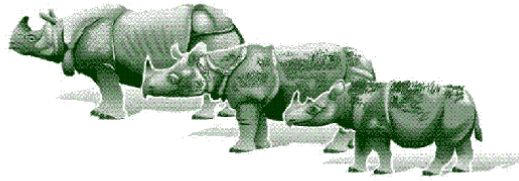


# IUCN SSC Asian Rhino Specialist Group

# ASRSG



SSC  
Species Survival Commission



# 2010



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RHINO  
SPECIALIST  
GROUP

## PROCEEDINGS OF THE ASIAN RHINO SPECIALIST GROUP MEETING HELD AT KAZIRANGA NATIONAL PARK, INDIA 10-12 FEBRUARY 2010

**Edited and Compiled By :**

Bibhab Kumar Talukdar, Sectionov and Lucy Boddam Whetham



Meeting Supported By

**AREAS**  
ASIAN RHINO & ELEPHANT  
ACTION STRATEGY



# **Meeting of Asian Rhino Specialist Group**

February 10-12, 2010  
Kaziranga National Park  
Assam :: India

*Report Edited and Compiled by:*

Bibhab Kumar Talukdar, Sectionov and Lucy Boddam Whetham

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***Organised by IUCN/SSC; Asian Rhino Specialist Group***

*Meeting Supported By:*  
*WWF-AREAS Programme, International Rhino Foundation, Save the Rhino International,  
Taiwan Forestry Bureau and Assam Forest Department*

### **Background:**

The combined meeting of the Asian Rhino Specialist Group (South and South East Asia) was convened at Kaziranga National Park, Assam, India from 10-12 February 2010 to assess the progress made towards conservation of the three Asian rhino species in their current distribution range in South and South East Asia. The earlier meeting of AsRSG for South Asia was held at Chitwan National Park from 15-17 September 2008 and for South East Asia, the meeting was held at Bogor, Indonesia from 2-3 March 2009.

The objectives of the 2010 meeting of AsRSG were -

- Compile and synthesise information on the current status and conservation of Asian rhinos across their range (Greater one-horned Rhino, Javan rhino and Sumatran rhino)
- Gain a better understanding of rhino poaching and international trade
- Invasive species management
- Carry out a comprehensive Threats Analysis of all three Asian rhino species
- Promote and catalyse conservation activities of Asian rhinos
- Provide and improve technical information and advice on the conservation of Asian rhinos
- Build capacity through the exchange of ideas, information and technical expertise amongst members of the group
- Begin to build on current Asian rhino conservation strategies
- Create a network of rhino managers and researchers in order to encourage regular contact with one another to improve rhino conservation in range countries

The meeting was attended by over 40 participants from as many as eight countries. The inaugural function was held on the afternoon of 10<sup>th</sup> February 2010 which was inaugurated by Mr. Suren Buragohain, Director of Kaziranga National Park. Dr. Bibhab Kumar Talukdar, Chair of the AsRSG briefed the members and participants about the purpose of the meeting. The first session included brief addresses from Tariq Aziz for Nepal, Pak Agus for Indonesia, Prof Abdul Hamid for Sabah, Mr Thanh for Vietnam, Ex-Director of KNP (name?), Christi Williams WWF AREA Manager and Susie Ellis from International Rhino Foundation, sponsor and AsRSG facilitator.

The meeting continued with presentations from range countries and rhino bearing protected areas of Asia. The rest of the meeting was taken up by an intense threats analysis and assessment process.

Day-1: 10 February 2010

**Country Presentation of Status of Rhinos:**

**Vietnam : Cat Tien National Park (CTNP)**

**Presenter: Mr. Tran Van Thanh (Director Cat Tien National Park (CTNP))**

The Cat Tien National Park of Vietnam still harbours about 5-7 Javan Rhino and Mr. Tran Van Thanh, Director of the national park presented the Vietnam country current status which highlighted the efforts being taken by the park authorities towards conservation and management of the remaining Javan Rhino in the national park. He also mentioned that the Cat Tien National Park is also a Biosphere Reserve and included a list of biodiversity which exists in the national park including -

- Flora: 1,610 species, 38 species in Vietnam Red Data book
- Mammals: 105 sps, 29 sps in IUCN red data book
- Birds: 351 species, 31 sps in Vietnam Red Data book
- Insects: 756 species, 2 sps in VN Red Data Book
- Reptiles: 109 species, 20 sps in Vietnam Red Data book
- Amphibians: 41 species, 3 sps in Vietnam Red Data Book
- Fishes: 159 species, 8 sps in Viet nam Red Data Book

He further informed the group that currently only two small populations of Javan Rhino (*Rhinoceros sondaicus*) exists which includes Ujung Kulon National Park (INDONESIA) where about 50-60 individuals reside and Cat Tien National Park (VIETNAM) where about 5-7 individuals are living. In 1980, after some surveys scientists confirmed one rhino population in CatLoc area of Cat Tien National Park. Since 2001 under the elephant and Javan rhino's action strategy financed by WWF, Tiger and Rhino Conservation Fund of the U.S Fish and Wildlife Service, two teams are currently patrolling and monitoring Javan rhino in CTNP. Camera trapping devices used in May 1999 has given a total 7 photographs of the Javan Rhino rhino in the national park. In 2005 three more camera trap photos were captured while the rhinos were having a mud-bath during the day. In 2006 the park authorities recorded about 5 minutes of film on Javan rhino during the day. The photos testify the presence of Javan Rhino in the CTNP. Mr Thanh stated how important rhino and elephant conservation was, and conservation has recently been getting more support from the government.

Some of the activities being carried out in the NP are as follows -

- Recently, with the sponsorship of the WWF Greater Mekong – Vietnam Country Programme (WWF VN) to accurately determine the population size and sex ratio of Javan Rhinos in Vietnam.

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- Survey using detector dogs (WWF VN) as well as genetic profiling of the rhinos by Queen's University, Canada to analyse reproductive viability. Two detector dogs will be utilised to increase survey coverage and ability to detect rhino dung. Capture-mark-recapture analysis will be employed to try to gain a statistically valid estimate of population size. This will be conducted on the genetic profiles constructed from the faecal samples. Hormonal analysis of faecal samples will be attempted to determine reproductive status of the rhinos
- Field constraints faced during the survey works. All suitable habitat in Cat Loc will be surveyed (approx. 10,000ha) by the field teams, including the 'core area' for rhinos (approx 5000ha) and the wider area where rhinos possibly are and used to occur (approx 5000ha). Four video camera-traps will also be established over saltlicks and wallows to receive graphic images and film of the rhinos for communications purposes
- Threats to the current population, the population of rhino is very small, from 3 - 5 individuals. We also don't know whether a male exists in the population as the population structure is not known yet.. The possible in-breeding of rhino in CTNP may result in losing the genetics diversity and this population will decline.

The participants at the meeting expressed their concern over the current situation and also put suggestion to improve upon the conservation and management of Javan Rhino in Cat Tien NP. Mr. N.K. Vasu was wondering whether in-situ conservation is possible. Mr. Bhupen N Talukdar encouraged the Vietnamese delegate to take the best conservation efforts possible to help save the species. Once the sex of the remaining individuals is known, we need to have recommendations for further action. Vietnam and Indonesia need to work together. Mr. Widodo Ramono suggested putting the remaining rhinos within a small area for intense monitoring and management. Dr. Amrithraj Christy Williams encouraged dialogue to bring government officials to the platform and implement the suggestions to improve upon the management need for Javan rhino in Cat Tien NP.

### **Sabah Malaysia:**

**Presenter : Prof. Abdul Hamid (Borneo Rhino Alliance, BORA - [www.borneoalliance.org](http://www.borneoalliance.org))**

Prof Hamid explained how SOS Borneo ceased operation in 2007 and is now a local NGO - Borneo Rhino Alliance.

The report from Sabah, Malaysia reflected how two-year old male Sumatran rhino who wandered into a oil palm plantation was rescued, snare wound treated, and is currently in captivity under the Rhino Rescue Programme since 2008, we need to make use of him. The presentation also included current progress and plans to develop a corridor and a fenced area. BORA has also visited the Sumatran Rhino

## Proceedings of AsRSG meeting 2010 held at Kaziranga NP, India

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Sanctuary in Sumatra to try to emulate the sanctuary in Borneo. The current task of this programme include -

1. Trying to establish the genetic relationship between Sumatran rhinos in peninsular Malaysia and Borneo
2. The operation of Sabah Rhino Sanctuary
3. Possibility of capturing rhinos from the wild

Since Sabah has become the last hope for Sumatran rhino conservation in Malaysia, the participants encouraged the Sabah-Malaysian delegate to undertake genetic studies and also enhance protection in the wild to ensure that the poaching of the remaining population of Sumatran Rhino in Sabah Malaysia could be halted. Questions from the floor included clarification on how different the subspecies are. Hamid also outlined that a female and calf ad bbeen seen but in wetland which is not optimal habitat. Threats from poaching continues, have found guns, snares, camps etc. Also the rhino population on Sabah is spread out too thinly over a vast area so the individuals maybe finding it difficult to find each other to breed. The guesstimate of the population is 30 rhinos.

### **Peninsula Malaysia: Rhino rescue project Peninsular Malaysia**

**Presenter: Ahmad Zafir Abdul Wahab, Senior Programme Officer, WWF-Malaysia**

- The presentation gave an overview of the survey of Sumatran rhino in peninsular Malaysia. The survey covered main rivers, ridges, salt licks, old wallows covering a 710 km area including using camera traps. Since Feb 2007 the traps have secured about 2102 wildlife photos during 838 trap nights. But no rhinos found.
- Big survey involving WWF, RPU, Peninsular Malaysia and Sabah Wildlife Department, Forestry, Perak State Parks Corporation and local tribe in 2007. Took part in wildlife department's inventory in 2008 in the park. No rhino evidence found.
- According to data obtained on poaching there has been weak enforcement, over 311 localities recorded with poaching signs.
- The Wildlife Protection Unit working in the area found much evidence of encroachment such as illegal logging, many snare and illegal activity inside NP. They also found evidence of encroachment especially several peoples from south Thailand inside NP (a Thai passport was found as well as food packaging from Thailand).
- Wildlife Protection Unit (WPU) formed in Oct 2008 is gathering poaching and encroachment information. This unit helped to reduce and eventually cease illegal activities within Royal Belum State Park

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- The WPU carry out monthly patrols in the park and along Grik-Jeli highway,. Cooperating with DWNP, PSPC and police, as well as information sharing with DWNP, police and TRAFFIC-SEA.
- Monthly WPU patrols have confiscated snares, poaching tools, apprehended suspected poachers near the park and have destroyed snares in the forest
- Social surveys were carried out, 297 people were interviewed including some poachers. Only 2% in 5 years had seen any rhino in the forest in North Malaysia.

The initiative interviewed many people to trace down any recent information on the existence of Sumatran Rhino in Peninsular Malaysia however failed to get any authentic record of Sumatran Rhino in Peninsular Malaysia.

Need to follow up with the Malaysian government to encourage them to reassess the numbers so informed decisions can be made.

### **Indonesia : Future of Javan and Sumatran Rhino in Indonesia**

**Presenter: Widodo Ramono, YABI Executive Director, Indonesia**

The presentation included information on the Indonesian Rhino Conservation Action Plan- Summary and recommendations towards strengthening conservation measures for Javan and Sumatran rhino in Indonesia. Mr. Ramono mentioned about diverse threats ranging from Tsunami, disease, climate change, human pressure, inbreeding depression, poaching, competition (between two different rhino species), invasive species, logging, LU conversion and developmental activities such as road building.

Some of the conservation activities initiated so far includes -

1. Population and habitat monitoring
2. Livelihood initiatives
3. Awareness
4. Protection, intelligence
5. Captive propagation management
6. Policy and Govt engagement

To enhance the knowledge base on Javan rhino and to secure the long term future of Javan rhino in Indonesia, he emphasised the need to create more habitats for Javan rhino through in-depth assessment of habitat.

Intensive and active management for the second habitat could include-

1. Planting rhino food plants

2. Active habitat management – prevention of forest fire, controlled burning, invasive species management
3. Ensure no rhino poaching
4. Development / maintaining patrolling tracks and new guard posts,
5. Increase number of Javan rhino wallows and intensively guard these areas
6. Conservation education to facilitate creation of second habitat
7. Relocation of families from Rhino habitat needs socialization and promotion
8. Provide alternative income sources for local communities, cottage industries (such as cacao planting), financial incentives and sustainable agriculture outside of the park. There is currently quite bad encroachment within UKNP.
9. PR activities and increase in government support. Need to work hand-in-hand with local government

He also mentioned that existing policy intensive to be examined and identify the agencies and responsibilities.

Ensure funding and Request to IUCN – AsRSG to endorse and support:

- Support in policy formulation to sustain rhino population through protection and active habitat management programme.
- Disease surveillance programme in Gn. Honje UKNP, Way Kambas and other rhino habitat.
- Research on invasive species of mantangan (*Merremia peltata*) in BBSNP and else where.
- Development of a Javan Rhino Study area in Gn. Honje UKNP.
- Re-enforcement *ex-situ* and *in-situ* rhino population as one meta population in order to increase Minimum Population Viability.
- Sustainable funding plan

### **Indonesia: Optimizing habitat of Javan Rhino**

**Presenter: Adhi Hariyadi, WWF - Indonesia**

The presenter emphasised the various components in Ujung Kulon NP ecosystem some of which are uncontrollable (rainfall, soil quality and population density) and others which are controllable (access to food, access to water, access to wallow sites). He also mentioned -

- Carrying capacity of Javan rhino in the peninsular area. Significance of access in determining the carrying capacity – food availability and food quality. Need to optimise Javan rhino food sources. Much of the area is lowland rainforest and mangrove forest swamp, and some primary rainforest so not all habitat is therefore suitable for rhinos. The NP is also fenced in some areas.
- Need to reduce invasive palm species and promote growth of rhino fodder. Need to select the plot area to reduce *Arenga obtusifolia* domination. An area with

700 palms per hectare was cleared manually and eliminated the probability of palm re-growth by thoroughly removing sub-terraneous shoot and fruits from the plot.

- Why eradicate *Arenga* palm? Because considered as an invasive species, not used intensively by the rhinos (they eat the fruit sometimes), spreads very quickly and over shadowing from the palm inhibits growth of other plant species (therefore reducing biodiversity).
- The main ideas from this project is to imitate natural feeding grounds (*rumpang*) commonly used by rhinos, to assess food plant growth using An Veg method (vegetation analysis), and to observe rhino visitation (habitat utilization) before and after clearing.
- Percent occurrences of rhino visitation to the cleared plot throughout August 2008-July 2009 indicates no visitation in the first two months (August and September 2008), and shows steady visitation between November 2008 and July 2009 with most occurrences (100% rhino findings in every observation occasion) in December 2008 - February 2009 and April 2009.
- There is a negative correlation between palm density and food plant growth (using An Veg method)
- The food plant biomass (abundance) is increasing over time after clearing
- The diversity (numbers of species) is not increasing significantly
- There is a trend of increasing rhino visitation after palm clearing (qualitative).
- Palm / invasive plant control can be used as tools for increasing rhino's access to food; thus increasing the carrying capacity in the current habitat.

### **India (Assam): Kaziranga NP and Rhino Conservation**

**Presenter: Mr. R.N. Sarma, Research Officer, KNP, Assam**

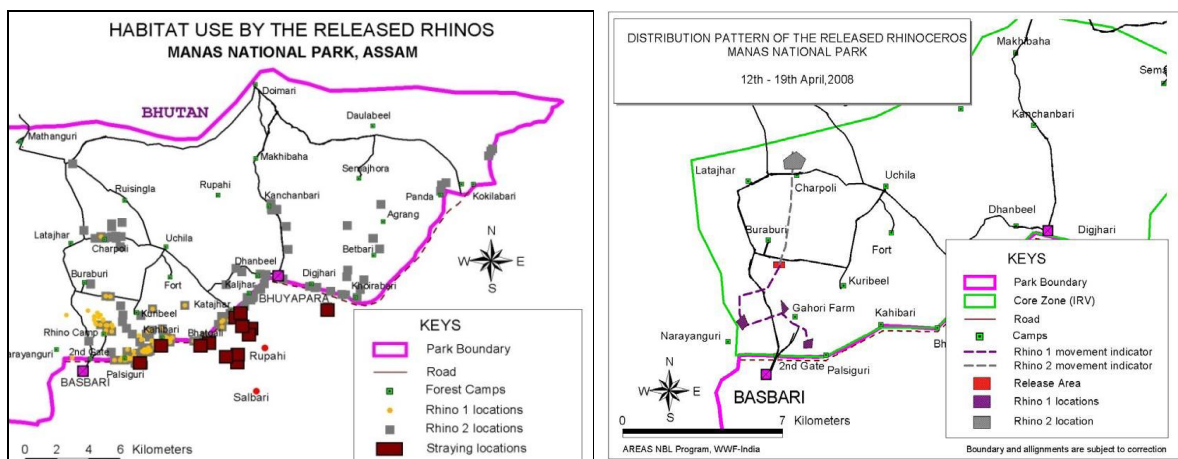
The presenter highlighted the rich wildlife diversity in Kaziranga NP and the dynamic variety of habitat. The park harbours 17 species of endangered mammals (including swamp deer, capped langur, river dolphin), 553 bird species, 25 globally important species, rich herpetofauna, 2048 rhinos (as estimated in 2009). It also has the highest tiger density in India and the world largest population of Asiatic water buffalo. To enhance protection of rhinos and other species, the park management has set up 152 anti-poaching camps. Threats from poachers, and invasive species like rapid growth of mimosa, poses threats to the rhinos in the park. Kaziranga has witnessed a yearly increase of about 68 rhinos since 2006 which is contributing to population growth of rhino in the park. Flood is an annual feature in KNP. Its an essential devil, the park needs it but it causes massive problems. With such a large rhino population there is some problems with overcrowding and the rhinos straying out of the park.

At the end of the presentation question of genetic diversity among the rhino population in Kaziranga was raised as it was believed that the 2000+ rhinos currently found in Kaziranga NP are infact descendants from about 20 rhinos in the early 19<sup>th</sup> century. It was suggested that genetic diversity study be taken up to assist adaptive management.

### India (Assam): The released Rhinos in Manas\_NP

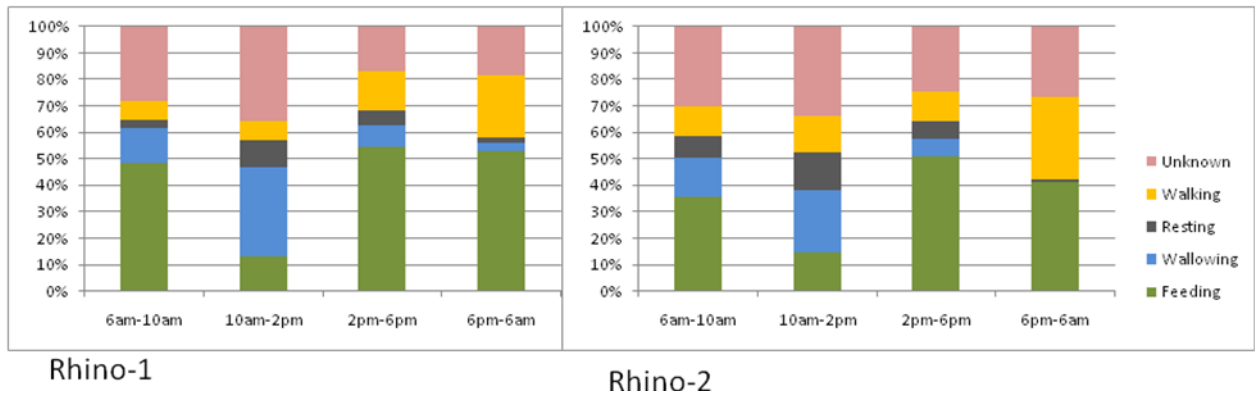
Presenter: Mr. Deba K. Dutta, WWF India

The presenter discussed monitoring of rhinos released in Manas NP under IRV 2020 including the project, objective, strategy and activities. He mentioned that two male rhinos released in Manas on 13<sup>th</sup> April 2008 through wild to wild translocations from Pobitora, the rhinos are being monitored daily through radio telemetry equipment. He stated that rhinos prefer to stay in the areas close to the south boundary in the Basbari range.



He further revealed that daily monitoring since 13<sup>th</sup> April 2008 using VHF telemetry equipment recorded the two rhinos more than 1000 times during the period April 2008 to March 2009. The two male rhinos were seen to be friendly to each other and also spend time together. They also enjoy a cordial relation with the females released under the Rescue and Rehabilitation Programme of Assam Forest Department and Wildlife Trust of India.

The temporal behavior of the two rhinos is shown in the following graphics.



The monitoring activities of rhinos include the components as below -

1. Ranging of released rhinos
2. Activity budgeting of the rhinos
3. Temporal behaviour
4. Habitat used by rhinos
5. Food species used (need to consider quality of rhino fodder)
6. Association with other animals

### India (Assam): Conservation Genetics of Greater One-horned Rhinoceros (*Rhinoceros unicornis*) in India

**Presenter: Udayan Borthakur, Aaranyak**

The presenter provided information about the research work planned by the Wildlife Genetics Programme of Aaranyak which includes the following -

- A. Pilot study to standardize protocols for dung DNA analysis
- B. Evaluation of genetic diversity and population differentiation among the Protected Areas (PA) through non-invasive sampling
- C. Non-invasive dung DNA-based estimation of individual numbers and sex ratio of rhinos in the PAs.

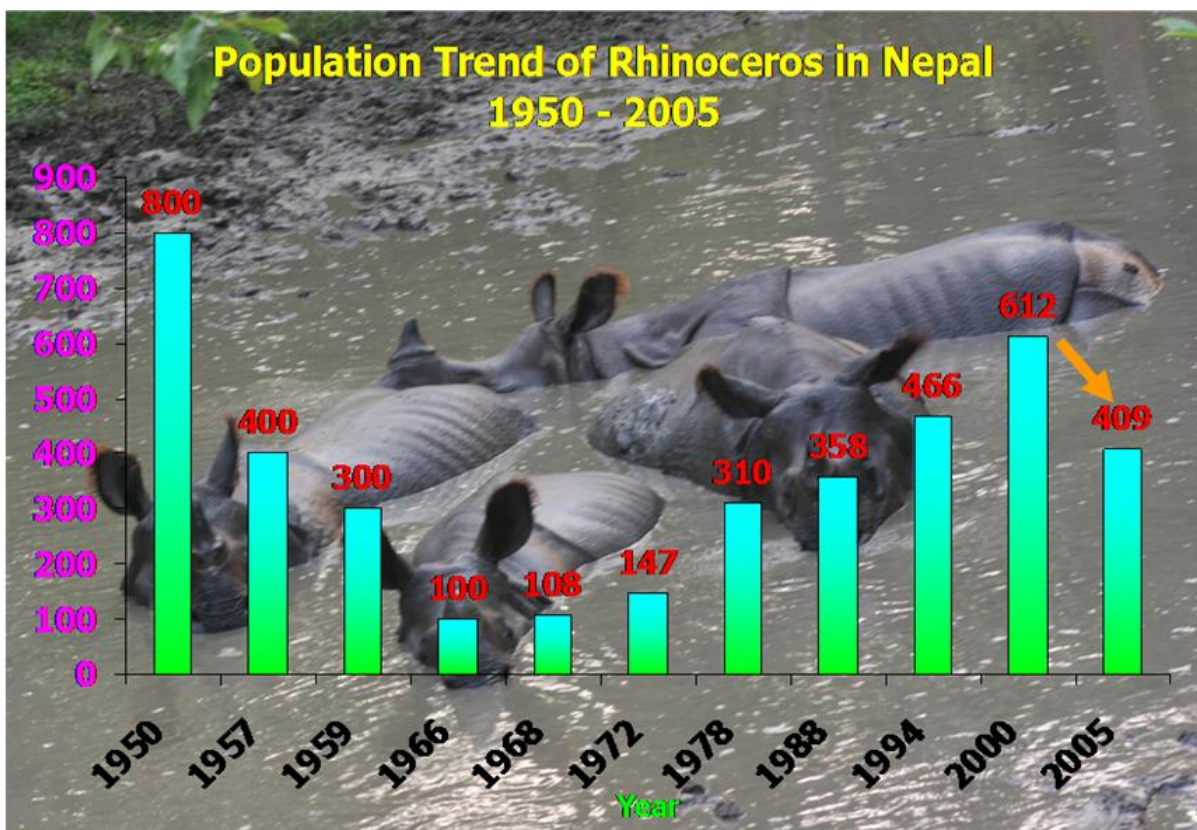
Udayan further mentioned that a large scale population genetic monitoring of the species is possible, with optimized methodologies on dung DNA analysis. With individual and gender identification techniques it becomes possible now to

- i. Estimate population size and sex ratio
- ii. Identify possible migrants among the existing wild populations
- iii. Undertake molecular tracking work on stray rhinos as well as tracking the movement of reintroduced individuals
- iv. Help forensic investigation of poaching cases

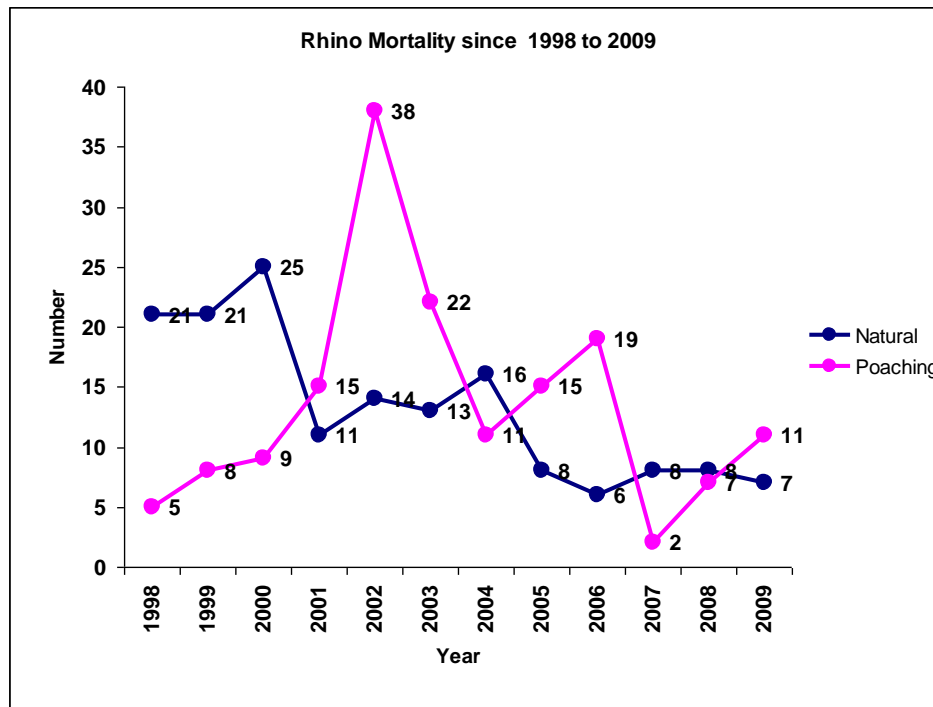
**Nepal : Rhino in Nepal**

**Presenter: Megh Bahadur Pandey, DNPWC - Government of Nepal.**

The presenter shared some background of Nepal's conservation history and mentioned that a major step forward took place towards conservation of rhino by the formation of Gaida-Gasti patrolling group in 1962 in Chitwan. Royal Chitwan National Park (RCNP) was then established in 1973 and in 1975, Royal Nepal Army were introduced to RCNP to strengthen protection of rhinos. The population trend of rhinos in Nepal is shown in the following graphs.



While Nepal promoted rhino conservation from early 1970s until about the year 2000, socio-political instability in Nepal caused increased rhino poaching which has reduced the rhino population from about 600 to about 400. Socio-political stability has improved gradually since 2008 and the guard posts in Chitwan NP have been re-strengthened. The rhino mortality in Nepal is shown in the following graphs -



It was further mentioned about the threats being posed by invasive species to rhinos and their habitat and emphasised the need to undertake research to address this growing threat. He has also analysed the strength and weakness in rhino protection efforts in Nepal and emphasised the need for adaptive management. He mentioned that the following tasks are being performed by the Nepalese authority to enhance conservation of rhino:

- Population monitoring through MIST, ID based and Satellite telemetry
- Grassland management
- Water hole construction
- Infrastructure improvement (Construction of Posts, communications, transportation, training etc.)
- Anti-poaching support (PAs and outside PAs)
- Community support (CBAPO)
- Awareness Programme
- Sweeping operations
- Informant network strengthened
- Local youth mobilized
- Mobile teams
- Formation of Rhino Conservation Coordination Committee

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### Nepal: Research and Monitoring on Rhinoceros and its habitat in Nepal

**Presenter: Naresh Subedi, Research Officer, NTNC-Nepal**

The presenter discussed ongoing work on research and monitoring of rhinos in Nepal with the following objectives:

- Establish a science-based monitoring system for rhinoceros and develop effective surveillance mechanism in all rhino bearing PAs
- Study impact of *Mikania micrantha* on rhinoceros and its native food plants
- Build-up national capacity in rhino conservation

ID based monitoring of rhinos which includes:


- Each and every individual rhino is morphologically different and can be identified from its unique features (horn size, shape, body marks, cuts, lumps)
- Based on the unique body features, an ID profile of every individual is created
- Long term monitoring of population status and surveillance
- Status reporting – monthly/annual

Instructor's training followed by site trainings through:

- use of equipment (GPS, Binoculars, Cameras)
- Use of patrol and sighting booklets
- Monitoring of rhinos in all rhino areas -initiated
- Training to field staffs from Rhino bearing PAs in India (Assam and UP)



**GREATER ONE-HORNED RHINO SIGHTING FORM**



Protected Area \_\_\_\_\_ Date \_\_\_\_\_

Observers \_\_\_\_\_ Time (24 hrs) \_\_\_\_\_

Location (Area/Block No.) \_\_\_\_\_

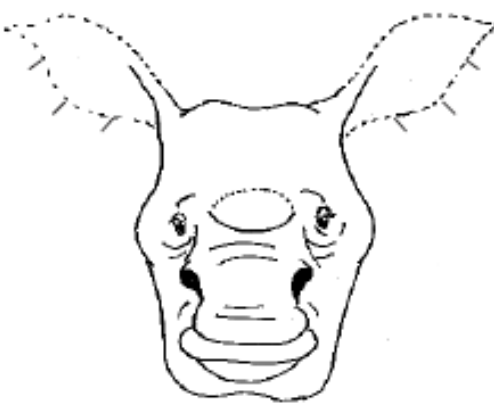
GPS Location UTM Eastings: 

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UTM Northings: 

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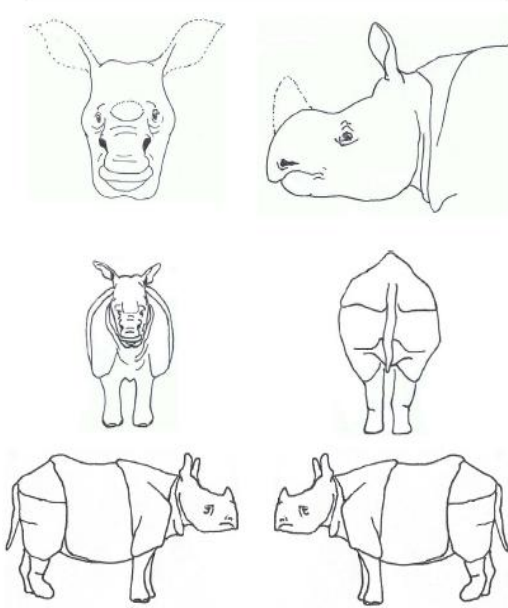
Seen?  Seen?



**GREATER ONE-HORNED RHINO MASTER ID RECORD**

Chitwan National Park / Bardia National Park / Suklaphanta Wildlife Reserve

ID Number:	Name:	Sex:
Notch Code:	Origin:	Birth Date:
	Mother:	Father:



**TRANSBOUNDARY ISSUES:**

The issues related to trans-boundary rhino conservation were discussed. It was felt that for small populations of rhino in areas like Suklaphanta, Bardia, Gorumara, Manas, Orang, Katarniaghat and Dudhwa, intensive ID/radio collar-based monitoring of rhino is required. The need to put radio collar in rhino population moving around India-Nepal border in Katarniaghat-Bardia and Lagga Bagga-Suklaphanta has also been suggested to monitor the rhino and initiate appropriate conservation measures. It was also felt essential to develop monitoring protocols towards training/sharing of information through joint collaborative approach. As well as essential to strengthen the corridors and connectivity between Bardia-Katarniaghat & Sukla-Duduwa/Pilibhit and specially to build-up the Sukla/Bardia population.

Under the Indian Rhino Vision 2020, emphasis is to build capacity for translocation of rhinos. It was further emphasised that IRV 2020 should continue translocation of rhinos in Manas and extended to Laokhowa and Burachapori WLS in Assam.

### Day-2 and 3: 11 - 12 February 2010

(A field visit to Kaziranga National Park was undertaken by all attendees on the Thursday afternoon).

### THREAT ANALYSIS:

Dr. Susie Ellis, Executive Director of IRF who is also the IUCN/SSC; Red List Focal Point for Asian rhinos coordinated this session to carry out a threat analysis of each of the three Asian rhino species. Threat is being defined as any factor that causes either a substantial decline in the numbers of individuals or a substantial contraction of the species' geographic range (current or potential). Direct threats include immediate threats such as a human cause like poaching. Indirect includes root drivers such as land conversion and poverty. It is crucial to distinguish threats from the natural processes that limit population size and distribution and proximate (direct) and ultimate (indirect) threats.

Aim of Threat Analysis:

- To accurately and comprehensively identify the primary threats to species persistence.
- If the wrong threats are identified, proposed actions may fail to halt or reverse population declines

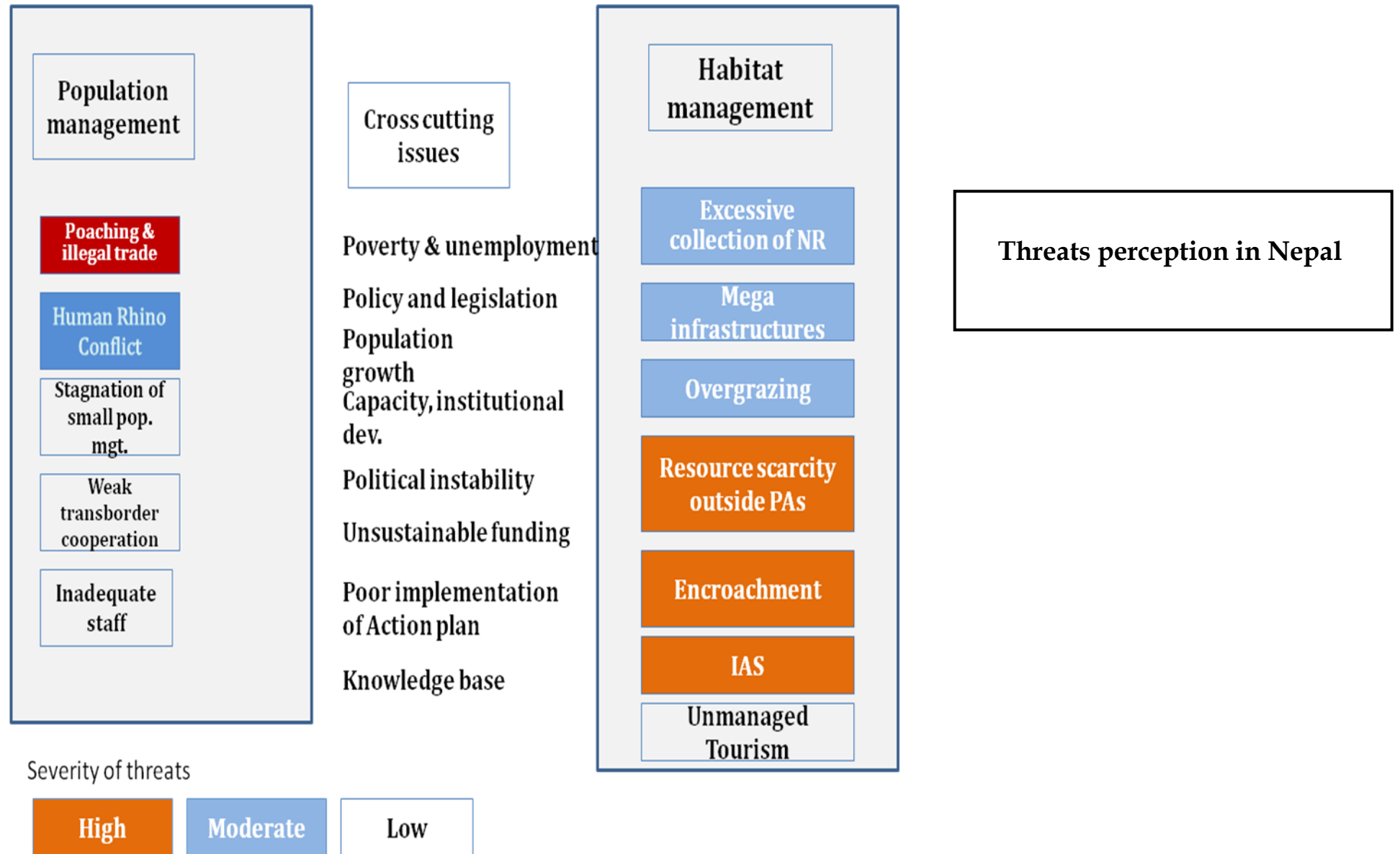
Working Groups for each species were formed, existing and potential threats were discussed and identified and the level of severity-low (1), medium (2) or high (3), was established. The threats were then grouped into similar themes. Once the threats were identified, discussions began on the driving forces behind each threat using "The Power of Five Whys". This method is used to identify the root cause of a threat, there are often several causes which have a knock on effect. From this, problem trees were created. The outcomes of the threat analysis were then presented back in plenary. The outcomes are also shown in the following tables and graphics.

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**NEPAL**

Type and level of threat in each area of Nepal

Name of PA	Size of PA (km2)	Buffer zone in km2	2010 est # rhino	Poaching	Conflict	Stagnat small Pop. management	IAS	Human encroachment	Overgrazing	Resource scarcity outside PAs	Mega infrastructure	Unmanaged tourism	Excessive resource collection	Current conservation measures in place
Nepal														
Chitwan	932	750	408	3	2		3	2	1	1	2	1	2	Anti-poaching operations, habitat management, research and monitoring, institutional developmen, livelihood improvement, conservation education, policy interventions, HWC mitigation measures etc.
Bardia NP	968	327	22	3	2	2	3	3	2	2	3	1	1	Anti-poaching operations, habitat management, research and monitoring, institutional developmen, livelihood improvement, conservation education, policy interventions, HWC mitigation measures etc.
Sukulaphanta	305	243	5	3	1	3	2	3	3	3	2	1	1	Anti-poaching operations, habitat management, research and monitoring, institutional developmen, livelihood improvement, conservation education, policy interventions, HWC mitigation measures etc.



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Name of PA	Size of PA (km <sup>2</sup> )	Buffer zone (km <sup>2</sup> )	2010 est # rhino
<b>Dudwa-Bardia Complex (India/Nepal)</b>			
Dudwa	800		29
Karteniaghat	450		2
Bardia	968	350	22
<b>India</b>			
Jaldapara	216		108
Gorumara	80		31
Pabitora	39		84
Orang	79		64
Manas	500		5
Kaziranga	860		2048
<b>Pakistan</b>			
Lal Sohanra NP	?		2
<b>NEPAL</b>			
Chitwan NP	932	750	408
Suklaphanta Wildlife Reserve	305	243	5

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INDIA

Name of PA	Size of PA (km <sup>2</sup> )	Buffer zone in km <sup>2</sup>	2010 est # rhino	Area of occupancy (km <sup>2</sup> )	Poaching severity level 1-3	Presence/ Effectiveness of Enforcement / Protection severity level 1-3	LACK OF POLICY severity level 1-3	Lack of Habitat Management severity level 1-3	Lack of Population MGMT severity level 1-3	Lack of Research Contrib to MGMT of SPP severity level 1-3	Human-Rhino Conflict severity level 1-3	Community Participation severity level 1-3	KNOWLEDGE OF EFFECTS OF CLIMATE CHANGE severity level 1-3
<b>India</b>													
Jaldapara	216		108	100	3	2	3	3	3	2	2	2	3
Gorumara	80		31	8	3	2	3	3	3	2	1	2	3
Pabitora	39		84	16	3	2	3	3	3	3	3	3	3
Orang	79		64	79	3	2	3	3	3	3	1	3	3
Manas	500		5	1	3	2	3	3	3	3	1	2	3
Kaziranga	860		2048	350	3	2	3	3	3	3	1	1	3
Dudwa	800		29		3	2	3	3	3	2	1	2	3
Karteniagha	450		2		3	2	3	3	3	3	1	2	3
<b>Pakistan</b>													
Lal Sohanra	?		2										

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<b>Indian</b>	
<b>Population management</b>	
Mechanism to monitor and control stray/ rescue	
differences in politics	
too many/ little eggs in one basket	lack of community awareness towards the importance of the species
disease risk	
genetics	<b>Enforcement/ Protection</b>
<b>poaching</b>	Low protection, Infrastructure and resources
poaching	Low enforcement
site specific factors driving poaching	Legal enforcement
<b>Habitat Management</b>	<b>Climate change</b>
habitat fragmentataion	<b>Policy</b>
over graxzing	No government institutional mechanism or policy at national level
invasive species in the grassland	merging the gap between conservation and implementation agencies
habitat degradation (invasive species) Mimosa	lack of coordinated approach to control poaching and wildlife trade
Habitat quaiity	mechanism lacking to control intra and inter country trade links
River erossion	political conflict
loss of corridors	<b>Human wildlife conflict</b>
siltation of wetlands	human wildlife conflict, human population
invasion of woodland	
encroachment and pressure from the field villagers	<b>Research</b>
competition of sympatric species	lack of scientific research
degradation of forest in Karbi Anglong and Bhutan	no study on carrying capacity
<b>Community awareness</b>	lack of information on dispersal patterns
lack of community awareness towards the imoirtance of the species	forensic investigation of past poaching cases
<b>Enforcement/ Protection</b>	
Low protection, Infrastructure and resources	
Low enforcement	

**SUMATRAN RHINO**

Name of PA	Size of PA (km2)	2010 est # rhino	LOSS OF HABITAT severity level 1-3	POACHING severity level 1-3	POLICY & LEADERSHIP severity level 1-3	LACK OF POP'N SCIENCE severity level 1-3	CLIMATE CHANGE severity level 1-3	LACK OF AWARENESS severity level 1-3	HERBICIDES/PESTICIDES severity level 1-3	DISEASE FROM LIVESTOCK/HUMANS severity level 1-3
<b>Indonesia</b>										
Bukit Barisan Selatan	300,000 ha	60 - 70	3	2	1	2	3	2	2	1
Gunung Leuser Ecosystem	800,000 ha	40 - 80	3	2	2	3	2	2	1	1
Way Kambas	60,000 ha	25-27	2	1	1	1	2	2	2	2
<b>Sabah, Malaysia</b>										
Tabin	1220 km2	15	1	3	3	3	1	2	1	1
Danum Valley	500 km2	13	1	2	1	3	1	2	1	1
Fragmented habitats		?	1	2	2	3	1	2	2	1
<b>Penninsula Malaysia</b>										
		?	1	2	3	3	1	2	1	1

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Potential	Sumatran	Existing	Potential
	Habitat fragmentation (Sumatra)	Y	
	Road construction (Sumatra)	Y	Y
	Dam Development (P.M)	Y	Y
	Encroachment within the Park (S & P.M)	Y	Y
	Invasive Species (Sumatra)	Y	
	Natural Disasters (Sumatra)		Y
	Encroachment outside the Park (Sumatra)	Y	Y
	Poaching in P.A.'s (Sabah & P.M.)	Y	
	Poaching outside P.A.'s (Sumatra)	Y	
	Lack of enforcement in rhino habitats (Sabah & P.M.)	Y	
	Loss of natural fear of humans (All)		Y
	Leadership (Sabah)	Y	
	Lack of political will (P.M.)	Y	
	Inbreeding (Sabah)		Y
	Population bottleneck	Y	
	Lack of info on population (All)	Y	
	Isolation of individuals/spread out (Sabah & Sumatra)		Y
	Time running out (All)	Y	
	Disease from livestock/humans (Sumatra)		Y
	Lack of awareness of Sumatran rhino (Domestic/International) (All)	Y	
	Herbicides/Pesticides (Sumatra & Sabah)	Y	
	Climate Change (All)		Y

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Country	Threat	Main Cause (Why)	Secondary Cause 1	2	3	4	Solutions
	<b>POLICY &amp; IMPLEMENTATION</b>		1				
Sumatra	<b>Central government responsibility of sustainable management of rhinos not being met</b>	Lack of co-ordination for implementation	No clear command	Many different decision-makers with same level of authority with different priorities	Ministry of home-affairs versus forest department, under national regulation conservation falls under central gov, but implementation in the field, authority of district gov has authority	Local government priority is to care for humans, rather than rhinos	Consider local communities in rhino conservation at central government, with central taking more ownership and developing better decision-making strategies
		Not following procedures and job responsibilities (local government)	Motivation and understanding of benefits and outputs or threats and understanding challenges (of rhino cons)	Ignorance			
			capacity				
		Proactive rhino conservation activities currently lies with local NGO's and international funders	Central Gov supporting many conservation initiatives so lack resources/commitment				Need to source sustainable funding so long-term strategies to be implemented, other sources than government

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Country	Threat	Main Cause (Why)	Secondary Cause 1	Solutions	
	<b>POLICY &amp; IMPLEMENTATION</b>		1		
		Proactive rhino conservation activities currently lies with local NGO's and international funders	Central Gov supporting many conservation initiatives so lack resources/commitment	Need to source sustainable funding so long-term strategies to be implemented, other sources than government	Encourage government to invest more in rhino cons both in funds, infrastructure and commitment
<b>Sabah</b>	<b>Delayed decisions and permission by technical committee for implementation on the ground</b>	Sabah Wildlife Dept responsible for rhino con which is then contracted to BORA. Budget is given but each activity needs permission from the technical committee.(e.g. BORA has other funds for BRS but SWD holds funds for the paddock to translocate to)		Provide BORA with more decision making and need more rapid decision-making	
<b>P. Malaysia</b>	<b>Weakness of political support</b>	no interest in rhinos		Re-align and prioritise activities identified in the Rhino Action Plan 2005 with support from AsRSG/SSC	

	<b>LOSS OF HABITAT</b>
Sumatra	Habitat fragmentation
Sumatra	Road construction (Sumatra)
Sumatra	Road construction (Sumatra)
P. Malaysia	Dam Development (P.M)
Sumatra	Encroachment within the Park (S & P.M)
P.Malaysia	Encroachment within the Park (S & P.M)
Sumatra	Invasive Species
Sumatra	Natural Disasters
Sumatra	Encroachment outside the Park (Sumatra)
Sabah	Poaching in P.A.'s (Sabah & P.M.)
P. Malaysia	Poaching in P.A.'s (Sabah & P.M.)
Sumatra	Poaching outside P.A.'s (Sumatra)
Sabah	Lack of enforcement in rhino habitats (Sabah & P.M.)
P.Malaysia	Lack of enforcement in rhino habitats (Sabah & P.M.)
All	Loss of natural fear of humans (All)
Sabah	Leadership (Sabah)
	Lack of political will (P.M.)
	Inbreeding (Sabah)
	Population bottleneck
	Lack of info on population (All)
	Isolation of individuals/spread out (Sabah & Sumatra)
	Time running out (All)
	Disease from livestock/humans (Sumatra)
	Lack of awareness of Sumatran rhino (Domestic/International) (
	Herbicides/Pesticides (Sumatra & Sabah)
	Climate Change (All)

## JAVAN RHINO

Name of PA	Size of PA (km <sup>2</sup> )	Buffer zone in km <sup>2</sup>	2010 est # rhino	Area of occupancy (km <sup>2</sup> )	Low Habitat Quality	Low Habitat Quantity	Small Numbers	Low Public Interest
<b>Indonesia</b>								
Ujung Kulon			37 - 44		3	2	3	2
<b>Viet Nam</b>								
Cat Tien	5,000 ha		03-05?		2	3	3	1

**Progress Assessment of Resolution taken in 2008 AsRSG South Asia Meeting held in Nepal as on 12 February 2010**

<u>Population</u>	<u>Nepal</u>	<u>India</u>
Census of rhino population in Rhino bearing areas in India and Nepal, is being proposed at an interval of at least every 3-5 years with First Base in the year 2010	Preparing for 2010 census	Assam conducted rhino census in 2009
For small population of rhino in areas like Suklaphanta, Bardia, Gorumara, Manas, Katarniaghat and Dudhwa intensive ID/radio collar based monitoring of rhino is required	Started and progressing well	Field staff trained
Management of rhino based on meta population and strengthening the corridors and connectivities among Bardia-Katarniaghat & Sukla-Duduwa/Pilibhit and specially to build Sukla population.	Progressing well	
The IRV 2020 should continue translocation in Manas and extend to Laokhowa - Burachapori WLS	NA	Ongoing
AsRSG and WWF should initiate action for translocation of rhino to Buxa Tiger Reserve in WB after feasibility study.	NA	No progress
Recommend to review existing PA protection system and its effectiveness	Workshop held and report to come soon	Prepared only for Assam under IRV 2020
Time bound research on invasive species in rhino habitat	Started in 2008 as a joint undertaking among DNPWC, NTNC, ZSL and WWF Nepal	No progress
Assess potential alternative habitats in both India and Nepal	Progressing well and ground work to create more habitat ongoing	Ongoing under IRV 2020 in Assam

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Scientific study for habitat management including grassland and wetland	Initiated since 2008	Projects in link with habitat studies
Share research reports between India and Nepal among park managers, and create SA Rhino portal/website.	Training shared	Participation in training
Develop Monitoring Training Modules for Greater One Horned Rhino and where possible translate into local language and train park staff and local communities	Monitoring Training Module Developed, in press	Monitoring Training Module Developed, in press
Build capacity of PAs and technical staff including veterenarians to handle stray and orphaned rhino	No progress	Good progress together with WTI and College of Veterinary Science
Capacity building of anti-poaching staff and strengthening the mobility and communication to effectively deal with poaching and illegal trade.	Few initiatives ongoing	Few initiatives, ongoing
Mechanism to share knowledge and information on rhino conservation needs to be developed and shared among PA managers	No structured program	No structured programs
WWF to request the Government of India to call for trans-boundary meeting between India and Nepal		Between two countries initiated
AsRSG to work with CITES, TRAFFIC and local agencies to generate data on illegal trade on rhino horn and other body parts.	Some progress, need to be strengthened	Some progress, need to be strengthened
Initiate regular orientation for enforcement agencies like Police and para-military force, Customs, Forests, Revenue, Postal services and army.	Some progress	Some progress

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LAST SESSION: DAY 3 Friday 12 February 2010

The Chair of the AsRSG, Dr. Bibhab Kumar Talukdar has appointed the following members of the AsRSG as Country Coordinators:

- ✚ Prof. Abdul Hamid Ahmad, AsRSG Country Coordinator for Malaysia
- ✚ Mr. Bhupen N Talukdar, AsRSG Country Coordinator for India
- ✚ Dr. Shantraj Jnewali, AsRSG Country Coordinator for Nepal
- ✚ Mr. Widodo Ramono, AsRSG Country Coordinator for Indonesia

The meeting also decided to have create working groups within AsRSG which are as follows:

## WORKING GROUPS

Population Working Group:

- Co-chair: Adhi Rahmat S Hariyadi
- Co-Chair: Shantraj Jnewali

Habitat Management Group:

- Co-Chair: Naresh Subedi
- Co-Chair: Widodo Ramono

Human Rhino Conflict Group:

- Co-Chair: Rinjen Shrestha
- Co-Chair: Amit Kumar Sharma

Legal and Policy Group:

- Co-Chair: Ritesh Bhattacharjee
- Co-Chair: Ram Prasad Lamsal

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### Lists of Participants at the AsRSG meeting held at Kaziranga NP 10-12 February 2010

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