

## NEPAL

# Royal Chitwan National Park



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### II.1 Introduction

**Year of Inscription** 1984

#### Organisation Responsible for the Report

- Royal Chitwan National Park HQ (RCNP)  
Dept. National Parks & Wildlife Conservation (DNPWC)  
Babar Mahal  
GPO Box 860,  
Kathmandu  
Nepal

### II.2 Statement of Significance

**Inscription Criteria** N ii, iii, iv

#### Statement of Significance

- Proposed as follows:  
The park is considered to be “the last surviving example of the natural ecosystems of the Terai region... and provides critical and viable habitat for significant populations of several rare and endangered species, especially the one-horned Asian rhinoceros and the Gharial crocodile.”

*“The World Heritage biodiversity value is considered to have improved with an increase in the population of rhinos and tigers (up from 46 in 1977 to 110 in 1995).”*

#### Status of Site Boundaries

- A buffer zone of 766.1 sq km was added to the park with a gazette notification in March 1997.
- The combined area of RCNP totals 2,181 km<sup>2</sup>, including its buffer zone and the adjoining Parsa Wildlife Reserve (499 km<sup>2</sup>, established in 1984). It is considered adequate for current wildlife populations.

### II.3 Statement of Authenticity/Integrity

#### Status of Authenticity/Integrity

- The WH biodiversity value is considered to have improved with an increase in the population of rhinos and tigers (up from 46 in 1977 to 110 in 1995). No changes are foreseen.

### II.4 Management

#### Administrative and Management Arrangements

- RCNP became the first park in Nepal to adopt IUCN Cat. II protection in the NPWC Act (1973, 1993).
- The park authority has a network of 4 sectors with 46 guard posts supervised by both the DNPWC (35) and the Royal Nepal Army - RNA (11).
- There have been about 792 RNA soldiers stationed in the vicinity of the park since 1973.
- The first management plan for the park was prepared in 1975-79 under the aegis of a Nepal Government/UNDP/FAO project. An updated plan with three ‘management zones’ covers the period 2001-05.
- Under two Buffer Zone regulations (1996, 1999), the Management Committee and some 21 ‘user committees’ receive 30-50% of park revenue for conservation and local community development activities.
- “The traditional rights of way of the people in the Madi Valley have been considered.”

#### Present State of Conservation

- In total, there are 9 major mills and distilleries, (Bhrikuti Paper & Pulp Mill, San Miguel Beer etc) discharging effluent into the Narayani river.
- The relocation of the village of Padampur (11,208 people in 1,704 households) to Saguntole north of the park is “under completion”.
- DNPWC has voiced its opposition to the construction of the ‘Kasara bridge’.
- The ‘Terai Arc Landscape Project’ linking 11 protected areas between Nepal and India has translocated 72 rhinos to Bardia NP and 4 to the Royal Shuklaphanta Wildlife Reserve.

#### Staffing and Training Needs

- 278 staff, including 79 game scouts and 128 elephant keepers are employed by the RCNP office.
- Staffing level is considered inadequate. There is a plan to recruit 21 additional rangers to be attached to the 21 BZ user committees.
- Training is required in habitat management, anti-poaching intelligence, and ‘digital monitoring’.

### Financial Situation

- Government funding for RCNP in 2001-02 was about US\$ 180,000. Administration accounts for 60-84%.
- Funding is considered inadequate.
- Major donors include UNDP-GEF, ADB, WWF, UNF, 'Save the Tiger' Fund, the Smithsonian Institute, and the US National Fish & Wildlife Foundation.
- On top of taxes on lodge concessions, a 'conservation fee' donated by the 7 concessionaries has formed an endowment for emergency conservation activities.
- \* International Assistance from WHF as follows: (i) 1988, US\$30,000 Technical Co-operation; (ii) 1990, US\$50,000 Technical Co-operation for the development of an Educational Centre and promotional programme.

### Access to IT

- 3 PCs without internet access. GIS ARCVIEW 3.1 has been installed, but is not operational.

### Visitor Management

- The number of foreign visitors has increased from below 1,000 in 1974-75 to 117,000 in 1999-2000 (plus a further 30,000 domestic guests/students).
- The Nepal Tourism Board grants operating licences to 7 concessionary lodges with 68 elephants (the contract is due to expire in 2008) within the park.
- There are a further 71 hotels in villages outside the park with an "oversupply" of 1800 beds.
- There is a need to improve telephone facilities, park watchtowers, signage, and road maintenance. A Tourism Plan was drafted in March 2001

## II.5 Factors Affecting the Property

### Threats and Risks

- Intensive fishing in the bordering rivers,
- Encroachment of water hyacinth and other weeds,
- Effluent discharge by local factories,
- Construction of the Kasara bridge over the Rapti river,
- 42% of 223,260 buffer zone population is below the age of 15,
- 150,000 head of livestock in the area,
- Flooding of the Rapti river (especially between June and Sept),
- Increased poaching during the *Dasain* festival period,
- 3 annual pilgrimages to the area.

### Counteractive Plans

- No emergency plan has been developed.
- The Master Plan for the Forestry Sector (1988) has identified meeting local peoples' basic needs as a long term objective to reduce park-people conflicts.

- Minimisation of the obstacles created by the Gandak barrage between India and Nepal for dolphin and (captive bred) gharial crocodile migration.
- Re-routing of proposed electricity transmission lines outside the park.
- With UNDP/GEF co-operation, HMG of Nepal has prepared the 'Nepal Biodiversity Strategy' in 2002.

## II.6 Monitoring

### Monitoring Arrangements

- The King Mahendra Trust for Nature Conservation (KMTNC) has established a park research station, the 'Biodiversity Conservation Centre', in Sauraha.
- In November 2001, the Wildlife Institute of India facilitated a monitoring workshop in Chitwan.
- 'Tiger Tops Jungle Lodge', a private concessionary, also conducts a tiger monitoring programme.
- Since the 1970s, over 50 major independent research works have been completed on individual species and socio-economic studies (publications list attached).

### Monitoring Indicators

- KMTNC assesses the following indicators in RCNP: (i) "camera trapping" for tigers; (ii) crop damage by wildlife; (iii) sloth bear count; (iv) bird count; (v) grassland ecology; (vi) ecotourism studies.
- DNPWC and WWF have developed key 'success indicators' for all the protected areas of Nepal.

## II.7 Conclusions and Recommended Actions

### Conclusions and Proposed Actions

- "RCNP is the last remnant of Nepal's glorious game sanctuary where 120 tigers, 38 rhinoceros and a hoard of bears, boars and deer were amassed in a single hunting event just over 60 years ago."
- A review of regulations relating to water pollution (Aquatic Animal Protection Act 1961, Water Resources Act 1992) for the Narayani, Rapti and Reu rivers is urgently required.
- Conflicts regarding the proposed Kasara bridge and tensions between concessionaries and other local tourism operators will need to be solved.
- Support of WHF may be required for conservation, education, monitoring & evaluation.

## \*State of Conservation Reports

1990 Committee CONF.004/4 The Secretariat transmitted the Bureau's concerns to relevant authorities in Nepal and in the Asian Development Bank (ADB) regarding the impact of a proposed irrigation project to divert the Rapti river along the northern boundary of Royal Chitwan National Park (RCNP). The ADB responded in August 1990 that it was "equally concerned with the possible adverse effects" of the East Rapti Irrigation Project on the wildlife of RCNP. The Bank noted that it had requested consultants to carry out a detailed environmental impact assessment study by late 1990, and that the HMG of Nepal had commissioned other studies, including a survey of existing farmer-managed irrigation schemes in the area. The ADB indicated that it would keep the Centre informed of the future status and possible alternatives to the project.

1997 Bureau CONF.204/2B The Director of the RCNP submitted a state of conservation report of this property at the meeting of the South Asian World Natural Heritage Site Managers held in January 1997. The Director reported that the Park had a population of more than 400 greater one-horned rhinoceros, a success story attributable to the assistance of the Nepalese Army in anti-poaching activities. Discussions during the meeting revealed that 80% of the total population of about 2,000 greater one-horned rhinoceros, were found in the WH sites of Kaziranga in India (1,200) and RCNP in Nepal

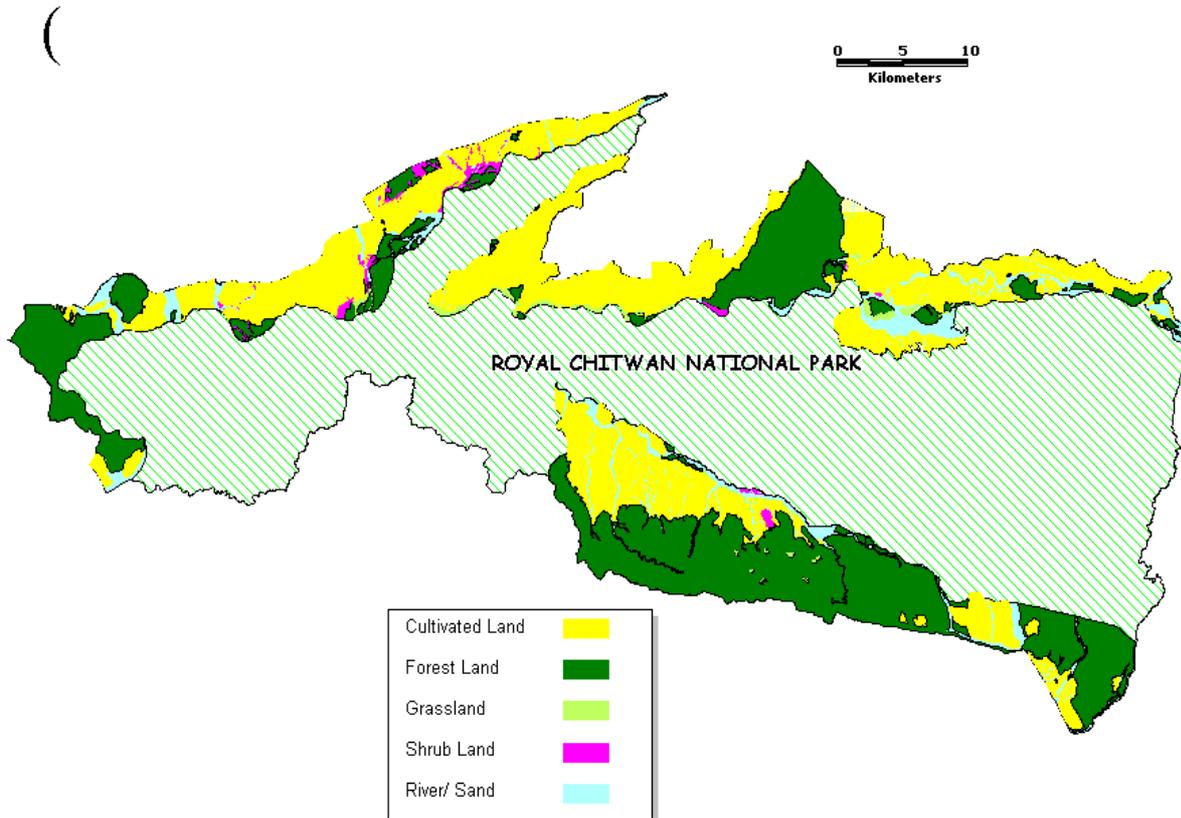
(400). Intensive poaching could, however, lead to sharp declines in Rhino populations as in the case of Manas WH area (India); and increased cooperation between the 3 WH sites was called for regarding intelligence information on trading routes for rhino horns, and the activities of commercially motivated poaching gangs.

The management of RCNP further reported measures to reduce conflicts with local villagers, arising largely from crop damage caused by wild animals. Villagers had been allowed to collect grass for roof-thatching and for use as fodder for livestock. In addition, villages around the Park received 50% of the revenues generated through tourism to the Park for use in rural development initiatives. In December 1996, the RCNP signed a cooperative agreement with Dartmoor National Park in the UK under a EU-funded Partnership and Exchange Programme which enabled staff exchanges and training programmes.

The Bureau encouraged the Centre to co-operate with the States Party and the CITES Convention for sustaining the successes achieved to-date.

1998 Ext Bureau CONF.202/4 The Bureau noted the success of RCNP in conserving the one-horned rhinoceros. However, at a sub-regional meeting on Himalayan Heritage, held in Kathmandu in August 1998, the Director General of DNPWC pointed out that the Park was facing problems of pollution of the Narayani River due to industrial sewage discharged into the river by

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Map of Royal Chitwan National Park showing Core zone (stipped) and land use of Buffer zone

private enterprises located outside the park. An increase in the mortality rate of the rhinoceros in 1998 remained unexplained and was perhaps attributable to the fact that the population may have consisted of a considerable number of older individuals. The Bureau was informed of the interest of the DNPWC to use the large volume of scientific data available on ecological and managerial aspects of RCNP to set up a systematic monitoring regime for the Park. The National Parks & Wildlife Conservation Act had been recently amended to ensure that 30-50% of the tourism revenue from the Park was used for development projects benefiting local communities.

1998 Committee CONF.203/ 8rev The Committee recommended that the Centre and IUCN co-operate with the State Party to design and implement international assistance projects for mitigating the impacts of the pollution of the Narayani River. The Committee urged the Centre and IUCN-Nepal to co-operate with the DNPWC to establish a systematic monitoring scheme for tracking long-term changes in the ecology, and the management regime of RCNP.

2001 Bureau CONF.205/5 The Bureau noted that a sum of US\$ 80,000 had been provided in the past for management planning, equipment purchase, and training activities. IUCN alerted the Bureau to a planned road construction through the centre of RCNP, as well as a bridge under construction over the Rapti River at Kasara high enough to provide access across the river during the monsoon season. The road was being constructed to provide access to the Madi village area south of the Park. Given the large scale of the bridge, it was possible that the road would cut RCNP in half, and eventually link with India leading to a high level of traffic and disruption to the property. A proposal was also reported to put a power-line along the road. IUCN was informed that an EIA had been prepared for the electricity line, but not for the road or bridge.

The Bureau requested the State Party to provide a report to the Centre, before September 2001, on the status of the road and power-line construction projects, including information on all environmental impact assessments undertaken, to enable the next session of the Bureau to undertake a review of the potential threats to the integrity of the property.

2001 Committee CONF.208/10 In response to the request of the Bureau in June 2001, the State Party submitted a report entitled "Environmental Impact Statement (EIA) for the Jagatpur Madi 33 kV Subtransmission Line Project", dated June 2000. The report stated that the transmission line would pass through approximately 6km of the Park and WH site (and through 500 metres and 1,000 metres of buffer zone forest) between Dhrubaghat and Bankatta. The project anticipated the erection of 11-metre-high concrete poles and the stringing of lines aligned along the existing Hulaki road requiring the clearance of a corridor 2 metres in

width. The EIA had not yet been approved by the Government of Nepal.

According to the EIA report the following negative impacts of the transmission line were foreseen: (i) loss or alteration of habitat; (ii) disturbances to wild fauna; (iii) likely hunting & poaching by project workers; (iv) decline in water quality associated with erosion and silting; (v) pollution from temporary workers camps; and (vi) bird deaths from collision with the transmission line. Proposed mitigation measures included: (i) reforestation of 2 hectares of community land near the Park with the guidance of the Park authorities; (ii) a Community Forest Support programme in 3 locations to be implemented with the Park authorities; (iii) an environmental awareness programme to be implemented by NGOs; and (iv) a habitat management programme to be implemented by the DNPWC.

The road and Kasara Bridge under construction were expected to require a number of years to complete due to budget uncertainties and restrictions. No EIA was conducted for either project. It was noted that whilst the road passing through the WH site would follow the current designated public right of way to Madi Village, the alignment of the Kasara Bridge had not been decided. IUCN noted that one option would be to follow the Park/WH site periphery along the Rapti River for 3-4 km. IUCN recognised, however, that the provision of electricity would help reduce the need for kerosene for lighting, as well as firewood for cooking and fuel for the local population, lodges and hotels. IUCN was nonetheless concerned that the impacts associated with proposed construction of a road and transmission line had prompted Danger Listing in similar cases.

Noting that the State Party had not yet approved the construction of the line, the Committee urged the State Party to seek out alternatives that would minimise impacts on the integrity of the property. The Committee noted that the Kasara Bridge and the associated road along the northern periphery of the Park might be a less intrusive option to improve transport in the region.

2002 Bureau CONF.201/11rev In January 2002, the DNPWC informed the Centre that the Bureau's concerns had been brought to the attention of the Ministry of Population and Environment responsible for approval of the EIA of the project. The DNPWC informed the Centre that a public hearing on the EIA was held in January 2002 where Park staff had presented the Bureau's concerns to the public and proposed underground wiring for the distance of 6 km through the Park. The representative of the Nepal Electricity Authority (NEA) had responded that it would be very expensive, and suggested insulated wiring for the same 6 km. IUCN informed the Centre that the EIA under question was awaiting approval, and noted that there was considerable public pressure in favour of the project going ahead.

DNPWC further reported that the alignment of the transmission line would pass along the Dhruba-Bankatta public right of way, and that erection of transmission poles had already begun in Madi and other parts outside of the northern sector, although no poles had been erected inside the Park. IUCN noted that the public right of way served the communities of Madi valley (involving 4 Village Development Committees consisting of approximately 50-60,000 people), and that the trees to be felled along the chosen route were neither listed in the national regulations, nor in the appendices of the CITES Convention. IUCN recalled that the foundation for the Kasara Bridge were laid by a former Prime Minister in response to requests from the local government and people, and that alternative sites had not been considered as cost effective. IUCN was informed that the bridge would be ready in a couple of months, allowing vehicles access to at least 4 to 5 kilometres within the Park, inevitably causing tremendous pressure on the WH property. As a compromise solution, IUCN was informed that the Park authorities were seeking the insulation of the wire by the NEA along its entire length within RCNP and its buffer zone.

The Bureau expressed its support for measures that would reduce the impact of the transmission line, and noted that the installation of an underground line, while more expensive, would have the least potential impact. The Bureau urged the NEA to contribute to conservation activities in addition to the insulation of the wire, and invited the State Party to undertake an EIA of the Kasara Bridge and associated road in order to identify possible alternatives and/or mitigation measures. Pending the completion of the EIA, the Bureau recommended that the State Party consider imposing a moratorium on the construction and use of the bridge and road. The Bureau further requested the State Party to consider inviting a monitoring mission to fully assess the impacts of the proposals, and consider alternatives that would not compromise the WH value of the property.