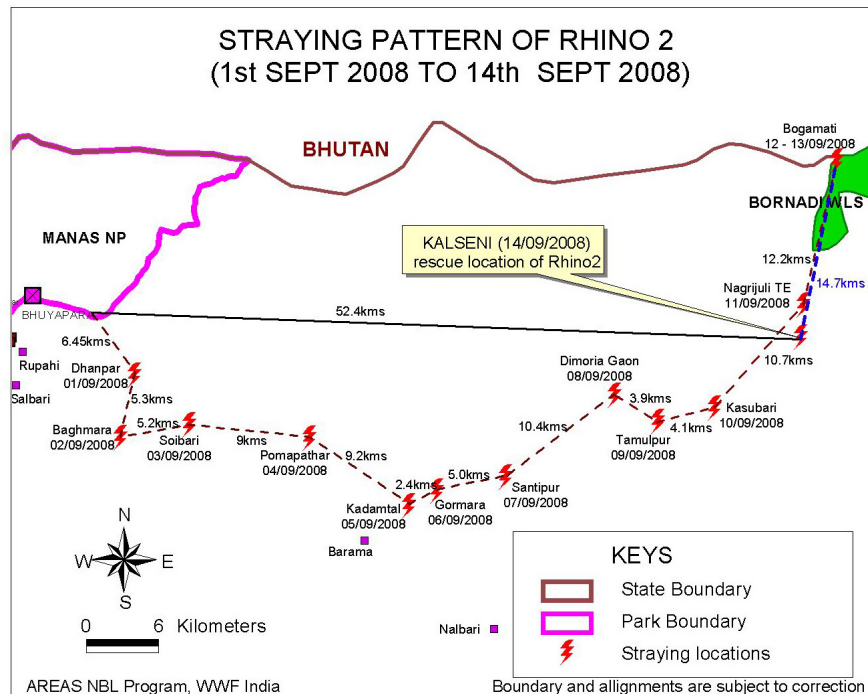


Fig. 3 – Straying Pattern of Rhino 2 from Manas NP



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The rhino was followed on all days by members of the Manas team, members from local NGO's and doctors. Multiple attempts were made to drive back the rhino with the help of elephants and also to capture without success due to inclement weather conditions as it was the monsoon season. Finally on favorable conditions the rhino was captured in the evening hours of 14th September 2008 with the joint efforts of the forest staff, Veterinary Specialists from Assam State Zoo, College of Veterinary Sciences Khanapara and WTI, Civil Administration and Police, WWF members, conservation volunteers, local NGO's, student body organizations and local communities. The rhino was successfully darted, crated and loaded on to a truck in the late evening of 14th September 08 in a place called Kalseni in Baksa district at an aerial distance of about 52kms from Manas, it was transported overnight and released in the morning of 15th September 2008 within the enclosure in Basbari. During this period of crisis, the media both print and electronic played a very positive role to make the community aware and generate support for the whole operation of security and capture of the rhino.



Plate8 – FDTP Manas planning the moves with team members, doctors & TCC members



Plate9 – Thousands of villagers trying to get a glimpse of the rhino



Plate10 – Attempting a drive with trained elephants



Plate11 – Attempting a capture of the stray rhino

Photo – WWF-India



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Acknowledgements

The Forest Department, Government of Assam, is duly acknowledged for undertaking the Indian Rhino Vision (IRV) 2020 Program along with all the major supporters and donors viz.- WWF, IRF USFWS and the BTC. The support and help offered by all the people in the concerned area is worth mentioning and we take the opportunity to offer our special thanks to all the NGO's and student body organization without whose help the efforts may not have been successful. We also offer our gratitude to the veterinary specialist Dr M.L.Smith from Assam State Zoo, Dr. Bijoy Dutta from College of Veterinary Sciences Khanapara, Dr Pranab Deka (FVO Manas) and Dr Bhaskar Choudhury & Dr P. Basumatary from Wildlife Trust of India who provided their services whenever requested for specially during the period of crisis. We also thank all the members of the Rhino Task Force, Assam and TCC subgroups specially Mr Kaushik Barua from the logistics group for his constant help and encouragement. Thanks also to Mr M.C.Malakar, IFS (Chief Wildlife Warden, Assam), Dr Bibhab K. Talukdar from IRF , Mr Tariq Aziz and Dr A. Christy Williams from WWF and Mr Khampa Borgoyari (Deputy Chief, BTC) for their constant support and advice. We thank the media, Police Department, Indian Army, SSB and District Administration for their much needed support. Last but not the least we would like to acknowledge the untiring and dedicated efforts of the officers and frontline staff in Manas, the Conservation Volunteers from the fringe villages and members from the WWF team in Assam who was ever ready to put forth a helping hand.

References

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ANNEXURE - I

GOVERNMENT OF ASSAM
OFFICE OF THE CHIEF CONSERVATOR OF FORESTS : : WILDLIFE : : ASSAM
REHABARI : : GUWAHATI – 781 008.

No.WL/ FG.41 (A)/ TCC/ 2007

Dated Guwahati, the 28th December, 2007

NOTIFICATION

In pursuance to the decision taken in 1st meeting of Translocation Core Committee the “**Manas - Monitoring Team**” is constituted as following.

1. Field Director, Manas TR, Sri A. Swargiary - Team Leader
2. Dy. Field Director, Manas TR, Sri C.R.Bhobora - Deputy Team Leader

Security :

3. Range Officer, Basbari, - Member
4. Range Officer, Bhuyanpara - Member
5. Range Officer, Panbari - Member

Darters/ Veterinarians :

6. Dr. Pranab K. Deka, FVO Manas TR - Member

Technical Support :

7. Mr. B.S.Bonal (CCF-WL)
8. Mr. Amit Sharma (WWF)
9. Dr. Bibhab Talukdar (Aaranyak)
10. Dr. Rathin Barman (WTI)
11. Dr. Kushal Sarma (CVSc, Khanapara)

Research Support :

12. Dr. G.C.Chetry (Res. Off., Manas)
13. Mr. Bibhuti P. Lahkar (Aaranyak)
14. Mr. Deba Kr. Dutta (WWF)
15. Dr. Prabhat Basumatary (WTI)

Terms of references :

1. The team will be responsible for monitoring the released rhinos and shall prepare a day to day report, after taking over from the Release Team.
2. The team will also be responsible for ensuring security and anti-poaching activity in the National Park.
3. The team will work under the supervision and guidance of the TCC.
4. The team will work in close co-ordination with the officials managing the monitoring control station.
5. The leader will nominate 15 forest personnel, 6 armed guards and 6 *kunkie - mahaut* for regular rhino monitoring. The team will also take the help of individuals to accomplish different activities as necessary.

(B.S.Bonal)

Chief Operation Officer, TCC cum
Chief Conservator of Forests (WL),
Rehabari Guwahati – 8.



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ANNEXURE - II

**GOVERNMENT OF ASSAM
OFFICE OF THE FIELD DIRECTOR: MANAS TIGER PROJECT
BODOLAND TERRITORIAL COUNCIL
BARPETA ROAD: ASSAM**

O. O. No. 100.

Dated: 24-04-2008.

Following mentioned forest staff are hereby deputed specifically for the purpose of Monitoring and constant tracking of the two male Rhinos recently translocated to MANAS on 12-04-2008 under IRV-2020 programme. They will keep a close liaison with the Monitoring team engaged by WWF, and the joint team shall be responsible for overall monitoring and constant tracking of the Rhinos.

Name of the Forest staff:

1. Sri Daneswar Das, Forster-I,
2. Sri Barekul Islam, Forester-I,
3. Sri Kumud Das, Forest Guard,
4. Sri Pabin Ray, Forest Guard,
5. Sri Emanuel Narzary, Forest Guard,
6. Sri Tarini Kalita, Forest Guard.

(A. Swargowari, IFS)
Field Director, Manas Tiger Project,
Barpeta Road, Assam.

Memo No. FDTP/Rsd/IRV/101-06

Dated: 24-04-2008.

Copy to:-

1. The Chief Conservator of Forests, Wildlife, Assam, Rehabari, Guwahati-8, Assam, for favour of kind information and needful.
2. The Deputy Field Director, Manas Tiger Project, Barpeta Road, for information and necessary action. He is requested to supervise the monitoring procedure.
3. The Range Officer, Bansbari Range, Bansbari for information and necessary action. He is requested to supervise and guide the team constantly.
4. Sri Amit Sarma, WWF-INDIA, 202, Meghmallar, Uzan Bazar, Guwahati - 1, Assam, for information and needful.

(A. Swargowari, IFS)
Field Director, Manas Tiger Project,
Barpeta Road, Assam.



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ANNEXURE - III

7	Rhino Code	Date	Time	Weather	Stn Name	Latitude	Longitude	Signal quality	Location	Nearest camp	Land cover	Surrounding if land
10	148-7000	21-07-08	7:10 AM	Rainy	Rhino Camp	-	-	Strong	At 1071 Boma	Rhino Camp	Grassland & Nala	Hard
11	148-2100	20	9:00 AM	ca.	MJ Jangsi	N. 26.65989	E. 91.02682	ca.	10° N.E	P.G. Camp	ca.	ca.
11	148-2100	20	10:30 AM	ca.	Muduli Jangsi	N. 26.66337	E. 91.03397	ca.	25° N.W	ca.	ca.	Hard
11	148-2100	21-07-08	12:10 PM	ca.	Muduli Jangsi	N. 26.66411	E. 91.03537	ca.	245° N.W	ca.	ca.	ca.
11	148-2100	20	2:15 PM	ca.	Muduli Jangsi	N. 26.66337	E. 91.03397	ca.	255° N.W	ca.	ca.	Hard
11	148-2100	20	3:40 PM	ca.	MJ Jangsi	N. 26.66411	E. 91.03537	ca.	9° N.E	ca.	ca.	ca.
11	148-2100	20	5:10 PM	Cloudy	Sasarsadi Jangsi	N. 26.66762	E. 91.03788	ca.	35° N.E	Kahibara Beat	ca.	ca.
11	148-7000	22-07-08	7:15 PM	Clear Sky	Rhino Camp	-	-	Strong	At 1071 Boma	Rhino Camp	Grassland & Nala	Hard
11	148-2100	20	9:00 PM	ca.	MJ Jangsi	N. 26.66411	E. 91.03537	ca.	30° N.W	P.G. Camp	ca.	ca.
11	148-2100	20	10:30 PM	ca.	Sasarsadi Jangsi	N. 26.66762	E. 91.03788	ca.	255° N.W	Kahibara Beat	ca.	ca.
11	148-2100	23-07-08	12:30 PM	ca.	Muduli Jangsi	N. 26.66337	E. 91.03397	ca.	365° North	P.G. Camp	ca.	ca.
11	148-2100	20	3:40 PM	ca.	MJ Jangsi	N. 26.66411	E. 91.03537	ca.	245° N.W	ca.	ca.	ca.
11	148-2100	20	4:40 AM	ca.	Sasarsadi Jangsi	N. 26.66762	E. 91.03788	ca.	230° N.W	Kahibara Beat	ca.	ca.
11	148-7000	24-07-08	8:30 AM	Sunny	Rhino Camp	-	-	Strong	At 1071 Boma	Rhino Camp	Grassland & Nala	Hard
11	148-2100	20	10:05 AM	ca.	MJ Jangsi	N. 26.66411	E. 91.03537	ca.	No Signal	P.G. Camp	ca.	ca.
11	148-2100	20	11:30 AM	ca.	Kahibara Beat	N. 26.67175	E. 91.04422	ca.	ca.	Kahibara Beat	ca.	ca.
11	148-2100	20	2:15 PM	ca.	MJ Jangsi	N. 26.66411	E. 91.03537	ca.	ca.	P.G. Camp	ca.	ca.
11	148-2100	20	5:30 PM	ca.	Muduli Jangsi	N. 26.66337	E. 91.03397	ca.	No Signal	Kahibara Beat	ca.	ca.
11	148-2100	20	6:00 PM	ca.	Kahibara Beat	N. 26.66439	E. 91.03788	ca.	No Signal	Kahibara Beat	ca.	ca.

A sample of the data register maintained by the IRV2020 field Monitoring Team at Manas



ANNEXURE – IV

1. FRONT-LINE FOREST STAFF INVOLVED IN MONITORING OF RHINOS

A. **Basbari Range** : Daneswar Das (Fr.I), Bariqul Islam (Fr.I), Prabitra Kr.Das (Fr.I), U.Pathak (Fr.I), Prabin Kr.Roy, Lankeswar Lahkar, Kumud Das, Emanuel Narzary, Arabindra Patgiri, Dilip Roy, Azad Ali, Ayub Khan, Tarini Kalita, Dhon Doloi, Roma Roy, Jogen Das, Romesh Kosh, Jatin Ch.Das, Bobul Nath, D.Sharma, Lankeswar Das, B Baruah, Bimol Roy, Sufen Basumatry, Gunin Das, Dipuru Deka (Head Mahout), Ganesh Das (Mahout), Sabin Bodo (Mahout), Prafulla Konch (Mahout), Hopna Mazi (Mahout), Bogi Kalita (Mahout) and a host of Casual workers and Conservation Volunteers in addition to the departmental elephants.

B. **Bhuyapara Range** : Dilip Das (Fr.I), Niranjan Basumatary (Fr.I), Narayan Kumar (Fr.I), Bhakti Ram Kalita (Fr.I), Umesh Das, Tilok Boro, Bokal Boro, Ajoy Das, Damodar Kalita, Jitu Boro, Amit Baishya, Kunja Bihari Sharma, Bishnu Boro, Lakshan Boro, Lakhindar Karmakar, Kiran Boro.

2. WWF-INDIA TEAM INVOLVED IN MONITORING OF RHINOS

Deba Kr. Dutta (i/c), Jamir Ali, Iushuf Khan, Bipol Ch. Nath and Rajen Khaklari

About the Authors –

1. Bishan Singh Bonal – Chief Operations Officer, Translocation Core Committee cum Chief Conservator of Forests (M&E), Assam
2. Amit Sharma – Deputy Chief Operations Officer, Translocation Core Committee (WWF-India, Assam)
3. Deba Kr. Dutta – Member, Manas Monitoring Team (WWF-India, Assam)
4. A. Swargowari – Leader, Manas Monitoring Team cum Field Director, Manas TP
5. C.R. Bhabora – Deputy Leader, Manas Monitoring Team cum Deputy Field Director, Manas TP