

TIGER CONSERVATION PROGRAMME

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THREE YEARS  
AND BEYOND

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# CONTENTS

## WWF TIGER CONSERVATION PROGRAMME: THREE YEARS AND BEYOND

Published by  
WWF Tiger Conservation Programme,  
New Delhi

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WWF Tiger Conservation Programme,  
WWF India, 172 B, Lodhi Estate,  
New Delhi Tele/Fax: 91-11-469 8072

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publication do not necessarily reflect those of  
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Suggested citation  
WWF, December 1999: WWF Tiger  
Conservation Programme: Three Years and  
Beyond, WWF TCP, New Delhi

Front and back cover photograph  
Tigers in Bandhavgarh Tiger Reserve  
by Jagdeep Rajput

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## PERSPECTIVES: TIGER CONSERVATION

- 6 TIGERS IN INDIA IN THE 1990S  
**Peter Jackson**
- 8 TIGER CONSERVATION AND ECO-DEVELOPMENT  
**T. Ramakrishnan**
- 11 NEW TIGER RESERVES NEEDED IN ORISSA  
**S.K. Patnaik**
- 14 TIGER RETURNS TO RAJASTHAN  
**R.G. Soni**
- 17 PRIDE OF BENGAL  
**Arin Ghosh**
- 20 TIGER GUARDIANS OF UTTAR PRADESH  
**R.L. Singh**
- 22 THE TIGER STATE RIDES THE BIG CAT  
**Rajesh Gopal**
- 25 KAZIRANGA: JOYS AND SORROWS OF FLOODS  
**B.S. Bonal**
- 28 TOWARDS EXTINCTION  
**Divyabhanusinh**

## THREE YEARS OF TIGER CONSERVATION PROGRAMME

- 32 WHY SOME AND NOT OTHERS  
**M.K. Ranjitsinh**
- 38 PROGRAMME COSTS
- 39 TCP SUPPORT: A CRITICAL LOOK  
**Usha Rai**
- 41 PASSPORT TIGERS  
THE 2ND INDO-NEPAL TRANSBORDER MEETING  
**Tariq Aziz**
- 43 TRACKING TIGERS  
**Ranjit Talwar**
- 45 DEMYSTIFYING WILDLIFE LAWS FOR FIELD STAFF  
**Devaki Panini**
- 47 HONOURING THE BRAVE FORESTER  
**Usha Rai**
- 49 CATTLE COMPENSATION SCHEME  
A SECURITY COVER FOR THE TIGER  
**G.D. Sarin**

- 52 SIMILIPAL TIGER RESERVE  
WWF HELPS CURB HUNTING  
**Tariq Aziz**
- 55 WWF HELPS FLOOD-HIT KAZIRANGA  
**Tariq Aziz**
- 56 MEDIA SPOTS THE TIGER  
**Usha Rai**
- 58 TCP SUPPORT TO TRAFFIC-INDIA  
**Ranjit Talwar**
- 59 INSURANCE POLICY FOR TIGERS  
**Ranjit Talwar**
- 61 RELIEF FOR GUARDIANS OF THE FOREST  
**Tariq Aziz**
- 62 THE DUTCH FOCUS ON TCP  
**Usha Rai**
- 66 RAJASTHAN REWARD SCHEME  
**Ranjit Talwar**
- 67 EXTRACTS FROM 'TIGER UPDATE'
- 71 VOICES FROM THE FIELD  
**Usha Rai**

## TIGER CONSERVATION IN THE NEXT MILLENNIUM

- 74 SAVING THE TIGER  
MORE FUNDS HAVE TO COME FROM DONORS  
**S.C. Sharma**
- 76 AN UNCERTAIN STRIDE  
INTO THE NEXT MILLENNIUM  
**H.S. Panwar**
- 79 PUTTING A SMILE ON THE TIGER'S FACE  
**Mahesh Rangarajan**
- 81 THE GLOBAL TIGER PARTNERSHIP  
FLOUNDERS FOR FUNDS  
**S.C. Dey**
- 84 VILLAGERS CAN WORK WONDERS  
**Ashish Kothari**
- 87 TIGER CONSERVATION PROGRAMME:  
A VISION FOR THE FUTURE  
**M.K. Ranjitsinh**
- 90 TCP PROJECT LOCATIONS IN INDIA
- 91 MILESTONES

## INTRODUCTION

In India, as in many other countries, conservation of the tiger has been the preserve - almost a close preserve - of the government, which owns the predator, its prey and its habitat. The people themselves must also play their part, but that is the hardest task. It is, however, now being increasingly realized that non-governmental agencies like the WWF can and must also play an active role, though a supportive one, to fill the existing gaps in the government programme. People also have to be activated and motivated and linkages provided between government and the people in a common cause to save nature and the national animal.

There are plenty of publications on the tiger and there is hence a reluctance to add to the plethora. Besides, there has been enough agony and anguish expressed and preaching carried out in the past. What perhaps is needed is a rational analysis of the problem, mainly by the field personnel and the chief wildlife wardens; a practical statement of what could be achieved by not just the government but by non-governmental agencies like the WWF Tiger Conservation Programme and the Corbett Foundation, and the future requirements that need to be addressed. In the process, what has been attempted and attained by the TCP becomes just a milestone in what the future path should become.

We take this opportunity to earnestly thank all those who have contributed to this publication.

**M.K. Ranjitsinh**



## PERSPECTIVES: TIGER CONSERVATION

## TIGER IN INDIA IN THE 1990s

Peter Jackson

The tiger has been in the forefront of wildlife conservation efforts in the 1990s. Although the threat of extinction became known to the world around 1970, the success of conservation measures in India in the following two decades led to widespread complacency; the tiger appeared to be safe. The discovery in the early 1990s that poaching and illegal trade in tiger parts were quietly eroding the tiger population in India led to alarm and a renewal of attention to the need to save the tiger from disappearing from the wild. The alarm increased when the collapse of the USSR unleashed unprecedented poaching of the Amur or Siberian tiger, which had been recovering well from near extinction in 1940s.

For centuries, tigers have been killed to use their bones and other parts in medicines in China and other Asian countries. In India too, tiger fat and whiskers were used for cures. But it now became apparent that a massive assault on the tiger through its range was occurring in order to obtain bones, especially, for traditional Chinese medicines. This was probably due to the fact that a huge store of bones, dating from the killing of some 3,000 South China tigers declared as pests by the Chinese government in 1950s, was running out. Supplies for the industry were required from other range countries, where occasional poaching for skins turned into a hunt for bones. Skins were often discarded. India and Nepal, with about two-thirds of the surviving tigers in the world, became prime targets. Transport of inconspicuous bones across the long, little populated mountainous frontiers to the Tibetan region of China was easy.

Meanwhile, another insidious threat to the tiger has been growing stronger – human pressure on habitat. In the 20 years since Project Tiger was launched in 1973 the human population of India increased by half. Demand grew for land and natural resources, such as grasslands and forests, which encroached on nature reserves, many of which were home to the tiger. Large tiger areas became fragmented so that the cats were isolated in smaller and smaller groups.

Deer and wild boar, food for both tigers and people, were poached, leading to increasing attacks by tigers on livestock. Understandably, livestock owners retaliated against tigers, often poisoning them by putting agricultural pesticides in the carcasses of the animals they had killed. Such practices sometimes killed whole families of tigers.

Yet another growing threat has been the encroachment of industry, especially mining, on natural areas. Many of India's finest wildlife areas lie on top of valuable minerals, for which there is growing demand. Mines have been established right on the boundaries of, and even, illegally, in protected areas. Apart from mining damage, air and water got polluted. Roads and railways connected with mining activities have ripped through the forests. A prime example is Hazaribagh in Bihar. With funding from the World Bank, over 400 mines, mostly opencast, and the necessary infrastructure of roads and railways, have devastated an area defined by WWF as a Level One Tiger Conservation Unit, one of the largest in India. It is also the homeland of indigenous tribal peoples, with their cultural monuments.

Evidence of the tiger's plight spurred new efforts by non-governmental organisations to deal with the problems of conserving the tiger. WWF India and the Wildlife Protection Society of India have led the fight against poaching and illegal trade, enabling the authorities to seize contraband tiger and other wildlife products and to make arrests. But the seizures are but the tip of the iceberg and, as with drugs and other illegal products, a vast trade still exists. Furthermore, many of those arrested are never convicted and punished.

WWF, through its Tiger Conservation Programme, has been able to reduce the killing of tigers by livestock owners by providing rapid compensation. Emergency funding has been provided to help the authorities deal with catastrophes, such as the floods which devastated Kaziranga National Park in 1998.



JAGDEEP RAJPUT

However, the greatest challenge is to reconcile conservation of the tiger with human existence. The population of India will continue to expand, with a consequent growing demand on the remaining natural areas for agriculture to produce more food, and industry for economic development. Responsibility for this reconciliation lies primarily with the central and state governments, which make decisions on land use, legislation, economic development and the whole host of issues involved in a nation's life.

Conservation of the tiger should not be looked upon as saving an animal which might appear as irrelevant to modern life. But the tiger represents the natural world of which humans are a part. It is a world that, through natural processes, provides great services, such as air, soil and water on which all life depends. Like humans, the tiger is dependent on a pyramid of life made up of food sources. Its prey depend on vegetation, which in turn depends

on soil kept healthy and fertile by myriads of insects, worms and other creatures which recycle dead matter to support new life. Caring about the tiger has to mean caring about its environment, which is also that of humans.

For the people of India, the tiger has always been a presence, an awesome animal admired and feared – and worshipped. Simple tribal shrines in the forests record its power on the human mind. The great Hindu female deity, Durga, rides a tiger. Her image is to be seen in homes and in public throughout the country; it is even pasted on the side of trucks. As the tiger supports Durga, the people of India should support the tiger, in the interests of maintaining the natural foundation of life on earth. ■

*(The author is the Chairman of the Cat Specialist Group of the World Conservation Union (IUCN) and spent sixteen years in India as a journalist before becoming Director of Information of WWF International)*

# TIGER CONSERVATION AND ECO-DEVELOPMENT

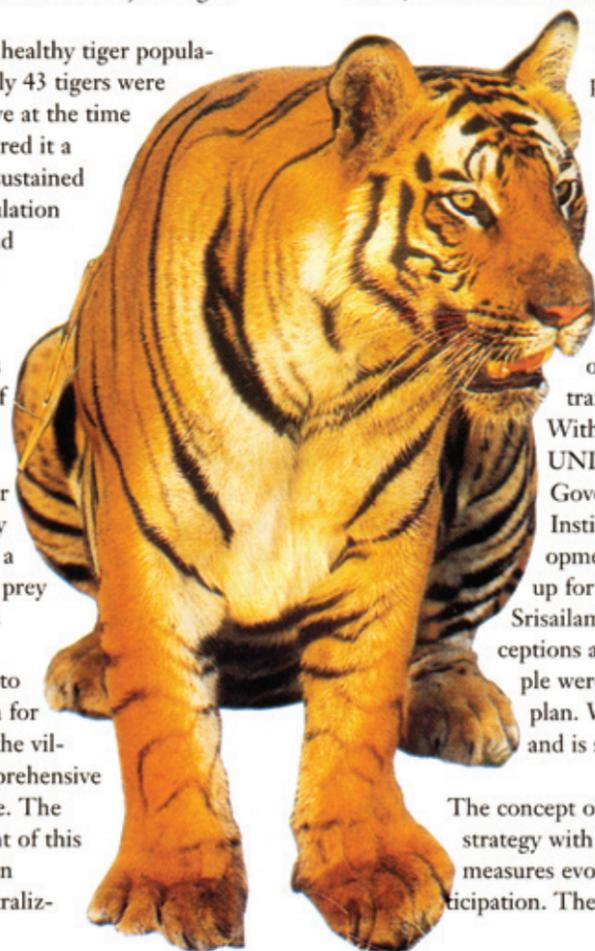
**T. Ramakrishna**

**N**agarjunasagar Srisailem Tiger Reserve (NSTR) is one of the biggest protected areas in India covering 3,568 sq. km. It nestles in the biodiversity rich hotspot of the Nallamalai hill ranges. This area has been a home to the tiger since time immemorial as depicted in the tiger-prey interactions and man-tiger conflicts on the walls of the ancient Mallikarjuna temple in Srisailem.

Realizing the value of the area's wildlife, Andhra Pradesh declared it a wildlife sanctuary in 1979. Four years later, the Union Government brought this area under the purview of Project Tiger.

Despite a historically healthy tiger population in the region, only 43 tigers were recorded in the reserve at the time the government declared it a sanctuary. Owing to sustained efforts, the tiger population rose to 65 in 1984, and peaked at 94 in 1989.

However, several anthropogenic factors led to the depletion of tigers from the early nineties. These included conflicts over livestock kills made by tiger, habitat loss and a corresponding loss in prey base. To mitigate this problem, the State Government decided to provide compensation for the loss sustained by the villagers through a comprehensive compensation package. The procedure for payment of this compensation has been streamlined by decentraliz-



ing the power of sanction. To get instant information on cattle kills, incentives are also being paid to informers with funding from WWF -TCP. In 1998-'99, Rs.112815 was paid as compensation for tiger kills in this one tiger reserve, and Rs.10700 as incentive.

The gamut of problems confronting the Reserve were primarily the result of increased dependency of local people on forest resources, and a lack of awareness about their sustainable use. In addition, the presence of extremists, and their activities in the forest, hindered conservation action. To counteract these pressures we felt it was necessary to involve people in conservation, especially for the conservation of the tiger.

The NSTR was identified by the Union Government as one of the eco-development implementation sites. A State Government officer was given special training to lead the project. With the support of the UNDP, the Union Government and the Wildlife Institute of India, an eco-development action plan was drawn up for the Nagarjunasagar Srisailem Tiger Reserve. The perceptions and needs of the local people were directly reflected in the plan. Work began on it in 1994 and is still continuing.

The concept of eco-development is a strategy with a site-specific package of measures evolved through people's participation. The objective: balancing the

socio-economic development of the people and ecological sustenance of the region. The main objective of the strategy is to reduce the pressure on the protected area as well as improve the degraded ecosystem. The first step was to improve the economic conditions of the rural poor by encouraging them to adopt improved agricultural and animal husbandry practices. Certain habitat enrichment practices were envisioned for initiating the ecological process in the degraded eco-system.

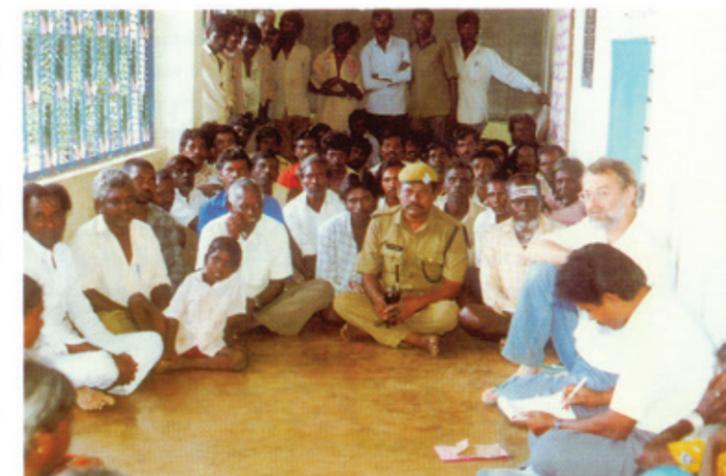
The process was institutionalized by involving non governmental organizations (NGOs) in the formation of Eco-development Committees (EDCs) and establishing linkages with other developmental agencies.

To develop the human resource for successful implementation of the programme, several training sessions and workshops were organized to motivate the staff, NGOs, EDC members, villagers, and other important stakeholders. In all 1,140 such training workshops were organized.

A total of 115 Eco-development Committees were formed of people living in and around the Nagarjunasagar Srisailem Tiger Reserve covering an area of 10,420 hectares under the habitat improvement scheme. This scheme involved the removal of weeds; soil and moisture conservation work; construction of check dams and percolation tanks; bamboo mounding, and enhancement of the regeneration process with the participation of the local people. Several steps were also taken to reduce the biotic pressures on the habitat.

The local needs were identified through a total of 60 income-generating schemes. To reduce the grazing pressures on the habitat, goats were replaced with sheep under the animal husbandry scheme and 586 households were benefitted. To reduce the fuelwood collection, biogas and smokeless chullahs were provided to 534 and 10,330 households respectively. Almost 170 families benefitted from the vegetable vending scheme; 44 were given provision shops, and 53 benefitted from a basket weaving scheme. There was similar involvement of the local people in fish rearing, apiculture, tailoring, running canteens and cycle shops.

Realizing the importance of women in conservation activities, special strategies were developed to insure their involvement. Special training programmes were held for women in conservation and eco-development and thrift and credit schemes were imple-



mented. Separate meetings were held for women to ensure that their views are heard. As women are often the primary fuelwood collectors, alternatives such as the use of biogas and smokeless chullahs were emphasized at these meetings.

To economically empower women, the Social Banking Scheme was formulated. Under this scheme people are encouraged to save nominal amount of Rs.30 per month with the ultimate goal of establishing a low interest rural banking system from which all contributors can benefit. A total of 362 thrift and credit groups involving 5,459 members has been developed to date with savings of about Rs. 20.10 lakhs.

The expertise of the NGOs in participatory approaches was utilized by involving them in EDC's work. Ten NGOs, each with its own agenda of rural development, were brought together. These NGOs provided an avenue for disseminating environmental information as well as a means for gathering information about local resources and needs.

**Top:**  
An eco-development workshop  
**Above:**  
A march to create awareness

After the commencement of the scheme, a significant reduction in the biotic pressure was noticed. Simultaneously there was a tangible benefit for the local people. The EDC members, who actively participated in all the habitat improvement schemes, then zealously guarded the resulting luxuriant regeneration. Villagers have undertaken regular patrolling to monitor the habitat and curb illegal felling of timber, poaching, and indiscriminate collection of fuelwood.

Due to the soil and moisture conservation work, the region's water table showed a significant rise. At Mannanur, the previously dry Durvasula Cheruvu was replenished with water enabling increased crop productivity. As a result, over 400 families who depended on forest resources for income found employment in the agriculture fields. At Dokkuthanda and Bolgattupally, the open wells were recharged benefiting locals for agricultural as well as domestic usage. These successes have been acknowledged by the Union Government, and the Wildlife Institute of India has recognized this project area as a center for training its officers in eco-development.

Eco-destruction was mitigated through holistic conservation education to all sections of the people by explaining the adverse effects of degraded environment on their lifestyles. In the past, there were several cases of physical assault on staff resulting in grievous injury and death. Because of the efforts of the Protected Area Eco-development Team, the previously hostile attitude towards forest department activities has changed to one of cooperation. This was critical to ensuring the support of local people in further implementation of conservation activities.

The successful implementation of the eco-development programme through people's involvement has improved the quality of habitat, which in turn, has led to the dispersal of fragmented and restricted prey base. Frequent sighting of wild herbivores - cheetal, sambar, nilgai, four-horned antelope, and chinkara

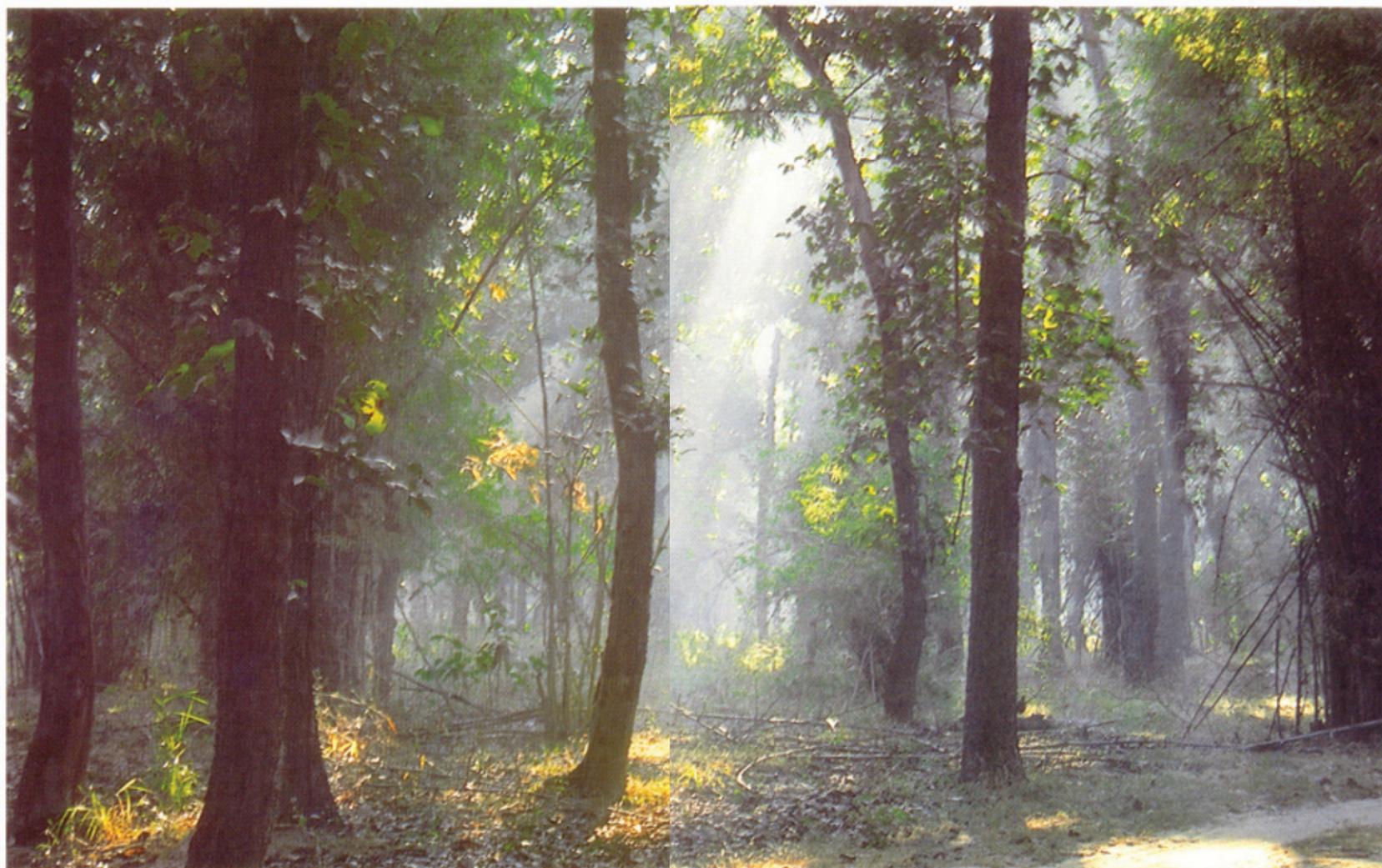
- has increased in the past two years.

The eco-development programme has benefitted tiger conservation in a variety of ways. The EDCs have become mechanisms for the previously undocumented reporting of cattle kills and tiger poisoning from remote and inaccessible areas of the tiger reserve.

There are several indicators that the tiger population is on the path of recovery. The numbers of individual tigers recorded since the start of the eco-development programme has stabilized and is steadily increasing. With the involvement of local people, the monitoring of the tiger along with other wildlife is being undertaken for the first time. ■

*(The author is the Chief Wildlife Warden of Andhra Pradesh)*

JAGDEEP RAJPUT



## NEW TIGER RESERVES NEEDED IN ORISSA

**S.K. Patnaik**

If the tigers outside the Similipal Tiger Reserve are to survive, more tiger reserves need to be created without further loss of time. This is the one major lesson that 26 years of tiger conservation in the state has taught us.

While the mean growth rate of the tiger has been

positive in this one tiger reserve of the state — from 12 to 18 per cent of the total tiger population in 1972, to 51 per cent in 1998 — it has been negative outside the tiger reserve. Special status and protection is also needed for Sunabeda Wildlife Sanctuary which has 12 tigers and eight leopards, and can be linked with Udanti and Sitanadi Sanctuaries in

Madhya Pradesh, and for Satkosia-Baisipali Sanctuary which has 16 tigers and nine leopards as per the 1998 census. They should both be declared tiger reserves and given proper management inputs for improving the status of the tiger and its habitats.

In fact, Similipal with the largest chunk of contiguous luxuriant forests and an abundance of flora and fauna, became the first tiger Reserve of the state under Project Tiger in 1973. Though Orissa had 142 tigers or 7.7 of the 1827 tigers in the country in 1972, the population was scattered. Orissa was rated as the state having the fifth largest concentration of tigers in the country.

But 25 years of urbanisation, industrial development and the state's exploding population has nullified the gains of the early years of conservation. If the tiger has survived and in fact thrived, it is in Similipal Tiger Reserve which received special status and care. As against 17 tigers in 1972, today there are



98 tigers, or 51 per cent of the state's population of these big cats in this reserve.

Orissa was formed in 1936, taking portions from the then Madras Presidency and parts of Bihar and Orissa. In 1948 and 1949, 26 princely states merged with the state. The state's forests were managed under the Madras Forest Act of 1882, the Indian Forest Act of 1927 and the Acts and Rules of the different princely States. The tiger and other wildlife received some protection under respective Acts. The Orissa Shooting Rules were also in operation in the state, but a complete ban on tiger hunting started with the enforcement of the Wildlife (Protection) Act, 1972. Before it was elevated to the status of a Tiger Reserve, Simlipal received some protection as a National Park Division, created in 1956.

The cat fauna of Orissa include two large cats and five species of lesser cats. The Asiatic cheetah, which has become extinct, was also found in this region. The clouded leopard, the marbled cat and the caracal have been sighted, but their presence needs further confirmation. The other cats reported from the region are the fishing cat, jungle cat, leopard cat and of course, the tiger and the leopard.

Over four per cent of geographical area of the state, which is equivalent to 11 per cent of the state forest cover, has been brought under a network of 18 sanctuaries and two national parks. What is truly wonderful and worth building on is the fact that tigers occur in 11 of these 18 sanctuaries and in the Simlipal National Park. Tigers also disperse into forest areas outside the PAs, particularly in the Eastern Ghats,

though their number is small and dwindling due to habitat loss.

Though the Satkosia Gorge and Sunabeda Sanctuaries have often been discussed as tiger reserves, somehow it has not happened so far. However, there has been an overall improvement in tiger conservation efforts after recognising its importance as a flagship species. A large number of voluntary organisations are assisting in tiger conservation by creating public awareness about poaching and illegal trade and providing information which needs focussed attention. The honorary wildlife wardens in all 30 districts also help in conservation efforts.

Besides habitat loss, poaching of tigers and trade in their skins is a major threat. In 1995-96 and 1996-97, six tigers were poached, and in most other years, one a year. There may have been other incidents which have gone unnoticed. However, the good news is that the man/tiger conflict in the state has been on the decline. There was just one case of a man-eating leopard in Bolangir district and compensation was paid to the grieving family. To prevent retaliatory poaching of the tiger, immediate compensation is paid to villagers who lose cattle.

However, to ensure survival of the tiger till the end of the next millennium, habitats still holding sustainable tiger populations should be identified and given the rigid protection they deserve - free from human and biotic interference. ■

*(The author is the Chief Conservator of Forests - Wildlife, Orissa)*



# TIGER RETURNS TO RAJASTHAN

R.G. Soni

Indian society has been according exemplary importance to conservation to fauna and flora since time immemorial. Rajasthan has special place in the history of conservation. The 1730 sacrifice of 363 women, men and children in Khejarli village of Jodhpur district to save trees is an unparalleled example. Even now, 1 to 2 lives are lost every year in an effort to save wild animals.

The princely states of Rajasthan had a spectacular record of setting apart large areas of good forests for preservation as sanctuaries and game reserves. Keen interest of the rulers in protection, monitoring and systematic hunting ensured sustained conservation. Despite Rajasthan being the hottest and driest habitat in the tiger range, it flourished well in all districts except Jaisalmer, Barmer, Bikaner, Churu, SriGanganagar, Hanumangarh and Nagaur, until the 1940s.

Rajasthan was famous for tiger hunts. Places like Darrah (Kota), Borband (Jhalawar), Sariska and Sawai Madhopur were specially well known. There was unchecked hunting in the fifties and sixties. However, the perception of people started changing in the seventies. Though Queen Elizabeth hunted a tiger in 1961 at Sawai Madhopur, raising some controversy, the Duke felt happy in attempting to see it through a camera in the Sariska jungles in 1981.

Due to rapid increase in human population, the root cause of all our problems, various pressures on forests and wildlife kept increasing exponentially. Consequently, the tiger habitats got degraded, were diverted for agriculture and industry, got largely fragmented and also became devoid of prey, forcing tigers to stray out in search of food. In the

process, they got killed. Gradually, one after another the districts started becoming tigerless. The tiger vanished from Pali around 1970 (it was last seen by Mr. V.D. Sharma at Jojawar in 1969); from Mt. Abu sanctuary in 1971, from Jhunjhunu and Sikar in 1976, from Darrah (Kota) & Rawatbhata (Chittor) in 1980. Perhaps the last tiger of Bundi district, which put his paw mark on forester Bhardwaj's back near Bundi in 1997, still survives as a transient. A tigress with two cubs was seen in the Digota block of J. Ramgarh sanctuary (Jaipur dist) in December 98. Rajasthan now has tigers only in the two Project Tiger areas - Ranthambhore and Sariska, with only a few in the adjoining Ramgarh Vishdhari and Jamua Ramgarh sanctuaries.

Though in the beginning of the twentieth century India had more than 50,000 tigers, Rajasthan must have had more than 500. Due to immense biotic pressures by 1972 the number reduced to only about 1800 for India and 100 for Rajasthan. Looking at the serious status of the tiger in the country, Project Tiger was launched by the Government of India with the assistance of WWF in 1973 under the able and dedicated leadership of Kailash Sankhala, forest officer of the Rajasthan cadre. Ranthambhore National Park in Sawai Madhopur was taken up as a project tiger area in 1973 and Sariska (866 sq.km.) in 1978. Keladevi sanctuary of Karauli district was also included in Ranthambhore TR making its area 1,334 sq. km. With the Central assistance of Rs 100 lakhs per year per park, additional efforts of protection, improvement of habitat and creation of water-holes, the



RAMJIT TALWAR

chances of survival and revival of the tiger in these protected areas improved. However, the threats to sustained survival of the tiger are many and in dangerous proportions.

The survival of the tiger is threatened by :

- Loss and fragmentation of habitats;
- Poaching of tiger and its prey-base;
- Retaliatory destruction by cattle owners;
- Illegal cutting for fuelwood and
- Illegal grazing.

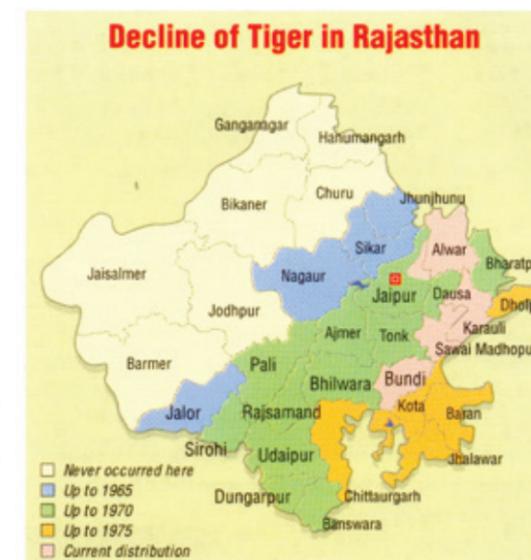
To conserve tigerland, in both tiger reserves various activities are on - making enclosures by erecting stone-wall/ditch fences on degraded forests and preventing grazing to enable the natural root-stock to flourish. In the gaps, suitable indigenous species are planted. Grass protection, controlled burning and clearing of fire-lines are among the other measures for habitat improvement.

Rajasthan suffers frequent droughts, causing severe water shortages in PAs, therefore, new water-holes are created every year by constructing anicuts, Johras and Nadis at suitable places. This prevents animals straying out of the PAs in search of water and also improves the water regime.

To ensure better protection of flora and fauna, new chowkies have been constructed and vehicles, wireless sets and arms provided. Some equipment has been provided by NGOs like the WWF, Global Tiger Patrol and Tiger Watch. Illegal grazing is a terrible menace for both reserves, specially for Ranthambhore N.P. Every year more than 25,000 cattle are driven into the park during the monsoon and there are frequent clashes between the staff and the illegal graziers, often resulting in casualties. In 1998 the forest department placed 80 additional surplus staff to counter this menace and there has been much better protection and availability of grass for herbivores in more areas and in larger quantity now. This will in turn improve the breeding and survival of the tiger.

Realising that only policing and use of force is not going to be successful in conservation, the stress is now on the eco-development strategy. It aims at reducing the pressures of the neighbouring population on the PA and also at reducing the negative impact of the PA on the people.

For Ranthambhore, the India eco-development project, aided by GEF and World Bank, is being



implemented. It envisages active involvement of 92 surrounding villages through eco-development committees. The total outlay of the project is Rs 3838 million for 6 years (1996-97 to 2001-02). It will also help in strengthening infra-structure, habitat improvement and PA management.

An integrated eco-development project of over Rs 159 lakhs for 5 years from 1999-2000, has been proposed for Sariska TR to the Union Government. This will help in sustained protection of Sariska and its buffer.

One of the major threats to the tiger in Rajasthan is retaliatory killings by cattle-owners whose cattle are killed by tiger. To reduce this threat Rajasthan has provided since 1993 compensation that varies from, Rs 2,500 for a buffalo to Rs 100 for a goat or sheep.

As the procedural delays in giving the compensation were posing hurdles in immediate mitigation of the loss and anger, the WWF TCP has started the cattle compensation scheme in Ranthambhore since March '99. An advance of Rs 40,000 has been deposited with Tiger Watch, an NGO, at Sawai Madhopur so that compensation could be paid on the spot without any delay. Under the scheme, Rs 300 is paid to the informer of a cattle kill if the information is given within 24 hours of the kill, Rs 200 for information between 24 and 48 hours and Rs 100 for information from 48 to 72 hours. Compensation amounting to 50% of the market value of the cattle killed is also paid immediately to the owner. Cattle compensation for 15 cases amounting to Rs 18,400 has already been paid.

To prevent poaching, a new award scheme has been started with the contribution from the WWF TCP. It provides for cash awards of Rs 10,000 to Rs 7,000 to persons helping / informing, leading to the successful prosecution of poachers. WWF TCP has provided Rs 50,000 to the Field Director of Ranthambhore for disbursing such awards.

The relocation of 12 villages out of Ranthambhore National Park in 1970, resulted in remarkable protection, breeding success and visibility of the tiger. The remaining 4 villages are to be relocated soon according to a relocation package under consideration. The villagers are keen to get relocated. Relocation efforts in case of Sariska in 1979 had mixed results. Karnakabas was successfully relocated. However, villagers of Kiraska and Kundalka came back even after availing the benefits of relocation. At present, there are 11 villages inside the park, out of which proposals for the relocation of 4 villages - Bhagani, Kankwari, Umri and Kiraska - at a cost of Rs 430 lakhs is under consideration. All relocations will be strictly on a voluntary basis.

State Highway 13, Shahpura -Thanaghazi-Sariska-Alwar has fragmented the national park due to the severe disturbance caused by more than 2000 vehicles per day. Several animals have died in road accidents. An alternative road is being constructed at a cost of Rs 430 lakhs.

The tiger in Rajasthan has got restricted to two very small reserves which are separated by over 200 kms, making it impossible for tigers to move from one reserve to another. This makes the population non-viable and unsustainable on a long term basis, because of dangers of inbreeding, epidemics and natural calamities. So immediate efforts have to be made to extend the habitats by creating effective buffers all around and also conditions for tigers from Ranthambhore to utilise tiger habitats of Madhya Pradesh across the Chambal and vice-versa. Migration between Sariska and Ranthambhore is also to be made possible.

Effective buffers are proposed from Bundi to Ranthambhore to Keladevi to Dholpur, with the Chambal as the eastern boundary. It is also proposed to extend Sariska tiger reserve with the effective buffer of Jamua Ramgarh sanctuary in South West and good forest blocks of Alwar forest division in North East. Though the tiger is a prolific breeder and capable of coming back quickly, it may be useful to establish relocation-cum-breeding centres at suitable places like Talwas, Ramgarh, Durrah, Kumbhalgarh, Sitamata, Todgarh and Mt. Abu to hasten the process of bringing back the tiger to its pre-1970 range and status.

There is regular monitoring of the tiger and its prey base through periodic census by the pugmark method. During 1999, Dr. Ulhas Karanth was also permitted to try out the 'camera-trap' method of enumeration.

Eco-tourism is of great help in conservation, as it not only generates revenue but also elicits considerable support among people for the cause of conservation. Large number of visitors enjoy the tranquillity and feel of nature in both reserves every year.

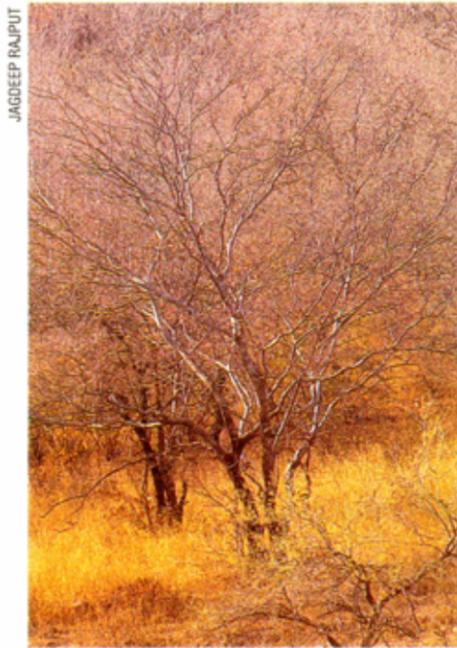
In 1998-99, the two parks generated Rs 8,051,960 from eco-tourism.

The better parts of Rajasthan forests are now limited to

PAs only. It is also a fact that it is much more useful and economic to invest on protection and restocking of existing forests as compared to creating new forests. Therefore, there is a need to lay more emphasis on protection, maintenance and development of PAs and invest more funds for the same.

In view of the prevailing resource crunch, it is necessary that the revenue earned by the PAs must be recycled into the PAs. The proposal to use entry fee is under consideration of the State. It should generate goodwill of the villagers and their active support in protection and development of the PAs. ■

*(The author is the Chief Wildlife Warden of Rajasthan)*



JAGDEEP RAJPUT

## PRIDE OF BENGAL

Arin Ghosh

The "Royal Bengal Tiger", as it is emphatically called in this part of the country, is the pride of Bengal. It has been intricately enmeshed in the psyche and profile in anything Bengali; be it fiction or folklore, its religious beliefs or its serious literary pursuits.

No official figures of the tiger population at the beginning of the seventies are available; however, the contribution of the Bengal population to the 1972 all India figure of 1800 being the first official estimation of the wild tiger population, must have been substantial. Tigers were found to be roaming freely in the jungles of North Bengal and in the Sunderban.

Project Tiger was launched by the Union Government in 1973 and Sunderban was one of the first nine sites in India. Today, this is the home of the largest single population of wild tigers in the world. Implementation of the intensive management practices has resulted in the overall improvement of the ecosystem. A large number of seemingly lost

species of flora and fauna reappeared and lent variety and vibrancy to the habitat. The core area, already a properly notified national park, is also a declared "World Heritage Site". Sunderban tigers are simultaneously feared, revered and hated. The man-eating tag, though slightly exaggerated and misplaced, is a phenomenon typical of this area.

Buxa is the second tiger reserve of West Bengal having rich and lush forest cover typical of the duars and terai region. It serves as the critical corridor between the forests of the adjoining states of Assam and Bhutan. Known for the organized tiger hunts for the sahibs in the past and the dolomite mining in the present, the reserve is now on the way back to its pristine state.

Jaldapara and Mahananda Wildlife Sanctuaries are more known for their rhinos and elephants, respectively. They harbour substantial and growing tiger populations. The management of these parks takes into consideration the conflicting demands of coexistence of the two-mega species in relatively smaller



RAJESH BEDI

Left:  
The Sunderban  
tiger

sanctuaries. We are proud of our achievements - both the rhino and tiger populations in Jaldapara and the elephant and tiger populations in Mahananda have shown convincingly upward trends.

Neora Valley National Park is our crown jewel. An inviolate area of 88 sq.km. being left the way nature had desired. Recent expedition deep into the area has revealed immense wealth of wild fauna particularly of the tiger. More than 15 tigers have been reported from here for the first time.

The success of Project Tiger had taught us that no species, howsoever mega or important, can be conserved or protected in isolation of its habitat. We have now learnt that no area, howsoever well guarded, can be protected in isolation of its environment, the people included. The socio-political climate of West Bengal is ever pregnant with the idea of decentralization and participation. The birthplace of the Joint Forest Management is well set to espouse the concept of Joint Protected Area Management. The active involvement of the people in the management of the park, however, needs to be institutionalized with reciprocal commitments to protect the area effectively.

Participatory microplanning process at the grassroot level has started and some are already in the implementation stage by the people themselves. It has reduced dependency of the local people on the Protected Areas, instilled a sense of responsibility towards protection and pride in management of the park and a commitment towards its overall improvement. The people of Sunderban now realise that their efforts to protect the tiger is in their own interest. The people around Buxa are aware that the investments under the India Eco-development Project is due to the area being a mega diversity area and the fund flow to Jaldapara and Mahananda is because the people there have committed themselves to the protection of tigers, elephants, rhinos and their habitat.

Research plays an important part in the State's wildlife management sector. Sunderban and Buxa have been acting as our field laboratories for tiger-related research studies. The straying behavior of tigers in the Sunderban, the effect of salinity on tiger ecology, the study of the insect distribution density as the index of biodiversity value in Buxa, discovery of more than fifty new species of endemic beetles, butterflies and spiders and the establishment of the Indo-Malayan linkages, initiating the genetic fingerprinting of rhinos in Jaldapara, are some examples.

The beginning of the escalation of the illegal trade in wildlife and its derivatives, the consumption of tiger bones and other parts of its body for macho supplement added a new dimension to the threat to the tiger of a magnitude hitherto unknown. We quickly reassessed our strategy, commissioned expert studies and started to implement the recommendations. It has been to our credit that despite large and soft international boundaries and trade routes, we have been able to catch the bull by the horn and prevented significant drain.

Monitoring of the investments and evaluation of the effects are necessary activities to ensure success of the management interventions. Census of wild animals is one such management tool. The wildlife in various protected areas of the State is constantly under surveillance and is regularly monitored. A formal census/estimation of tiger population in Project Tiger Reserves once in two years and in the rest of the areas once in four years, as per the guidelines of the Union Government, are very rigidly followed.

Tranquilisation and translocation of the aberrant tigers is something the State has perfected. Straying tigers are either captured in trap cages or tranquilized and after proper veterinary care and examination are released back into the wild. This is possibly the only State where the aberrant tigers are given a second chance to freedom.

To cite one of the many incidents, a pregnant tigress strayed into an adjoining village in Sunderban. There was panic all around after daybreak. Thousands of people surrounded the animal and in desperation the tigress achieved the impossible feat of climbing up a date palm tree. The animal was darter but decided to go to sleep on top of the tree. In a rather fairy tale operation, one person went up the tree and tied a rope to the tail of the sleeping tigress. The tigress was pulled down to a stretched



RAGHU RAI

out net and the impact brought it back to its senses. People kept their cool and in an exhibition of extreme courage the tigress was injected a sedative. It was caged and after proper examination released back into the wild.

Such acts of courage and dedication are many.

The tiger is very intricately ingrained in the psyche of the people of this state. To us, it is not only associated with the ruling deity but is also the rallying point for the people of all hues irrespective of their caste, creed or religion. And with the people-friendly government reflecting the true wishes of the people, the conservation and protection of the tiger and its habitat is high on its agenda.

Project Tiger has just completed 25 years of eventful run as the biggest and most successful conservation project of the world. The association of WWF with Project Tiger has been long and mutually stimulating. The current phase of WWF TCP has also chipped in at a very crucial juncture of the project. Their recent contribution with money, material and moral support has further strengthened this bond. We as active players in the partnership renew our pledge to ensure protection and safe home to the most wonderful and undoubtedly the most Royal cat of the Indian forests. ■

*(The author is Chief Wildlife Warden of West Bengal)*

**Above:** Boatmen in Sunderban wear masks to prevent tiger attack from behind

## TIGER GUARDIANS OF UTTAR PRADESH

R.L. Singh

Terrai forests of Uttar Pradesh, barely 10 to 12 hours drive from Lutyen's New Delhi, are home to 472 tigers, that is nearly a tenth of the total number of tigers in the country. Corbett, named after the famous Jim Corbett, and Dudhwa, two of the country's better known tiger reserves, are located in this state and are home to 134 and 102 tigers respectively.

There are three distinct categories of tiger areas from the management point of view - tiger reserves, protected areas and forest divisions or non-protected areas. There are 236 tigers in the two tiger reserves - 130 in Katarniaghat, Sohawal, Ranipur

and Sohagibarua wildlife sanctuaries and Rajaji National Park, and 106 tigers in various forest divisions or non-protected areas.

The level of funding and the consequent level of protection and monitoring of the habitat is different for these three categories of tiger areas.

In fact, the Union Government assistance during 1998-99 illustrates this point. While the tiger reserves received Rs 306.72 lakhs, other tiger supporting protected areas received Rs 109.75 lakhs. No funds were provided for protecting the big cat in the forest divisions.

Recently the Union Government sanctioned special pay to all field staff posted in tiger reserves, thus further widening the gap in the salaries of different field staff. I feel strongly that there is a need to ensure that the staff engaged in managing tiger areas are placed on equal footing for better conservation of all remaining tigers.

Cattle killing by tigers outside the tiger areas and, in turn, the retaliatory killing (poisoning) of tigers by the affected villagers, is another problem. In 1997-98, six tigers, including a tigress with three cubs, were poisoned by villagers in sugarcane fields outside Dudhwa Tiger Reserve. The State Government has a provision to pay compensation varying between Rs 150 and Rs 1,200, depending on the age and size of the cattle killed. In case of a human killed by a tiger the compensation provided is Rs 50,000 for an adult, and Rs 25,000 for a minor.

Although the 1999 tiger census of Uttar Pradesh shows that the number of tigers in the state has dropped by three and is now 472, the number of tiger deaths reported has dropped from 12 in 1997-98 to 7 the following year, and in the current year (till September) it is just four. In 1997-98 while only one tiger died a natural death, another was killed by poachers, two were crushed by trains, six poisoned by villagers and six others died of infighting. In the subsequent years the number of natural deaths reported were five and three respectively. Three tigers died of infighting in the last two years.

The death of four tigers due to poisoning in the sugarcane fields outside Dudhwa Tiger Reserve was the proverbial turning point in tiger conservation. A check of the sugarcane fields showed that there were 10

tigresses with 17 cubs in the 60 km long sugarcane belt along the southern boundary of Dudhwa National Park. All of them were endangered and there was no way to drive them back into the park.

It was then decided to go to the farmers and seek their help in seeing that these tigresses with cubs are not harmed during their stay in the sugarcane fields. The farmers agreed to help and they were formally recognised as 'Tiger Guardians'. The Tiger Guardians are to this day helping in the protection of tigers in the Dudhwa Tiger Reserve. However, the delay in the payment of compensation to owners of the cattle killed by tigers is a problem and needs attention.

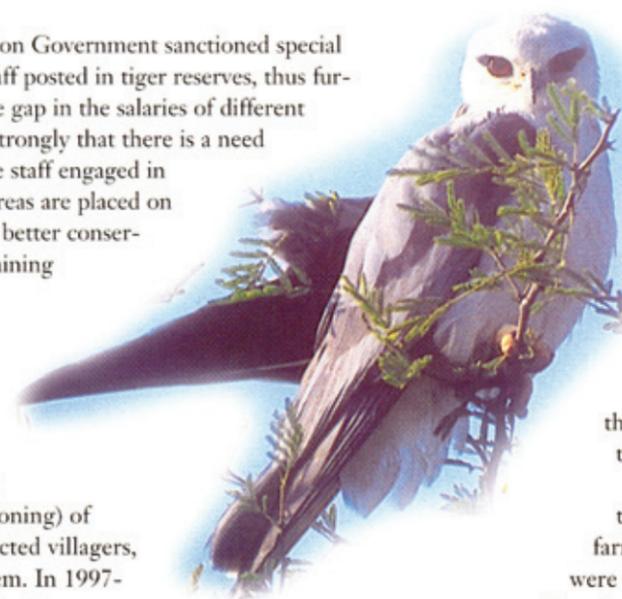
Another major problem for the tiger habitat is the heavy infestation of exotic weeds like lantana and parthenium. These weeds suppress the growth of palatable indigenous grasses and shrubs, resulting in loss of grazing ground for herbivores. The shortage of fodder forces deer and wild boar to go out to forage in the adjacent cropland. This appears to be the main reason for tigers going out from protected areas.

The solution lies in the replacement of unpalatable exotic weeds with palatable, indigenous grasses like bamboo and reed, depending on the moisture regime of the area. This will help the prey base of the tiger to multiply and in turn support the tiger population within the limits of the available tiger areas.

The present level of tiger population and available habitat in Uttar Pradesh seems to be adequate, provided it can be sustained. This would require building up of the prey base by improving the habitat and removing the exotic weeds. There appears to be no organised poaching in UP. But villagers resorting to poisoning of carcasses of cattle killed by tigers outside the forest areas is a real threat. The speedy payment of compensation to affected villagers can protect the tiger from a painful death from poisoning. ■

(The author is Chief Wildlife Warden of Uttar Pradesh)

Left:  
A black  
shouldered kite



Below:  
Wild elephants  
crossing the  
Ramganga river  
in Corbett

JAGDEEP RAJPUT



# THE TIGER STATE RIDES THE BIG CAT

Rajesh Gopal

*Tiger! Tiger! Burning Bright,  
In the forests of the night;  
What immortal hand or eye  
Could frame thy fearful symmetry?*

William Blake's evocative poem could well apply to the lush green jungles and the 927 big cats of Madhya Pradesh, crowned a Tiger State. The largest land-locked State of the country, it has a quarter of India's striped cats. While 226 tigers are in five Tiger Reserves, 229 are in PAs other than Tiger Reserves, and 472 tigers are in the general forest areas.

This is one State which, taking advantage of having the largest forest land in the country and a wealth of biodiversity, has declared almost 11 per cent of its forest area as PAs. There are 11 national parks and 35 sanctuaries spread across 16,877 sq kms.

Efforts are now on to enhance the protected area network to 15 per cent of the forest area, based on the recommendations of the State Wildlife Advisory Board.

The eastern half of the State is endowed with a relatively better forest connectivity than the western half. The State represents the typical central Indian flora and fauna.

Loss of biotic diversity with faunal regression has been an unfortunate reality in the tropics, and Madhya Pradesh is no exception.

Tremendous biotic pressure owing to dependence of indigenous people on the forests has led to the depletion of the tiger habitat. Therefore, the task of tiger conservation in such a scenario is challenging. Nevertheless, numerous inputs have been made and the results are encouraging.

Conservation efforts in the State date back to the early thirties when the Banjar and Halon valley forests of Mandla and Balaghat districts were

declared as sanctuaries. In the fifties the degree of protection in certain areas was increased by declaring national parks under the Madhya Pradesh National Park Act. The State has the distinction of making pioneering efforts towards conservation even before the national movement for conservation gained momentum in the early seventies. With the enactment of the Wildlife Protection Act of 1972, tiger conservation efforts received an added impetus.

Since 1974, a full-fledged wildlife wing has been created within the forest department, headed by the Chief Wildlife Warden. Considerable importance is given to human resource development and many officers have been imparted special training in wildlife management. A special training centre has also been established to impart skills to the frontline staff of Tiger Reserves and PAs.

Kanha was included in the first list of nine tiger reserves when Project Tiger was launched in the early seventies. Indrawati was declared a Tiger Reserve in the early eighties, and since then three more reserves have been brought under the umbrella of Project Tiger - Pench, Bandhavgarh and Panna.

Project Tiger has completed more than two eventful decades. The gains of the project are impressive. Concerted restorative efforts during the formative years have not only saved the flagship species (tiger), but also revived the biodiversity by conserving many endangered plants and animals.

A great deal of importance is given to curb poaching and illegal wildlife trade. The Tiger Reserves and other PAs have been divided into patrol beats with patrolling camps. Strategy is adopted during the rains in the form of "Operation Monsoon". Anti-poaching squads, intelligence networking, frequent market checks, enhanced road communication facilities and frontline staff development have undoubtedly improved the protection status of the habitat.

The management of the PAs has improved by patrol

JAGDEEP RAJPUT

camps, forest guard *nakas* (check posts), wireless stations, range buildings, bridges, stop dams and causeways.

The impact zone around Tiger Reserves and PAs have been identified for eco-development inputs so that the indigenous communities become stakeholders in the conservation efforts. Special efforts have been made for formation of village level committees. Micro plans have been prepared after participatory rural appraisal for site-specific eco-development inputs. Community credit programmes have also been initiated under the MP Forestry Project. Livestock depredation and loss of human life is promptly compensated as per the citizens' charter.

Continuous monitoring of predator and prey animals is done in most of the Tiger Reserves and Protected Areas by patrolling camps. The daily field data relating to prey animals and predators is recorded in the patrolling camp registers for overall assessment and seasonal monitoring. This also facilitates an understanding of the spatio-temporal use of the habitat by wild animals. Field workshops on the estimation of tigers, co-predators and prey animals are conducted in a phased manner to impart the necessary skill to the officers and frontline staff.

Under the biodiversity component of the World Bank aided MP Forestry Project special inputs are being provided for improved management and protection of PAs. About 16 per cent of the Rs 2,460 million project is earmarked for biodiversity conservation, being implemented since 1995-96. Eco-development is being organised in about 100 villages around the 12 priority areas through site-specific, participative micro planning.

Among the initiatives for protecting tigers outside the PAs are survey and demarcation of 18 potential satellite areas outside the PA; inputs for eco-development in intervening zones to strengthen the PA network and spatial pattern analysis of forested landscape between Kanha Tiger Reserve and Achanakmar Sanctuary. This has been done by the Wildlife Institute of India.

The India Ecodevelopment Project, aided by the GEF and the World Bank, has been launched in the Pench Tiger Reserve. The scope of the project includes improved management and eco-development of the impact zone. The UNDP/WII project for strengthening planning capabilities will cover three important Tiger Reserves — Kanha,

Bandhavgarh and Panna.

The Tiger Cell in Madhya Pradesh is a novel venture wherein two important prosecuting agencies of the government, the Police and Forest Departments, work closely to curb poaching and illegal wildlife trade.

The Tiger Foundation Society was created in 1997 for soliciting financial support from the general public and organisations committed to tiger conservation.

Madhya Pradesh believes in eco-tourism. Wildlife tourism is therefore a balance of conservation education and entertainment with the active participation of local people. The underlying principle is "ecological and socio-cultural sustainability."

Madhya Pradesh has taken the initiative in creating *Vikas Nidhis* (development funds) in all Tiger Reserves and PAs for using the gate receipts to improve tourist facilities.

The biggest challenge in the coming years is maintenance of ecological connectivity between PAs and Tiger Reserves by restoring the weak ecological links. This is crucial for saving almost 50 per cent of the tigers that reside outside the PA area system. Another formidable task is redressing the man-animal conflicts while reducing the dependency of communities on PA resources.

The task of balancing conservation and socio-economic development is very difficult in tropical countries, more so in a state like Madhya Pradesh where the indigenous people are dependent on the forests for their day-to-day sustenance. Traditional resource use systems are neither static nor benign. Need for income and lack of community awareness about the significance of biodiversity do affect the dynamics of forest management. The government is trying to ensure conservation with the active participation of indigenous people.

The sociology of indigenous people is not different from the sociology of the tiger. Had it been otherwise, this species would not have survived so long. The government seeks to restore this equation by suitable conservation inputs involving the local people. No political compulsion, economic imperative or popular pressure can thwart Madhya Pradesh from its commitment to save the tiger and its habitat. ■

(The author is Field Director, Kanha Tiger Reserve)

## KAZIRANGA: JOYS & SORROWS OF FLOODS

B.S. Bonal

**K**aziranga National Park in Assam is situated in the floodplain of the Brahmaputra river at the foot of the verdant Karbi Anglong Hills, located south of the National Highway-37. The area has been formed by alluvial deposit of the river and is flat with an east to west slope. The original notified area of the National Park was 430 sq km, but there is a constant change in the extent of area due to recurring bank erosion along the northern boundary and consequent accretion of new land masses. The present area of the Park is computed to be approximately 408 sq km.

The Kaziranga National Park has outstanding universal conservation values and it has been inscribed

on the IUCN List of World Natural Heritage Site in 1985. It is renowned as one of the finest and most picturesque wildlife refuges in southern Asia. It protects the largest population of the Greater Indian Rhinoceros (*Rhinoceros unicornis*) as well as many other threatened species enlisted in the Appendix-I of CITES. The Park also harbours more than 400 resident and migratory avian species.

The entire Kaziranga National Park area was formed by alluvial deposits of the Brahmaputra River and its smaller tributaries, which carry a great amount of silt during the rainy season every year. The riverine areas thus formed are colonised by Saccharum and other grass species as soon as the

Below:  
Grassland-Semal  
mosaic, Kaziranga



land masses stabilize. But it is observed sometimes that before the succession of other pioneer tree species could take route on such land masses, these get eroded. Constant change of land masses formed by the silt deposition can be visualised from the fact that the Diphlu River which flows into the river Brahmaputra through Kaziranga National Park after originating in the Karbi Anglong Hills, now divides the Park into two almost equal halves. Originally, this river had a course along the southern boundary of Kaziranga. This abandoned course of the Diphlu river, now known as the Mordiphlu River, partially forms the southern boundary of the Kaziranga National Park.

Numerous other channels of the Brahmaputra River criss-crossing the entire area once flowed through Kaziranga, and in course of time, silt depositions and the changing course of the Brahmaputra formed into the *Beels* (water bodies/lakes) of various sizes and depth. These processes of erosion and formation of land masses are still going on along the northern boundary of Kaziranga.

JOHANNA VAN GRUIJSEN



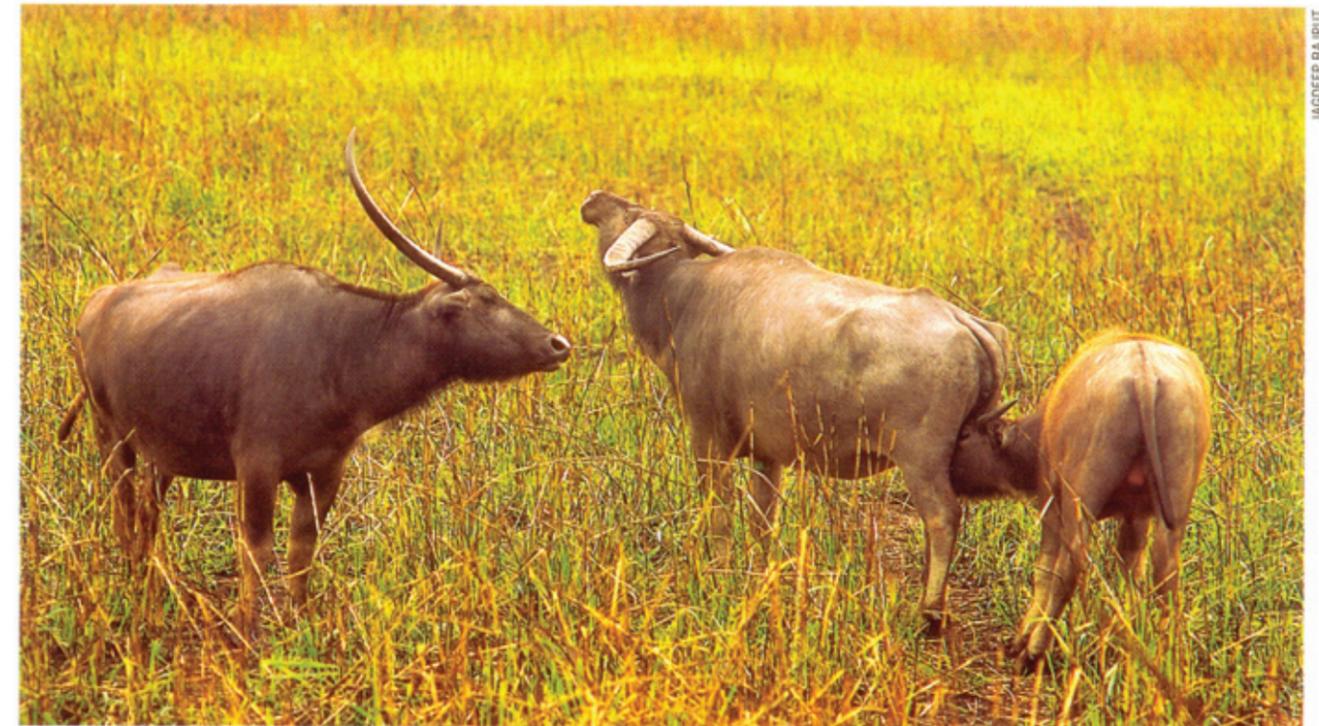
During the monsoon season every year, the river systems, originating in the Karbi Anglong Hills and flowing through the Park, inundates Kaziranga by overflowing the banks and filling up low lying areas. The beds of the entire river system, particularly of the Brahmaputra River, have been raised by the 1950 earthquake and the gradual silt deposition occurs in such a way that the run off from this catchment areas during the monsoon cannot be contained in the existing channels of this river. As a result, floods have become an annual feature of Kaziranga. Depending on the intensity of rain in the catchment areas of the Brahmaputra and its tributaries in the upper reaches, floods of varying intensity are experienced in Kaziranga. Though the annual average rainfall in the entire upper catch-

ment areas may not be very heavy, the intensity of floods in its basin varies due to the intensity of rain in concentrated spells. Depending on such spells of intensive rains, floods may occur a number of times in the same year.

The annual flood coupled with the annual burning of the grasslands are the two most important and major factors which influence the vegetation of the park. Flooding is responsible for creating different site conditions and formations, preferred by different types of vegetation. The areas from where the flood waters do not dry up completely have formed the swampy areas which support a different type of vegetation, compared to the areas which are annually flooded, but where the water dries up quickly.

Similarly, there are waterlogged and other marshy areas which support a different type of vegetation. The soil formations of different sites are also influenced by flood water. In some areas it has given rise to clayey soil by alluvial deposits, and at other places it has arrested the progress of soil development by sand depositions, creating different soil conditions preferred by different types of vegetation. Floods are one of the most important factors for maintaining the present vegetation status of the park and for arresting any further progress in the process of plant succession.

The influence of the annual flood on the wildlife population of the park is also important. A study of its impact on their physiological, behavioural and migratory habits is required. The distribution of various species of wild animals in the park during the seasonal change is most prominent during the flood. At the onset of the monsoon, animals start moving from the low lying areas to higher grounds. As soon as the park is submerged by the incoming flood water, the animals of the low lying southern boundary start migrating to the Karbi Anglong hills, and the animals of the central and northern parts seek shelter in the forest highlands of the park. Some animals, specially the deer living on the river islands along the northern boundary, are swept away by the strong currents of the turbulent Brahmaputra. Some animals migrating to the Karbi Anglong Hills through the populated villages and across the highway, are killed by poachers and fast moving motor vehicles. Though all wild animals are expert swimmers, some young and old ones drown.



JAGDEEP RAJPUT

Above:  
Wild buffaloes  
in Kaziranga

The floods generally cause considerable damage to the anti-poaching infrastructure - roads, bridges, patrolling paths, guard camps as well as the wildlife of the park. The worst flood occurred in Kaziranga in 1987, followed by another in 1988. During 1998, the park experienced three successive waves of high floods in June, August and September which played havoc with the anti-poaching infrastructure of the park. The situation is further aggravated by a national highway (NH 37) which runs almost parallel to the southern boundary of the park. A large number of animals are run over by the vehicles on the road during migration to natural highlands. Besides, the natural highlands located on the south of the NH 37 have also been opened up for cultivation and human habitation, and fleeing animals, also meet their doom in these areas.

The tiger being a carnivore can cope with the prevalent situation during floods better than the other animals of the park. The prey base of the tiger has not been reduced by the fury of floods, as evident from the census for large mammals in April 1999. The habitat of the tigers in the park was not adversely affected by flood as no cases of depredation by tiger have been reported from any area during or after the floods. However, the possibility of unaccounted loss of young cubs during the third wave of the 1998 flood cannot be ruled out. The deposition of sand in the fringe area of the *beels* may have an indirect

bearing on availability of prey, as herbivore are likely to avoid such areas for want of preferred grasses.

The floods are dreaded by animals and the park authorities. The increasing level of multiwave flooding for a decade now is threatening the future of the park. Due to various reasons, mainly deforestation in the upper catchment of the Brahmaputra, the intensity of flood is on the rise. During floods, most of the animals including rhinos migrate from the park and seek shelter in the adjacent highlands of Karbi Anglong. These areas which were sparsely populated initially are being gradually opened up for cultivation and human settlement. Protection of the animals during the period of migration from and to the park becomes difficult, as the enforcement network is almost non-existent in such areas.

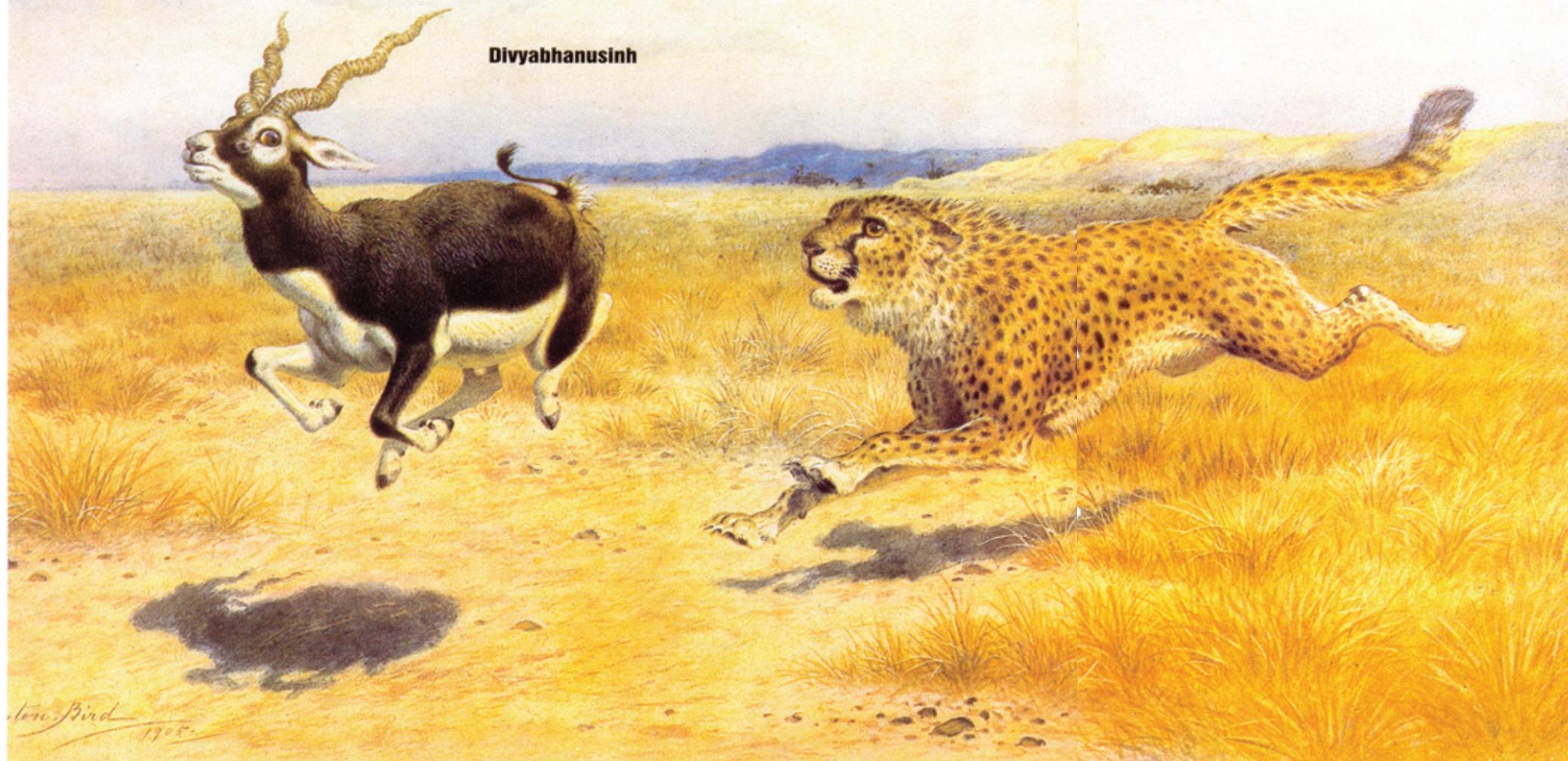
Annual floods in Kaziranga National Park have both positive and negative aspects. The flooding of the park is both necessary and beneficial for maintaining the ecology of the grasslands and forests, but it also has some adverse effect. The gradual rise of the water level and quick recession is no doubt beneficial. But floods of severe intensity which submerge the entire park for prolonged periods deprive the animals of both food and shelter. ■

(The author is the Field Director of KNP)

ASIATIC LION, ASIATIC CHEETAH AND THE BENGAL TIGER IN INDIA

## TOWARDS EXTINCTION

Divyabhanusinh



Above:  
The cheetah and  
the black buck  
never to be seen  
again

As we are about to enter the next millennium uncertain of our values and goals, it is opportune that we introspect on the strange journey of the 20th century. Obviously, this turning of the searchlights inwards is from the point of view of humans, arguably the most successful of mammals on earth.

A hundred years ago when India put its foot in the 20th century, the subcontinent had the benefits of half a century of peace under Pax Britannica. Our imperial masters were nearly supreme in their faith and values. The telegraph and railways had knit the country into a web of communications which was at that time equal to the best in the world. However,

for most Indians life had changed little. They travelled by bullock carts as fast as the people of Mohenjodaro. A tractor was yet to burst upon their lifestyle.

But the fruits of British rule were slowly making themselves apparent. Human population had grown to 200 million on the subcontinent by 1800. By 1901 the population had grown to nearly 284 million.

This explosion with the attendant increases in populations of cattle, goat, sheep, dog, etc., had a cataclysmic effect on the environment. First to come under pressure were the grasslands and wetlands from grazing and farming. The environmental bal-

ance changed at a pace hitherto unknown. The apex of the food chain represented by the lion was the first to show a drastic imbalance. The Mughals had hunted lions all over North India - near Ajmer, near Agra and elsewhere. Officers of the East India Company routinely hunted lions as their predecessors had done. William Frazer, who later became Resident at Delhi's Mughal Court, hunted seven lions in 1807 in Haryana and, upto the time of the Mutiny, lions were to be found and often shot in Central India. But by 1900, Lord Curzon in the famous viceregal epistle on conservation to the Burma Game Preservation Association, lamented a very few of these animals were left and that they were confined only to the Gir forest and

its environs. He attempted to set an example by not going there for a shoot.

The next in line of extinction was the cheetah. While the cheetahs were hunted like the lions, these remarkable animals were captured along with the caracal as an instrument of princely sport. For centuries they were taken from the wild to stock the paddocks of Chalukya kings, Tuqlaqs and Mughals. Akbar is believed to have had 1000 cheetahs at one time at his Court. By the time the British took note of the animals, very few were left. Between 1772 and 1968 some 200 animals were recorded in one form or another. They were shot even as vermin during this period. Obviously, the number of cheetahs in the wild would be higher than the recorded one, but to estimate it would be futile for the animal did not survive.

The relentless human march of progress and development left the tiger, the third big cat, for the last. In 1900 it was believed that only about 12 lions survived, the number now appears to have stabilized in the ever threatened habitat of Gir at less than 300. We do not have a figure for the cheetah in 1900. But from that date till 1968 about 50 cheetahs have been recorded. The tiger's habitat being thick jungle, it was the last to feel the extreme pressure of human progress. One look at Irfan Habib's Atlas of the Mughal Empire shows vast swathes of tract covered by thick jungle-ideal tiger country. The British inheritors penetrated these tracts for commerce. Be that as it may, the accepted wisdom gives us a figure for tiger population at 40,000 at the turn of the century. If we were to assume that half the tiger population disappeared by 1947 under British rule, then this creature has paid a remarkably heavy price for India's freedom. About 2,000 animals only were believed to be alive around 25 years later. This alarming situation was the immediate cause of Project Tiger and by way of a by-product, started the great numbers game according to which we are now the custodians of 4000 of these cats.

The fate of the tiger is alarming but it is not unexpected. Anyone with a slight bent for history could have read the animals' present plight as indeed the person can visualize its future.

We are on the threshold of the third Christian millennium. We enter it with the cheetah gone, with some 300 lions left and with the tiger well on its way in the same direction. There is little hope for these felines. There can but be only one agenda:



Above:  
Relics of the Raj:  
A viceroy's shoot  
Right:  
An elephant ring  
in Nepal



(a) Control of human, cattle, goat, sheep and dog populations on a war footing through education, extension of veterinary services and so on; (b) Preservation of the remaining miniscule areas covered by grasslands, wetlands and forests and their inhabitants at all costs.

NGOs and others who have different agendas, such as sustainable development, would do well to dwell

on a hypothetical situations of a Federation of wild tigers of India sitting down to write a white paper on their ideas of sustainable development vis-à-vis a human population of one billion, plus the attendant populations of domesticated animals. After all more than about 80% of India's land mass is available for human progress, surely the rest must be left to other creatures.

In our democratic polity animals have no votes and

therefore no voice. Most of us have no immediate perception of the need for environmental preservation. The task at hand requires a grim determination of the people and government of our republic. The question is: Will we rise to the occasion? ■

*(The author is a well known conservationist and author of books on wildlife.)*



## THREE YEARS OF TIGER CONSERVATION PROGRAMME

TCP SUPPORT TO TIGER AREAS  
**WHY SOME AND NOT OTHERS**

**M.K. Ranjitsinh**

The most frequent and important questions I continue to be asked is how much money is the TCP offering and where, what and why we are giving it. One is the total aggregate of runs a batsman makes; the other is the when, where and how he makes them in the different innings. In the ultimate analysis it is not the quantum that is contributed, but the contribution that is made in helping the team win, that should be the yardstick of success.

began with protected areas that were well known for their tiger - Corbett, Dudhwa, Palamau, Manas, Kaziranga, Bandhavgarh and Periyar. Detailed project proposals covering TCP support were drawn out in respect of each of them, in consultation with the park authorities. They provided both necessary ingredients to the protected areas and visibility to the programme.

When at the end of the first six months of TCP's life its second phase began, the perspectives and hence the priorities, had altered. There was more time to take an overall assessment. Two factors which must always be taken advantage of, were

The TCP began its life somewhat under a crisis of credibility. Funds were waiting and a quick start had to be made. My predecessor Tom Mathew rightly

Below:  
 Mechanised  
 country boats  
 for Kaziranga



TARIQ AZIZ

taken into consideration. First, the inherent capacity of the Indian forest and grassland eco-system to rapidly improve if given a respite and second, the propensity of the tiger itself to multiply if adequate protection, food and cover is provided.

There are less than 20 protected areas in the country that hold more than 20 tigers and where their numbers can be deemed to have reached optimum levels. What happens to the 'overflow' of tigers that must march out of these saturated PAs to stake their own territories? Third, a good number of PAs have reached 'saturated' levels of tiger numbers only in their core areas. The remainder of the areas of the PAs and their buffers - in what could be called 'penumbras' and peripheral areas - a larger number of tigers could be built up. Lastly, there are a score or more of protected areas which still have a viable breeding nuclei of tigers and a visible potential of improvement in prey biomass and habitat quality. Should these not be shored up as a second line of defence in the strategy to save the tiger ?

Protected Areas of the country cover a very wide spectrum in respect of conservation capabilities - from effective management infrastructure and traditions to those which exist, in effect, only in name. There are those which have been receiving manpower and other input support for 50 years and yet there are others, including some national parks and tiger reserves, which do not have the basic necessities. There are also those which have been receiving inputs and support, but have suffered setbacks.

It was felt that the prime consideration in the selection of a conservation area is where the inputs to be provided would be expected to yield the best results in habitat improvement, prey species increase and growth in tiger population in the near future, if not in the quickest possible time. This has to be complemented by the response received from the respective state governments in providing the requisite manpower and other support from their side. The managers of the chosen tiger conservation areas should not only be dedicated to the cause but should also have a certain minimum duration of tenure. They must, in fact, be of the choice of the Chief Wildlife Warden. The main consideration for selection, as stated above, would be the long-term potential as a tiger conservation unit, the chances of its success, the resources that it has or needs but are not available, and what the respective state governments themselves would do to better conserve them in the future. While Tiger Reserves and National



Parks that meet with the prioritization criteria mentioned above would, of course, be considered for support, wildlife sanctuaries and even those habitats that may not be sanctuaries, but are felt to be very crucial as corridors or otherwise and would be designated as sanctuaries or become effective conserva-

Above:  
 Mini-truck for  
 Palamau;  
 Uniforms for  
 Manas staff;  
 and bicycles for  
 Tadoba



Below:  
A jeep for  
Nameri and  
motorcycles for  
Bandhavgarh

tion units, would also be taken into account.

The very fact that the TCP was supporting these 'penumbras', peripheral areas of PAs and the 'second line of defence' PAs gave them stature, especially vis-à-vis their respective governments and helped their managers to garner additional requirements and support from their own governments in response to the TCP inputs. The TCP had taken a policy decision not to support a PA which was not fully under the control of the concerned state wildlife wing of the Forest Department. This is also the policy of the Government of India. Not only the management approach and priorities have to be different for a protected area, but they need a special ilk of people who have the expertise and the training and are in the wildlife wing of their own choice. The TCP selected Satkosia Gorge Sanctuary in Orissa and Achanakmar in Madhya Pradesh for support. Both have great potential. Both had been with the respective wildlife wings but had been reverted to territorial divisions

of their forest departments for reasons that had little to do with conservation. In the case of Satkosia, the sanctuary had been carved out amongst five territorial divisions. TCP made transfer back to the wildlife wings a pre-condition for its support. Madhya Pradesh procrastinated and the support was held in abeyance. Orissa agreed, at the level of its Chief Minister, and the five territorial bits of the sanctuary got once more united into a single unit under the control of the chief wildlife warden, and the TCP fulfilled its promise.

As regards the nature of the support provided to the PAs, the highest consideration was given to the perceived urgent needs of the managers of the protected areas themselves. However, these requests had sometimes to be tempered, not so much for the amounts entailed but for the type of inputs required and their priorities. It was found that it was not difficult at all to synchronize our vision and perceptions with theirs.

Predictably, their first priority were instruments that would help provide the most crucial concomitant of conservation in India - strict protection and law enforcement. Vehicles, communication equipment, chowkies, facilities for patrolling were top priority and TCP support became especially handy in view of the prevalent financial crunch and the government embargo on purchase of vehicles from their own budgets. Equipment for the staff not only helped the morale but also helped them to carry out their onerous duties more effectively. Veterinary care helped both in preventing the danger of contagion from animal diseases as well as in obtaining the goodwill of the neighbouring people. Provision of fire-fighting equipment highlighted that most underplayed bane of Indian forests - repeated, man-caused fires. Funds made available to the park managers through partner NGOs enabled the former to obtain vital information to counteract poaching and illegal trade and to provide for exigencies and emergencies.

Though inputs to lessen man-animal conflict and to wean public support were provided in the form of cattle compensations, alternatives to *akhand shikar* and awareness camps, sustained efforts to educate and involve the local people in the conservation of the protected areas and the biomass, could not really be undertaken. These require a long-term programme commitment - which is something the TCP did not have. ■

### Kaziranga NP

	Support accomplished	
Mini-truck	1	321,601
Wooden boat with OBM	3	195,500
Repair of existing boats	3	404,000
Radio sets	6	191,994
Binoculars	5(H), 3(M)	30,000
Tranquilizer gun	10	104,000
Night vision device	1	--
Clothing and field gear	2	300,000
Intelligence network		90,000
Local community health		40,000
Cattle inoculation		15,000
Awards to the field staff		37,000
Relief operation-floods 1996		90,000
		<b>1,819,000</b>

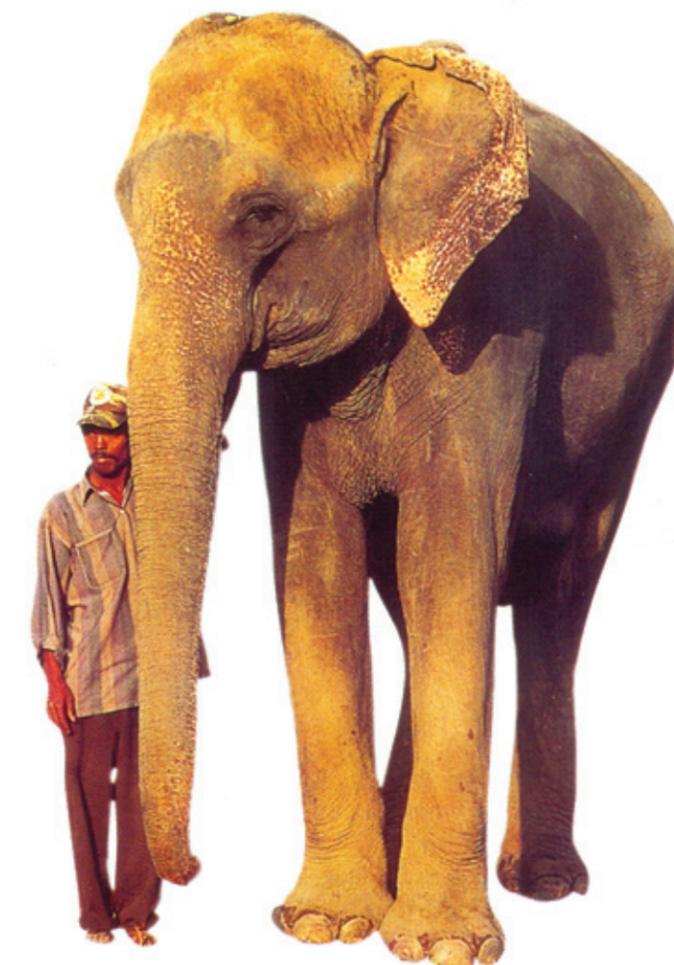
### Manas TR

	Support accomplished	
Motor cycles	2*	54,890
Cycle	12	18,240
Repair of boats	4	149,500
Radio sets	2(S), 4(M), 20(H)	396,402
Solar panels	10	102,000
Clothing and field gear		540,000
Training of field staff		50,000
Award for field staff		20,000
Intelligence network		60,000
Cattle inoculation		15,000
Local community healthcare		40,000
		<b>1,446,032</b>

### Corbett TR

	Support accomplished	
Diesel Jeeps	1	680,912
Boats with OBM	3	498,913
Elephants	3	1,065,500
Radio sets	6	178,549
Tranquilizer gun	5(H), 3(M)	106,001
Winter jackets	10	75,000
Award for the field staff	1	10,000
Intelligence network	2	4,000
		<b>2,618,875</b>

Below:  
Elephant for  
Corbett and  
mechanised  
boat for Manas



### Dudhwa TR

Support accomplished		
Diesel Jeeps	3	1,021,368
Tractors	2	424,211
Radio sets	2(S), 3(M), 10(H)	269,916
Winter jackets		96,900
		<b>1,812,395</b>

### Tadoba-Anhari TR

Support accomplished		
Truck	1+1*	689,200
Diesel jeeps	2+1*	971,176
Motorcycles	8	226,680
Cycles	34	43,792
Fire fighting equipment	1 set	2,800
Clothing and field gear		100,000
Lgl workshop for field staff		50,000
Healthcare for field staff		10,000
Cattle inoculation		250,000
Radio sets		
		<b>2,343,648</b>

### Katerniaghat WLS

Support accomplished		
Diesel jeep/Gypsy	1+1*	623,054
Motorcycles	2+1*	166,980
Boats with OBM	8	255,570
Cycles	34	12,900
Radio sets	1 set	305,903
Solar panels		41,550
Chowkies		21,600
Fire fighting equipment		34,000
Winter jackets		43,320
		<b>1,483,277</b>

### Mahananda WLS

Support accomplished		
Diesel jeeps	2	655,320
Motorcycles	8	217,134
Fire fighting sets	4	11,334
Radio sets	10(S), 2(M)*	275,000
Awareness camps		40,000
Cattle inoculation		50,000
		<b>1,248,788</b>

### Nameri NP

Support accomplished		
Mini-truck	1	338,363
Gypsy	1	276,430
Motorcycles	3	82,334
Inflatable boat	2	100,000
Radio sets	7(S), 2(M), 13(H)	362,918
Solar panels	3	40,000
Clothing and field gear		92,000
Intelligence network		15,000
Camp/chowkies	3	210,000
Tiger tracer		2,000
		<b>1,519,045</b>

### Pakhui WLS

Support accomplished		
Mini-truck	1	354,122
Motorcycles	2*	54,890
Radio sets	4(S), 6(H)	180,000
Solar panels	2	27,500
Camp/chowkies	2	245,000
		<b>861,512</b>

### Valmiki TR

Support accomplished		
Truck	1	335,772
Diesel jeeps	1	325,785
Motorcycles	4	111,320
Boat with OBM	1	259,892
Radio sets	3(S), 3(H), 15(M)	311,117
Fire fighting equipment	14 sets	39,667
Winter jackets	195	74,100
Solar panels	7*	95,084
		<b>1,552,737</b>

### Satkosia WLS

Support accomplished		
Diesel jeeps	2	664,546
Motorcycles	2*	82,334
Radio sets	8(S), 5(M), 3(H)	214,748
Fire fighting sets	18	51,054
		<b>1,012,682</b>

### Orang NP

Support accomplished		
Diesel jeeps	1	329,928
		<b>3,29,928</b>

### Sunderbans TR

Support accomplished		
Diesel jeeps	1	328,455
Radio sets	10(S)*	275,000
		<b>603,455</b>

### KMTR

Support accomplished		
Winter jackets	100	41,450
Radio sets	15 (H)	193,000
		<b>234,450</b>

### Sariska TR

Support accomplished		
Truck	3	1,085,781
Motorcycles	4*	184,998
Winter jackets	275*	104,500
Legal workshop for field staff		50,000
		<b>1,425,279</b>

### BRT WLS

Support accomplished		
Radio sets	3(S), 3(M), 12(H)	278,826
Solar panels	5	70,500
Fire fighting equipment	14 sets	39,667
Clothing and field gear		86,515
Tranquilliser gun	1	106,001
Base camp restorations		368,000
Cattle inoculation		164,366
Diesel jeep	1	302,222
		<b>1,416,097</b>

### Palamau TR

Support accomplished		
Truck	2	659,690
Diesel jeeps	1	317,129
Radio sets	3(S), 3(M), 6(H)	149,136
Solar panels	3	60,000
Clothing and field gear	60 sets	100,000
Insurance		14,045
		<b>1,300,000</b>

### Bandhavgarh TR

Support accomplished		
Motorcycles	5	142,473
Diesel jeeps	2	680,912
Radio sets	7(M), 25(H), 1(S)	484,810
Mini-truck		348,394
Solar panels	5	59,500
Raincoats		15,000
Legal workshop for field staff		50,000
Cattle inoculation		105,000
Chain link fencing	5 kms*	851,000
		<b>2,737,089</b>

Right:  
Patrol base at  
BRT



RAJIT TALWAR

Left:  
Jeep for  
Bandhavgarh



RAJIT TALWAR

WWF Tiger Conservation Programme  
**PROGRAMME COSTS**

January 1, 1997 to December 31, 1999

(Subject to correction by WWF India Accounts Division)

<i>Budget Heads</i>	<i>Total Expenditure (Rs)</i>
<b>I. Assistance to Tiger Conservation in the Field</b>	
Support to protected areas	31,960,783
Lessening of man animal conflict	
Cattle compensation scheme	2,447,756
Akhand shikar	338,000
Assessment and monitoring of tiger and its habitats	330,237
Interaction with government for tiger conservation	56,567
<b>II. Regional Cooperation for Tiger Conservation in Asia</b>	<b>750,006</b>
<b>III. Legal Redressal</b>	<b>184,195</b>
<b>IV. Trans-sectoral and Trans-Regional Activities</b>	
Control of illegal trade in tiger derivatives	
Support to TRAFFIC India & training of enforcement agencies	469,243
Support to Regional Deputy Directors for control of trade	204,000
Communication and media	939,671
Awards for special contribution to tiger conservation	905,812
Tiger conservation coordinators	1,276,384
Monitoring of TCP activities	263,356
<b>V. Contingency*</b>	<b>159,390</b>
<b>TOTAL PROGRAMME COSTS</b>	<b>40,469,595</b>

\*Ex-gratia payments were made to nine park personnel for serious injuries or to their families in case of death.

## TCP SUPPORT: A CRITICAL LOOK

Usha Rai

How does one evaluate three years of TCP support to 19 protected areas in India? Has TCP been able to stabilise or improve the tiger population? Has the prey base of the magnificent big cat been enlarged or have tiger habitats improved?

These are questions that are frequently asked of the TCP team. Questions that are difficult to answer, for three years are not enough to tackle such a challenging task.

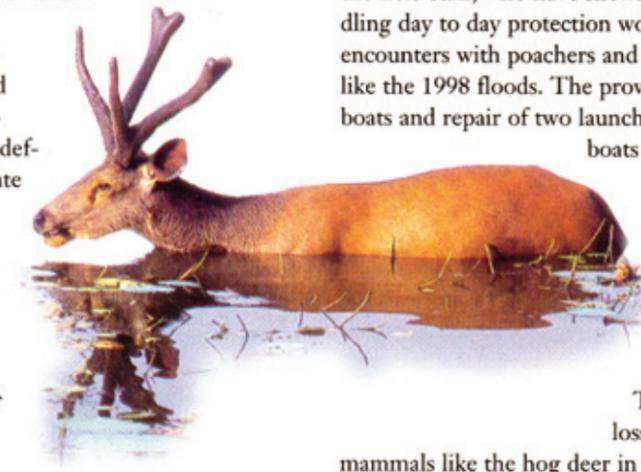
Yes, it can be said with a fair degree of confidence that the parks receiving support are looking up — there is a marked improvement in the morale of the staff; patrolling in the parks has been stepped up; TCP's cattle compensation scheme has definitely arrested the spate of tiger poisoning incidents in and around the protected areas of Corbett, Dudhwa and Katerniaghat in UP, as well as in other areas that have come under the TCP support umbrella. Yet, at the best of times, it would be difficult to pinpoint that the improvement that was noticed was due to TCP inputs.

Earlier this year conservation experts - Mr Kisor Chaudhury, Dr Rakesh Tomar, Dr D K Lahiri Choudhury, Dr Anwaruddin Choudhury, Dr Ravi Sankaran, and Mr R C Saxena - set off with their magnifying glasses and a set of parameters and criteria for assessment of TCP's support to 11 protected areas.

A base-line data, albeit of a cursory nature, has emerged and comparisons could be made with it for

future assessments, if any. As pointed out by Dr M K Ranjitsinh, Director of WWF-TCP, such assessments have not been carried out in the country in the past and the TCP has learnt a great deal from the reports received.

In his assessment of TCP support to Kaziranga National Park, Dr Lahiri Chaudhary says: "The support led to the improvement in the conservation status of the protected area." He adds that it has helped plug loopholes in the management of the park. The equipment provided and the recognition extended through the TCP's awards has motivated the field staff, who have shown great courage in handling day to day protection work that includes encounters with poachers and handling exigencies like the 1998 floods. The provision of motorised boats and repair of two launches and 30 country



boats has increased the anti-poaching capabilities of the management. The two launches now form permanent water-borne camps.

There was considerable loss of smaller prey base mammals like the hog deer in the 1998 floods. But the Tiger Emergency Fund, made available by WWF at short notice, has helped rejuvenate the tiger's prey base. An increase in the population of rhinos and swamp deer from the evaluator's last visit to the park was noticed.

In the case of Manas too, Dr Chaudhary points out that the TCP support has helped the park management overcome some basic hurdles in taking control of the park. This Park had been virtually seized by militants about 15 years ago. Better communication and field training to the staff has helped build capacities and incentives like the award scheme have enhanced the morale of the staff. The management is making an effort to use this support to take con-



Above:  
Wild pigs,  
natural food of  
the tiger

trol of the entire park.

Dr Chaudhary says that one area that still needs to be addressed by the TCP is trans-border cooperation between India and Bhutan. Though sufficient prey base animals were visible in the Bansbari range along the road to Mathanguri, the prey base in Manas as a whole is not that good. Thanks to the intelligence network support of the TCP, an armed poacher was killed by forest personnel and miscreants were stopped from torching Kokilabari beat office of Bhunyanpara. The personal gear provided by the TCP and the incentive awards have boosted the morale of the staff.

On the support to Nameri, it has been reported that the TCP support has been the first big resource input to the area. This has enhanced the capacity of the management for protection of the habitat. It will be impossible to evaluate the change in habitat as a result of TCP inputs, but it can be inferred that the TCP input has had a positive impact in the management and protection of the habitat. The presence of nine cattle camps in the protected area is, however, like a festering sore, adds Dr. Chaudhary.

Reports have also been critical of the misuse of the TCP support in some protected areas. The jeeps given to Katerniaghat wildlife sanctuary of UP for patrolling has been diverted - one to an official of the district administration and the other to a forest official. In Palamau Tiger Reserve of Bihar too, where two trucks and a jeep were provided, one truck

was diverted to the Dalma sanctuary for three months. The jeep provided for patrolling the park was being used by the deputy director. In Bandhavgarh tiger reserve of Madhya Pradesh, one of the two jeeps provided by the TCP for patrolling the park had been diverted to Umaria.

Despite some embarrassment for the park authorities and the TCP, the evaluation reports have been followed up and the "misuse" rectified. The TCP has also sought to stop the widening of an eight- km road from Kataiya to Kishanpur in Dudhwa Tiger Reserve, which evaluator, Kisor Chaudhury, pointed out would result in 5000 to 10,000 trees being felled.

Dr Rakesh Tomar, who evaluated support to Palamau, as well as Dr K Chaudhury have endorsed the success of the cattle compensation scheme. Thanks to the scheme, not only has poisoning of tigers been arrested but Park authorities are now able to monitor better the status and movement of tigers. Because of the high rate of cattle kills around Corbett Tiger Reserve (around 1000 in less than two years), Dr Chaudhury says there is need to study why so many cattle kills are taking place here.

Most reports refer to the intrusion of exotic weeds in these protected areas and have suggested that TCP support should extend to the removal of the weeds. However, though improvement of the habitat is a mandate of the TCP, it has not supported removal of weeds *per se*.

The reports have also looked at the development projects coming up in these protected areas and assessed the damage that these could cause. In Mahananda wildlife sanctuary, about the development of the Bagdogra-Sevoke road, via Sukna, and the conversion of the existing meter gauge railway line to broad gauge, through the southern part of the sanctuary, Dr Anwaruddin Chaudhary has warned that it would pose a major threat to elephants and other wild animals. It would also have a deleterious impact on the Chapramari-Gorumara complex, Jaldapara and Buxa tiger reserve. ■

## PASSPORT TIGERS

THE 2ND INDO-NEPAL TRANSBORDER MEETING

Tariq Aziz



The "Second Transborder Consultative Meeting for Biodiversity Conservation Between Nepal and India" was organised in New Delhi. This time round, managers of the protected areas that are contiguous with forests across the Indo-Nepal border were also present along with government representatives of both the countries. The two-day meeting started on February 28, and was supported by the WWF Tiger Conservation Programme.

Delegates from the two countries deliberated in the environs of Suraj Kund, a resort outside New Delhi, to draft a new charter for the conservation of a common resource - wildlife. A 'Declaration' and an 'Action Plan' towards improving cross-border wildlife conservation was finally approved by them. Managers of transborder protected areas from both India and Nepal also worked out a series of measures

to ensure easy movement of wild animals across the international border, and to check illegal cross-border smuggling of wildlife parts and forest produce.

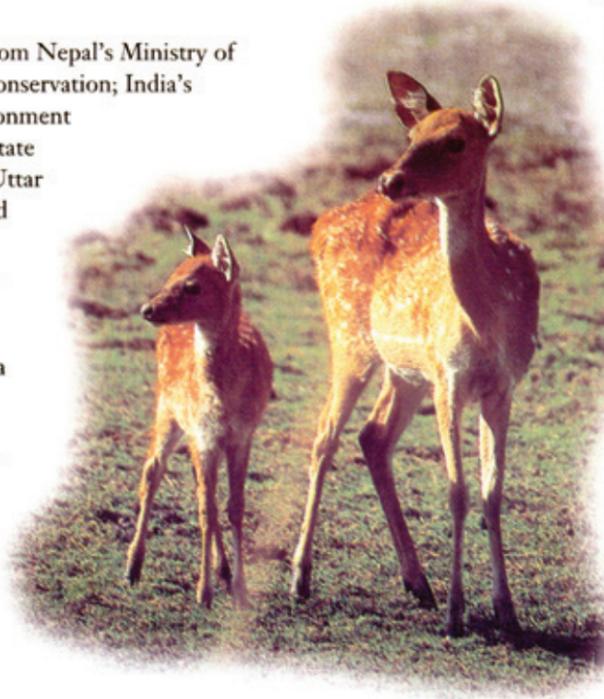
Wild animals, including the tiger and its preybase, move between the two countries, charting their own routes on land and water through contiguous forests across the border. Nepal has five protected areas on its border with India - Royal Chitwan National Park, Parsa Wildlife Reserve, Royal Bardia National Park, Royal Suklaphanta Wildlife Reserve and the Koshi Tappu Reserve. On the Indian side of the Nepal border are Dudhwa Tiger Reserve, Katerniaghat Wildlife Sanctuary, Sohelwa Sanctuary and the Sohagi Berwa Wildlife Sanctuary in Uttar Pradesh; Valmiki Tiger Reserve in Bihar and the Singhalila National Park in West Bengal. Barring Singhalila, all border protected areas have

tiger populations.

Representatives from Nepal's Ministry of Forest and Soil Conservation; India's Ministry of Environment and Forests, the State Governments of Uttar Pradesh, Bihar and West Bengal, agreed by consensus to promote bilateral cooperation between India and Nepal on the issue of trans-boundary protected area systems and illegal trade in fauna and flora. The presence of managers and field staff of these protected areas as well as senior forest and wildlife officials and representatives of NGOs, including that of WWF and King Mahendra Trust for Nature Conservation (KMTNC), made the meeting meaningful.

The delegates put on record that the 'transborder fauna is a shared resource' and that the 'adjacent transborder protected areas complement each other', and that 'it is vital to the conservation interest of each that the other is adequately protected and the ecological linkages between them are properly safeguarded'. The delegates decided to strengthen protection along a dozen routes that animals on both sides of the border take during their annual peregrinations. Neighbouring protected areas managers are also to meet once in three months. 'Increasing demographic impact on the wilderness and the illegal trade in wildlife can be curbed through close cooperation by both parties', the delegates noted.

The bilateral cooperation worked out during the meeting includes establishment of a communication system between transborder protected area managers and the maintenance of a close dialogue and exchange of information between them. It was also decided to synchronise enumeration of wildlife, particularly of tigers, on both sides of the border for a more realistic estimation of animals on the



RANJIT TALWAR

border. A linkage is to be established between Royal Bardia National Park and Katarniaghat Sanctuary; a protected area established in the trans-Sharda region of Pilibhit district, adjacent to the Royal Sukla Phanta Reserve; extension of the existing sanctuary at the Koshi barrage and providing of facilities to allow migration of aquatic fauna in trans-border rivers. To counteract poaching and illegal trade across the Indo-Nepal border, funds are to be raised and provided to protected areas managers on either side for intelligence work. It was also decided to harmonise the Indo-Nepal trade treaty of 1996 with the requirements of CITES.

Eco-development was also proposed on the Nepal territory across the border from Dudhwa Tiger Reserve and Katarniaghat Wildlife Sanctuary in India. The Nepal forests along these two Indian protected areas were unfortunately clear felled some time ago.

Although everything may not have been worked out and systematized in this one meeting, it has been a significant step in the right direction. It is also a lesson to all for further transborder cooperative action, between Bhutan, Bangladesh and India. The meeting has sent positive signals to all in the subcontinent, who work in an environment where habitat destruction and isolation continue along political boundaries. Protected area managers on both sides of such divides blame each other for the losses. "The one-to-one equation and camaraderie that has been established during this meet will have a positive bearing on the implementation of the action plan", remarked a delegate. With an agenda for Indo-Nepal transborder cooperation for wildlife conservation finally in place, the shape of things to come along the Indo-Nepal border are expected to be more tiger-friendly. ■

## TRACKING TIGERS

Ranjit Talwar

Ever since the first All India Tiger Census in 1972, all counting operations of wild tiger populations have been based on the Pugmark method, formalised by the late Saroj Raj Choudhury, an eminent forest officer of Orissa, and termed as the "Co-operation Tiger Census." The technique was first applied in Orissa in 1966.

The art of identifying individual tigers through their pugmarks has been practised in India since centuries. During the shikar days, professional trackers had developed skills not only to identify individual tigers from their pugmarks, but also their sex, age and the approximate size of the animal. Skilled trackers could determine even more from the pugmarks. They could judge whether the tiger had eaten a meal recently and in the case of a tigress, the pugmark was enough to tell them whether she was pregnant or not. As the intricacies of this art were passed down from father to son, the actual methodology remained

unrecorded and the art was lost with the banning of tiger hunting in India in 1970.

When the requirement to count tigers arose in the late sixties, some aspects of this dying art were revived by Saroj Raj Choudhury, who was able to convert this age-old skill into a science for general application. He described the procedure in an article that appeared in an issue of *Cheetal* magazine in 1970. Ever since, all counting of tigers and leopards in our country is done by this method, which has undergone further refinement with experience.

Although the pugmark method has been in use for counting tigers and leopards since 1972, there is no formal publication, by either the Government of India or the Wildlife Institute of India, laying down the exact procedure for application in the field. This has proved to be a major drawback as, in the absence of a formal training note, there have been very sig-



RANJIT TALWAR

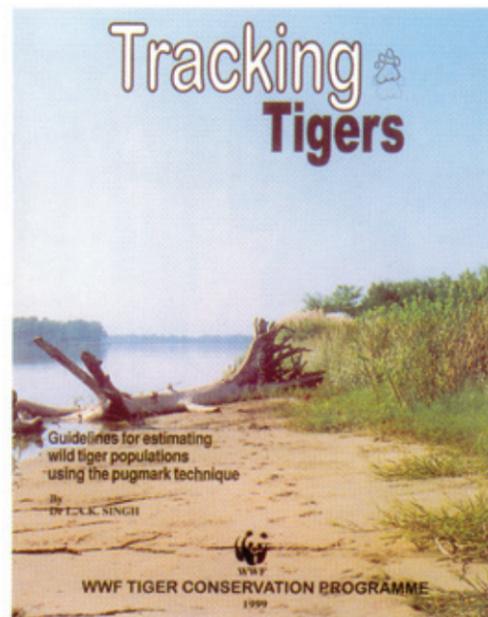
Right:  
Tracing tiger  
pugmarks



**Above:**  
Pugmark of a large male  
**Below:**  
Cover of the Guidelines for estimating tiger populations

nificant variations in the method's application in the field, resulting in inaccurate results. Consequently, there was a lot of criticism from some conservationists. Unfortunately, this criticism targetted the pugmark method of counting, whereas the problem probably lay with it's faulty application in the field.

The TCP analysed the problem and arrived at the conclusion that the fine-tuned pugmark method of tiger estimation needed to be documented and made available to all concerned as a guideline. Dr LAK Singh, Research Officer of Similipal Tiger Reserve, because of his vast experience in this field, was commissioned to write the basic contents of this manual. The draft was thereafter subjected to review by the Wildlife Institute of India and other experts in the field like Mr HS Panwar, former Director of Project Tiger, and the Field Director of Kanha Tiger Reserve. Comments on the draft were also sought from Additional IG (Wildlife) and Director Project Tiger, Government of India. The methodologies used in Nepal and Bhutan were also taken into consideration.



All this effort finally resulted in the publication of 'Tracking Tigers- Guidelines for estimating wild tiger populations using the pugmark technique' in April 1999, and distributed in time for the summer counting operations in May 1999.

The contents of Tracking Tigers have been drawn from years of research work by the author in enumerating tiger populations in Similipal and other tiger habitat of Orissa. Dr LAK Singh has not only fine-tuned the original co-operative tiger census technique for easy application in the field, but has also been able to significantly improve

upon it by adding supplementary techniques like the methodology for distinguishing between the pugmark of tiger cubs and leopards. He has also been able to bring clarity to methods available for determining the sex of a tiger from it's hind pugmark. These significant aspects are likely to be of immense value to the forest staff during counting operations in the future.

The publication has been received well. Besides good reviews in the press, the publication has been appreciated by the forest officials working in the field. The demand for the publication has been so great that the thousand copies that were initially printed were exhausted in a very short time. Meanwhile, feedback received from the field personnel on our request has enabled the TCP to improve upon the first edition and a revised edition is under publication. Simultaneously, a Hindi translation of the manual and a simple graphic version for the forest guards are also under preparation. ■

## DEMYSTIFYING WILDLIFE LAWS FOR FIELD STAFF

Devki Panini

The common perception amongst wildlife experts is that despite concerted efforts by the government and NGOs for protecting the tiger and improving the infrastructure in tiger reserves, poaching of tigers is still a widespread problem in India. Poaching cases are still reported from a large number of tiger reserves. The problem is compounded by the invisibility of the poachers who recruit local people to commit wildlife crimes for small sums of money.

The low rate of conviction in wildlife cases is disturbing and has a demoralising effect on the forest staff. In fact, the all too easy acquittal in wildlife cases encourages offenders to commit wildlife offences brazenly.

The difficulties faced by front-line forest staff in understanding the complicated legal procedures and the long winded application of the law were observed on visits to tiger reserves in Madhya Pradesh. The difficult legal language and the apprehension about court procedure posed many challenges. Having a legal background and having worked with a conservation NGO, could we simplify the wildlife laws? We also realised the need for adequate discussion and subject-specific legal training for the field personnel. For example, it would be useful to discuss what legally constituted "evidence" in a wildlife offence with forest guards and foresters, as they were primarily responsible for detection of wildlife crime and collection of evidence. It would also be useful to discuss the legal steps and procedure to be followed in wildlife cases with field personnel. The forest staff in the five tiger reserves visited expressed the need for simple material for application of legal provisions in wildlife cases. A discussion on judicial interpretation in wildlife cases and judicial activism in wildlife law would illustrate the landmark court judgements that could be used as precedents in wildlife offences.

Keeping in view the need for legal awareness and capacity building of forest staff, the workshops on wildlife law and procedure were planned with three specific objectives — to demystify the laws relating to wildlife including the Wildlife (Protection) Act, 1972, the Criminal Procedure Code, the Indian Evidence Act and the Indian Penal Code; To discuss and highlight the provisions of wildlife laws by using case studies and to produce simple handouts on wildlife laws and procedures for field personnel.

Workshops have been held in Tadoba and Bandhavgarh Tiger Reserves and are to be held in three others - Corbett, Dudhwa and Sariska. These five reserves were selected for the first phase of the legal training programme, as they already have the support of the WWF-Tiger Conservation Programme.

The experience of the workshops has also helped clarify our own legal understanding in wildlife cases. For example in Maharashtra, when the forest staff expressed their inability to produce two independent witnesses in wildlife cases for corroboration of evidence, we discussed the landmark order of the Kerala High Court which made an exception for wildlife cases. The Court held that in wildlife cases, difficult conditions and lack of accessibility in the forests would warrant waiving the rule of providing two independent witnesses. The Court held that confessions made by offenders to the forest officers could be relied upon as evidence.

The forest staff in Rajasthan compounded offences related to animals listed in Schedule I and Schedule II— Part 2. We discussed the recent ruling of the Madhya Pradesh High Court that since all animals, animal parts and instruments used in an offence were government property, the power to compound offences could not apply to government property. In this case, the Court held that the power to compound offences would stand

abridged with respect to government property and thus officers could not release jeeps used in a wildlife offence on payment of surety. However, the staff in Sariska were still unsure whether the MP order would be applicable in Sariska. We clarified that this order would be binding in all wildlife cases unless the order had been reversed by the Supreme Court.

The workshops are different from other initiatives, as preliminary research and intensive interaction with the forest staff have preceded the actual workshop. A significant suggestion given by forest staff in several tiger reserves is the appointment of an independent environmental lawyer for assisting the forest department in wildlife cases. The public prosecutor being overburdened with government's cases, such an independent lawyer is needed to counter

wildlife crime.

Another suggestion was to actively involve the territorial staff of the forest department in such initiatives, since wildlife crime occurs outside the boundaries of protected areas and the territorial wing lacks knowledge on wildlife preservation. They also suggested holding of mock courts and mock trials during the workshops to familiarise field personnel with court craft.

Our initiative to involve the local judiciary—the Chief Judicial Magistrate and the Sessions Judge—in the workshops has helped sensitise the judiciary to the practical difficulties of the field staff. This initiative has also strengthened the understanding between the forest department and the judiciary and has brought recognition for the forest department's efforts for preservation of the tiger. ■

## Tiger Conservation Awards

### 1998

- **Special award for team work** (Rs 2 lakhs)  
Kaziranga National Park
- **Outstanding management of tiger area** (Rs 25,000)  
Rajesh Gopal, field director, Kanha TR
- **Bravery Awards** (Rs 10,000)  
A.K. Brahma, Range Officer, Manas TR  
M.G. Alexander, Range Officer, Nagerhole NP  
Lalzawmliana, Dampa TR, Mizoram (P)  
Mohd. Iqbal Ahmed, Forest Guard, Simlipal TR  
T. Chellaiah Thevar, Watcher, Kalakad Mundanthurai TR (P)
- **Suppression of trade in tiger derivatives** (Rs10,000)  
Soumen Biswas, NESPON, West Bengal (P)  
Banikanta Saikia, forester, Kaziranga NP
- **Innovative/Exemplary contribution to tiger conservation** (Rs20,000)  
Dr. L.A.K. Singh, Simlipal TR
- **Notable work in involvement of people in tiger conservation** (Rs 20,000)  
K. Thulsi Rao, ACF, Nagarjunsagar-Srisailem TR

### 1999

- **Millennium Award** (Rs 2 lakhs)  
Kaziranga National Park
- **Saving forests from fires** (Rs 50,000)  
Panna National Park
- **Bravery Awards** (Rs 10,000)  
Ram Kumar, Daily Wager, Dudhwa NP  
Babulal Orang, Forest Guard, Manas TR  
Santen Barkachari, Forest Guard, Manas TR  
Thiru A. Udayan, Wildlife Warden, Mudumalai  
Saroj Kumar Mohanty, forester, Simlipal TR
- **Suppression of trade in tiger derivatives** (Rs 10,000)  
Diwakar Sharma, field investigator – TRAFFIC  
Mrigen Baruah, Forest Officer, Pobitara Wildlife Sanctuary
- **Innovative/Exemplary contribution to tiger conservation** (Rs 20,000)  
P.K. Sen, Director, Project Tiger
- **Notable work in involvement of people in tiger conservation** (Rs 20,000)  
S. Guruvayurappan, Sociologist, Eco-development project, Periyar TR.

## HONOURING THE BRAVE FORESTER

Usha Rai

For two years now the WWF-Tiger Conservation Awards have been given to Parks as well as field staff of the country's vast network of protected areas who have shown tremendous commitment in protecting the tiger, its prey base, the forests and the eco-system.

These vigilantes of our forest treasure trove have encountered poachers and killed them; stopped timber smugglers from running off with forest wealth and chased back into the forests herds of wild elephants that had strayed into paddy and sugarcane fields. They have tranquilised and moved back to the Sundarban Tiger Reserve tigers that have strayed into villages, posing a threat to the life of the people. Through eco-development programmes they have been trying to win over villagers living on protected area fringes to join hands with them in saving forests and wildlife.

A dedicated forester who was trampled by a female elephant and survived, is still recovering from multiple fractures in a Balasore hospital. From Simlipal Tiger Reserve, another forester, who with exemplary courage, challenged an armed gang of timber smugglers suffered multiple fractures and received 45 stitches on his head. Before collapsing he prevented smugglers from fleeing with the timber collected. But not all are as lucky as these two. Last year three posthumous awards were given - two to game watchers of Dampa Tiger Reserve, Mizoram and Mundanthurai Tiger Reserve, Tamil Nadu. The third was given to a pioneer wildlife activist of West Bengal who was investigating illegal trade in wildlife.

The TCP feels that important as funds and equipment are for protected areas, the mettle and commitment of the men who manage and guard our national parks and sanctuaries on humble wages is as vital and should be recognised. In fact many of them, especially in Bihar, are daily wagers.

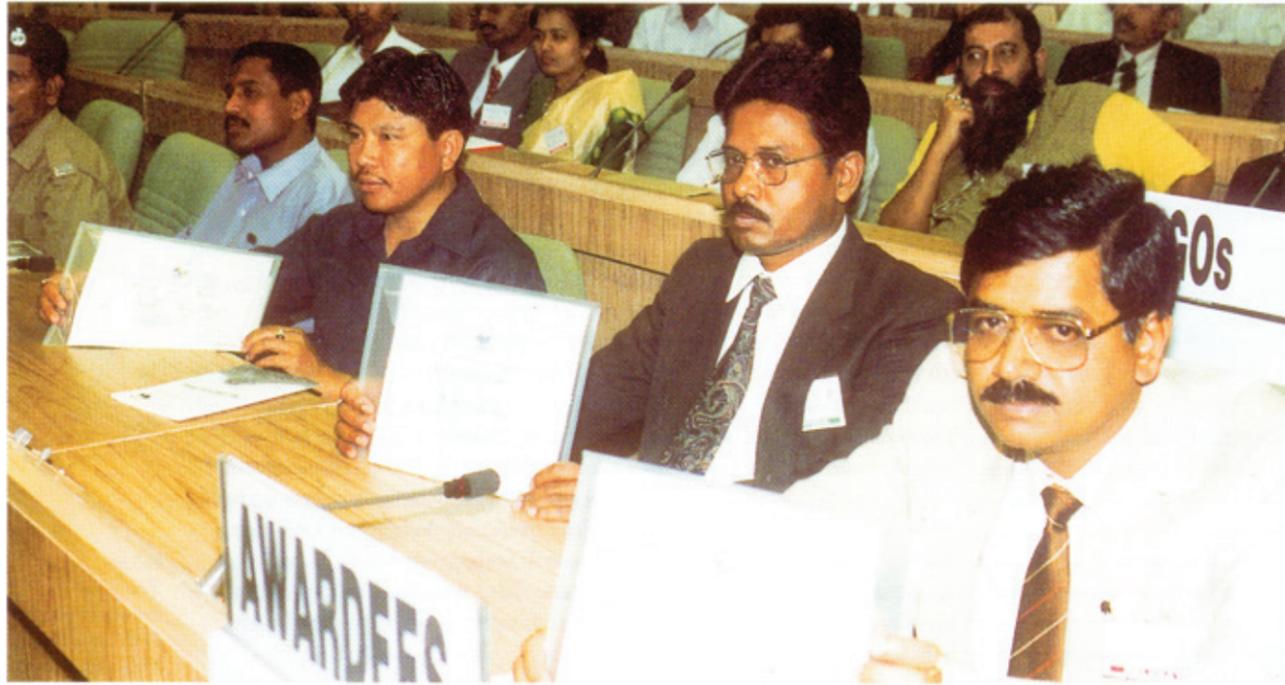
While soldiers and policemen in the country are routinely honoured, for, in public perception, it is

they who guard our frontiers and protect civil society, there is no such recognition for the forester. It is only NGOs who give awards to forest personnel. The amounts they give are small for the kind of risks they take. But the honour and the recognition the foresters earn through these awards has boosted the morale of the field staff. When the 1998 tiger conservation awards were given by the Vice President of India, there was standing ovation for the heroes of our jungles, some of who had come with their families.

The TCP has given equal importance to manage-

*Below:  
The Vice  
President giving  
1998 awards to  
M.G. Alexander  
and the widow of  
Lalzawmliana*





Above:  
Some of the  
1998 awardees

ment of parks, team work in running the park and in handling exigencies. The Kaziranga National Park in Assam, home to the largest population of one-horned rhinos in the world and some 80 tigers, confronts floods and poachers with equal equanimity. It has been recognised for two consecutive years as the best managed park in the country. While in 1998, the jury instituted a special award of Rs 2 lakhs for Kaziranga's team work in handling exigencies, notably the floods, in 1999 it was unanimously selected for the Millennium Award, also of Rs 2 lakhs. The money has gone into a welfare fund to meet the emergency needs of the staff.

To create the ambience for preventing forest fires, in 1999 the TCP instituted an award of Rs 50,000 for a park with a good record of preventing forest fires. A large number of these fires are caused deliberately to attain a fresh flush of grass and to collect minor forest produce. There have also been several reports of forests being set on fire to settle scores with forest personnel. The first award for saving forests from fire was given to Panna National Park in the dry, deciduous tracts of the Bundelkhand region of Madhya Pradesh.

Researchers working in protected areas are largely faceless people, working quietly behind the scenes. The 1998 award for innovative contribution to tiger conservation was given to Dr L A K Singh, a research officer, who was involved not only in the

crocodile conservation programme from its inception but has refined the old pugmark technique for tiger conservation. In 1999 the award has gone to the Director of Project Tiger, Mr P K Sen. He has spent over 30 years in wildlife management in the field. As Chief Wildlife Warden, Bihar, he has single-handedly recovered elephant tusks worth Rs 1 million from the den of extremists.

The work of K Thulsi Rao, Assistant Conservator of Forests, Nagarjunsagar-Srisailem Tiger Reserve won him the 1998 award for involvement of people in tiger conservation. He was given the daunting task of winning over the villagers for forest conservation when militancy was at its peak and forest officials were being targeted. The population of tigers in the Park had dropped from 94 in 1989 to 34 in 1995 because the villagers, backed by militants, were poisoning tigers in their fight over forest rights. Today, with people's support, 10,400 hectares of degraded forests have regenerated and tigers are being sighted in areas where they have not been seen for eight years. This year's winner of the same award, S Guruvayurappan, a sociologist of the eco-development project of Periyar tiger reserve, has been able to convert people who were thieves of forest timber into forest protectors.

All these people who were working quietly in remote corners of the country have been brought centre stage, albeit for a few moments of glory, by TCP's conservation awards. ■

## CATTLE COMPENSATION SCHEME

# A SECURITY COVER FOR THE TIGER

G.D. Sarin

Shamsul Haq retired from the U.P Home Guards and came back to live in his village Dhikuli on the periphery of Corbett Tiger Reserve (CTR). His pension benefits being under dispute, he invested his savings in four buffaloes to earn a livelihood. This was 1993, and by January 1996 two calves were added to his livestock. By September he had lost all of these animals.

A young tiger beginning to hunt independently had claimed all of them in quick succession. Shamsul Haq was reduced to virtual penury - no savings and no income. The Corbett Foundation (TCF) came forward to help with Rs.750 per buffalo and advised him to claim government compensation. For a livestock worth Rs. 30,000-35,000 he got a total of Rs.3500 for all the animals from the Corbett Foundation within 24 hrs of each incident and Rs.4,700 from the Forest Department. The payments made by the forest department were spread over two years. So the total compensation of Rs. 8200 for his entire savings came in bits and pieces, not allowing any possibility of re-investment. Shamsul Haq's bitterness over the annihilation of his livestock and his anger against the tiger, knew no bounds.

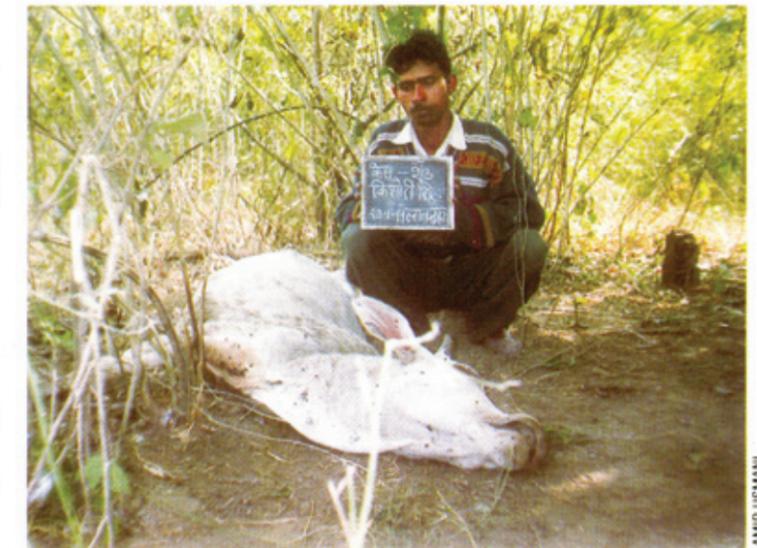
Shamsul is not the only one who has faced such a crisis. Khyali Datt Dorbi of Laldhang, rears cows. He has 150 cattle which are kept in a cattle station or a khatta in Phanto. All of them graze in the forests. He loses roughly 10% each year to predators. Initially he was extremely resentful. Being young and impulsive he had even thought of some extreme measures. His compensation was always in arrears.

Nearly all households living on the fringes of the CTR and dependent on livestock for a livelihood, have known loss of cattle to wild predators at some time or the other. Because of competition for available grasses and fodder, the vast cattle population ensures that the number of wild ungulates remain limited.

Peripheral areas are more disturbed and the plantations offer less cover for wild animals. Poaching pressure exists in these peripheral areas. The resident predator population and transients, compelled to move out of the protected habitat of the park, are forced to resort to cattle lifting for their survival.

With the launch of Project Tiger in 1973 the tiger habitat areas were brought under strict supervision. A little later it was noticed that the local communities living on the fringes of Tiger Reserves have also been adversely impacted. Damage from wildlife to their cattle was a genuine grievance and something needed to be done to reduce their resentment. There was always a danger of their anger expressing itself as a major threat to the tiger. A scheme was launched to provide ex-gratia payment to the owner of a cattle killed by a tiger or leopard. Implementation of this idea has, however, been less than ideal. There is a long time lag between the occurrence of the kill and payment of compensation. In some cases villagers did not receive any compensation. This often escalated into a conflict between the Park and the people.

Below:  
Documenting  
a "kill"



AMIR USMANI

The Corbett Foundation, established in 1994, sought to bridge this gap between the Park and the people by prompt inspection of the reported cattle kills and provision of some ex-gratia assistance on the spot. The Foundation covered the eastern and southern periphery of the CTR from its office at Dhikuli village. The personnel of the Foundation also tried to interact with the aggrieved cattle owner and advised him to claim official compensation. They insisted that the carcass of the cattle should be left to the predator. Although the amount paid was small compared to the price of the cattle, it eased the anguish of the farmer because the payment was prompt.

Many cattle are wounded by predators but their owners are not eligible for official compensation. This too creates rancour against the predator. So the TCF decided to extend monetary help for injured animals also.

In the beginning, TCF faced some suspicion from the wildlife authorities. But soon the TCF was accepted as a stakeholder and a partner of the forest authorities. Treating the state payment as the main compensation, TCF designated the amount it paid as interim relief, bringing out the complementary and supplementary role in this payment.

From April 1995, the principle of interim relief was extended to villages in the north zone. Since the TCF lacked infrastructure for physical inspection, two local representatives were identified to whom the villagers could report the loss of cattle to a predator. When this was confirmed and endorsed by the local range officer, the TCF office at Dhikuli would pay the compensation on the monthly visit of its medical team to the area. By now a rate had been determined for various types of cattle. This rate was increased in April 1996 and further enhanced in April 1997.

As the scheme became known, there was a steady increase in the number of cases reported to TCF. From a mere 55 cases in 1995, 120 were reported in 1996, 165 in 1997 and 351 up to October in 1997, which is when the scheme was adopted for funding under the WWF Tiger Conservation Programme (TCP). TCP's major concern was the threat to the tiger from poisoning of its kill for revenge.

The TCP initially provided realistic compensation for the cattle lost by the villager and reimbursed the petrol and other expenses on the TCF vehicles. In September 1999, the TCP provided a jeep to the

TCF to increase its mobility. Some wireless sets are also to be provided.

The key elements of the WWF-TCP strategy are :

- Compensation at near market rates for which a survey was carried out to determine the rate acceptable to villagers. The difference between this and the government rate to be paid by TCP.
- Quick joint inspection with CTR. For prompt alerting, TCF to be put on official wireless network. Informers of cattle kills to be paid a reward.
- Pre-inspection vigil to be maintained where necessary.
- Carcass to be disposed off by a burial or burning, after inspection, to prevent poisoning.

For practical reasons some modifications had to be made in the TCP strategy. For reasons of official confidentiality TCF couldn't be put on CTR wireless network. Carcass disposal was also not easily possible, given the stony terrain of CTR. Burning of cows was not appreciated by villagers.

Under the Tiger Conservation Programme, 1050 cases have been compensated between January 1998 to September 1999 at a cost of Rs.9,30,902/-

The Corbett Foundation feels both heartened and apprehensive with its experience. The system of giving reward to informers has proved a great success. A sharp increase in reporting has been noted, which only means that we now know more and more where the tiger or leopard is operating and where and when he needs to be given "security cover."

Working in the field since March 1995, visiting the Forests over a wide area specifically to inspect predator attacks, and the evidence of sightings, pug-marks and accumulated data has helped us to come to an "informed guess". TCF assesses that the total tiger population in the southern zone is showing an



SULTANA BASHEER

increase. We have observed many more breeding females with cubs throughout this zone. There has been no confirmed case of tiger death by poisoning ever since TCP's cattle compensation scheme was launched in the area. While the likes of Shamsul Haq are a little less resentful, Dorbi has accepted his regular loss as a "jungle tax" in return for the free fodder from the forests.

But the gains could be very fragile. The human and cattle population is on the rise. Sudden reversal of gains cannot be ruled out. Moreover, we have not been able to come to any "informed guess" about the leopard population. It is too scattered to make any estimation. Attacks on humans in Garhwal Division have generated extreme resentment against

leopards. It is also being felt that compensation may not be a good long term strategy but just a stop gap measure in the larger man-animal conflict.

Undoubtedly, long-term conservation objectives demand measures like reducing the number of cattle by substituting high-yielding varieties and creating more avenues for income generation. Yet the present scheme of ex-gratia assistance in case of cattle killings cannot be abruptly stopped. It may exacerbate the man-animal conflict. Essentially we cannot take any step which can reduce the security cover of the tiger. ■

(The author is the Director, Co-ordination, at the Corbett Foundation)

Above:  
The bane of  
Indian ecosystems  
-unsustainable  
grazing pressure

## SIMLIPAL TIGER RESERVE

# WWF HELPS CURB HUNTING

Tariq Aziz

**A** ritual hunting of wild animals—*Akhand Shikar*—by large tribal groups has perpetuated itself into a menace for the forests and tigers of Simlipal Tiger Reserve. During the peak hunting period in April-May, the tigers' preybase here gets diminished as tribals burn down forests to flush out and kill whatever animals they can—wild pig, sambar, cheetal, barking deer and even the mighty gaur.

WWF Tiger Conservation Programme (WWF TCP) started a new initiative to curb the menace of *Akhand Shikar* in Simlipal Tiger Reserve, one of the tiger's finest habitats. "To provide alternatives to the tribals and to spread awareness among them is perhaps the best solution to this problem", says Dr MK

Ranjitsinh, Director of the Programme. WWF TCP has started supporting local NGOs for educating the tribals. It is also supporting the Reserve management for intensifying anti-poaching work in its buffer zone.

Simlipal Tiger Reserve's buffer zone is a vast stretch of forests spread over 1,904 sq kms enveloping its 845 sq kms core zone. According to official figures the reserve supports a population of over 90 tigers. In all some 2750 sq kms of unbroken woods are spread over the Simlipal hills, with a large number of streams and waterholes. This includes 550 sq kms of land held by 65 tribal villages located in the reserve. Patrolling its 600-km long periphery for trespass is a challenging task.

The management of Simlipal Tiger Reserve, short on resources, has been trying to live up to this challenge. A forest guard here, on an average, has to look after a large area of almost 30 sq kms of forest spread over difficult terrain. To make anti-poaching work more effective the Forest Department now engages the services of a platoon of Armed Police Reserve (APR) in the peak *Akhand Shikar* period.

Traditionally, *Akhand Shikar* began in mid-April after the *Pana Sankranti*, a holy day, and continued till the rains arrived in May. Prior to the hunt, participants took part in a series of rituals, offering vermilion together with rice and incense to the deity of the hills by the village priest. Large hunting parties of upto 500 people entered the forests for the hunt, the culmination of which is a joyous occasion.

A lot has changed since then. The tribal population has increased manifold. Fair weather roads connect most villages to townships. The tribals are a lot more conscious now. "Oh! Those days are over", says Jai Kishan Naik, who belongs to the Gond tribe at village Chakradhar and works at the coastal town of Balasore. Naik has no intention of going on a hunt. He thinks it is a waste of time.

While most agree that *Akhand Shikar* is not the same anymore, they would rather continue with the tradition, despite the ban on hunting. This has often resulted in conflict between the Tiger Reserve staff and the tribals. Worse still is the mushrooming of gangs associated with the timber mafia. These criminals are armed and often go into the forest on the pretext of *Akhand Shikar*. The Reserve management is tackling this problem separately. Six country made guns were seized in 1988 alone.

For the regular tribal who is interested in *Akhand Shikar*, the party is over. "The hunter has now become the hunted", opined a tribal. Large hunting groups have been done away with. *Akhand Shikar's* original and more elaborate form, the *Basa Shikar*, which used to last for many days, has now been reduced to *Patam Shikar*. Small parties go to the forest in the morning for *Patam Shikar* and return by evening. It is a hush-hush affair and not many come to know of it. As a result, success rate of the hunt has gone down. Increasingly, small hunting parties resort to excessive burning of forests to flush out animals.



MAHATAB GANA SHAKTI



**Above:** Dance competition and price giving ceremony at Dangadiha and Jamuni villages in Simlipal

The loss of animals, most of whom form the tiger's preybase, is bad enough. Forest burning compounds the problem and leaves a lot more than the Reserve management can possibly handle. In a reaction to the Forest Department's resistance, the tribals have advanced the hunting period. The hunt now starts in January and lasts for five months, till the end of May.

To counter these fast moving *Patam Shikar* parties, the Forest Department sets up anti-poaching camps and engages fire-watchers during this period. These efforts of the Forest Department have put the hunters on the defensive. The task of the department, nevertheless, has become more difficult. It has to watch against fires and make special arrangements for controlling them. It also has to spread its financial resources, allocated for countering *Akhand Shikar*, over a longer period of time. Many hunting parties have been intercepted and dispersed, arrests made and weapons confiscated. Despite this hunting continues to play havoc in the Simlipal Tiger Reserve.

**Below:** Tribals worshipping their deity before starting the hunt



SANJAY MOULIK/INDIA TODAY



Above:  
Forest guards  
on the vigil

It is in these circumstances that the WWF TCP launched its two-pronged initiative to curb *Akhand Shikar*. The Society for Research and Development of Tribal Culture (SRTDC), one of WWF TCP partners in the project, initiated and got many village headmen of three tribes — Santhal, Munda and Ho — to take an oath against *Akhand Shikar* and burning of forests. The SRTDC is an NGO created and managed by tribals themselves. Alternatives like dancing competitions were also organised by both the partner NGOs, SRTDC and the Mahtab Gana Shakti (MGS), in many areas around the Reserve during the peak *Akhand Shikar*

days. These NGOs are also addressing other tribes like the *Bathudi*, *Khadia*, and *Bhujinja*.

WWF TCP is also supporting the Tiger Reserve's management for creating additional anti-poaching camps in the buffer forests of the Reserve through the Nature and Wildlife Conservation Society of Orissa. The management has employed senior tribals, many of whom are headmen of villages, for these new camps. These men command respect among the tribals. They dissuade the tribals from hunting and also gather information on preparations of *Akhand Shikar*. Once the information is available with the management in advance, the hunting parties are intercepted. Since the initiation of the TCP's initiative many hunting parties/poachers were successfully intercepted and dispersed.

The new initiatives for curbing *Akhand Shikar* have made an impact. "The frequency of animal killing has come down drastically this year", says Amrendra Bose, Similipal's Honorary Wildlife Warden. Field Director of Similipal Tiger Reserve, SS Srivastava, corroborates this fact. But many tribals still indulge in *Akhand Shikar*.

The awareness programmes by local NGOs are sending a subtle but strong message against *Akhand Shikar*. But it will take some time before an end can be brought to this blood-letting. "WWF has already made a difference. All it needs to do now is to continue with its programme for a few more years", says Bose. "The end of *Akhand Shikar* is within sight." ■

## WWF HELPS FLOOD-HIT KAZIRANGA

Tariq Aziz

The mighty River Brahmaputra is the lifeline of Kaziranga National Park. Its waters help maintain the unique ecosystem of the park by bringing in silt and water regularly. This lifeline sometimes turns into Kaziranga's sorrow. In 1998, its floods caused death and destruction in the Park. As the waters receded, the mammoth task of reconstructing the protective infrastructure began.

The WWF Tiger Conservation Programme was amongst the first to offer succour both during the floods and in the reconstruction phase. As news of the devastation was beamed across the world by television networks, conservationists rallied around raising funds for the rescue of the animals and for rebuilding one of the greatest Parks of Asia. Since this was prime tiger habitat, WWF International released a sum of Rs 788,406 in two tranches from its Tiger Emergency Fund (TEF).

The WWF TCP, which had adopted the Park in 1997 for support, was extremely concerned about the state of the park, its animals and in particular the tiger, and was in constant touch with the Park authorities. The 30 boats it had got repaired and the night vision binoculars provided earlier, helped in sighting and rescuing animals in distress. A tranquiliser gun with the necessary accessories and drugs, were quickly acquired and despatched for the sedation and rescue of animals.

The Field Director of the park and his team of committed men worked tirelessly to help the troubled animals. As the first wave of floods hit the grasslands, Deben Chasa, a forest guard of the Park, was swept away by the Diffluo river. Floods came in waves in the ensuing months, the worst being in September.

According to the Field Director, 652 animals were drowned or were hit by vehicles as they tried to cross the highway to higher ground. The biggest casualty was the hog deer - 506 of them were swept away. Among other animals that perished were 23 wild buffaloes, 22 wild pigs, 7 elephants, 9 swamp deer, porcupines, monitor lizards, fishing cats, and a bear. Of the 42 rhinos that perished, 39 were swept away by the swirling waters and three killed by poachers. Another five incidents of rhino poaching were reported from other areas. An orphaned baby rhino, later named Lahani, was rescued by the forest personnel. Today it is a tourist attraction at the Kohora range office.



Villagers around the National Park who rescued some 55 animals, largely deer, have been rewarded by the park authorities a token Rs 100 for each animal saved. It was because of the wonderful support extended by villagers, tea gardens managers and others that many animals were saved. A citizen's committee mounted

a round the clock vigil on the roads leading out of the national park. The rescued animals were later carefully released back into the Park.

The tiger, being adept in water, largely escaped major damage. Loss of cubs during the third phase of the floods cannot be, however, ruled out. The body of a tiger, in a highly decomposed state, was recovered after the waters receded.

Although help came from various sources including the Government of India, the WWF Tiger Emergency Fund was made available within days. Such timely support extended was of great help to the park personnel. The park saw through its worst floods, Thanks to its extremely dedicated staff, Kaziranga is now on its feet again. ■

## MEDIA SPOTS THE TIGER

**Usha Rai**

**T**he tiger and its eco-system have found new champions to promote their wellbeing. A warm and wonderful partnership has developed with the media in the last three years. While it is true that journalists are always looking for a scoop, the exclusive, sensational story that will catapult them to front page fame; they become ardent supporters of wildlife and environment when they get a chance to travel to parks and protected areas and see animals in the wild.

And those who get a chance to see a magnificent tiger, or better still a tigress with cubs, get committed to protect the big cat for life.

The Tiger Conservation Programme (TCP) has been taking journalists to the field to help them make their own assessments and commitments. There were two trips of print as well as television journalists in 1997 and 1998 to Corbett, and then to

Dudhwa and Katerniaghat. While on the first trip to Corbett, the journalists were able to watch a tiger census operation, on the second trip they were actually able to take up cudgels with the Union and State governments for the removal of a Central Seed Farm at Katerniaghat. This farm, spread over several acres of exquisite tiger terrain, is impeding the development of a wildlife sanctuary with immense potential.

Media persons were able to focus on the death and destruction being spewed by the Gonda-Bareilly railway line that passes through the park between Belraiyeen and Dudhwa, a distance of 27 km, and then through several kilometres of Kishanpur Sanctuary. Eleven times in a day, the trains chug through Dudhwa. Among the animals killed by the trains are the tiger, elephant, bear, crocodile and two fishing cats. The same line cuts through

Katerniaghat wildlife sanctuary and has taken its toll of animal life there too.

Uttar Pradesh's state animal is the northern subspecies of the barasingha, the tiger's main prey. But an important area, which forms the breeding ground for this magnificent animal, is already under the plough. The ecological boundary of the animal was ignored because the land was with private farmers. Journalists were quick to pick up this story which focuses on dwindling terrain for the barasingha. As a result of these stories, the allotment of some 36 acres of land to landless in Kishanpur village, close to Jhadi Tal in Kishanpur Sanctuary, is being reviewed.

On both sides of the Indo-Nepal border are important protected areas— Sukla Phanta, Royal Bardia and Chitwan-Parsa on the Nepal side, and Dudhwa, Katerniaghat, Sohelwa, Sohagi-Berwa and Valmiki on the Indian side. Journalists were also able to highlight the open border with Nepal and the problem this was creating for the transborder movement of wildlife. The need for check posts on the Indian side of the border was felt and, subsequently, the TCP has made provision for additional check posts. The second field trip with journalists yielded a bonanza of over 40 stories in newspapers. All important meetings organised by the TCP, like the Indo-

Nepal meeting of field directors and others involved in the protection of wildlife, the TCP awards programme and even the release of the important field guide 'Tracking Tigers' for those involved in tiger enumeration, received a good press. In fact some of the articles even made it to the edit page of India's leading national dailies.

Three heartwarming stories from remote jungle land even made it to the news channels of Star TV. In fact television networks across the world— BBC, CNN included — even used a three to four minutes story put out by WWF-International called "Good News for the Tiger." This news clip focussed on the TCP Cattle Compensation scheme which has been able to arrest the poisoning of tigers around Corbett National Park.

Six spots, three in English and three in Hindi on why the tiger should be saved, were shown on India's national channel, Doordarshan, as well as on Discovery Channel. The 30 seconds spots are unusual. A Mumbai actor sitting in a boat and waiting for floods tells you in his inimitable style the linkage between tigers and forests. If the tiger goes there will be no forest; there would be siltation and floods; there would be no power and prices of vegetables will sky rocket. There is not a single visual of the tiger in the spots but the message is loud and clear. ■

JAGDEEP RAJPUT



## TCP'S SUPPORT TO TRAFFIC-INDIA

Ranjit Talwar

Since monitoring of clandestine wildlife trade is always an important and inseparable part of effective conservation efforts, the TCP's support to TRAFFIC-India was a logical requirement that has been a part of the TCP's workplan since the beginning of the Programme in 1997. However, the actual spheres of activities of common interest to TCP and TRAFFIC-India could only be formalised in 1998.

A very useful activity was taken up jointly by the TCP and TRAFFIC-India in the form of training workshops for the personnel of the Indo-Tibetan Border Police (ITBP). The ITBP has the responsibility of manning India's border with China and is, therefore, in a position to play a very significant role in checking illegal wildlife trade across this border. A total of five workshops were held between 20 July 1998 and 12 October 1998 at Pithoragarh, Mirthi, Leh, the Training Academy at Mussoorie and at the Basic Training Centre at Bhanu, Haryana.

The workshops were attended by 118 officers and 820 other ranks of the ITBP with the aim of familiarising the ITBP personnel with various aspects of illegal trade in wildlife and transferring the know-how on various aspects of identification of wildlife parts and products in trade. The workshops covered the following topics:

- Overview of wildlife trade in the area of responsibility and the modus operandi of the traders.
- Identification of animal and plant parts, products and derivatives and wildlife forensics.
- Relevant legal instruments and case studies.
- Co-operation and collaboration with other enforcement agencies, and
- Current difficulties faced by the ITBP.

Besides these, adequate reading material and posters were also distributed amongst the participants.

Although the ITBP does not consider conservation of wildlife as one of its primary tasks, the response to the workshops was encouraging. All the presentations were well received and there were lively discussions on all relevant issues. Most participants, especially the officers expressed the need for more such workshops.

The TCP also agreed to provide funds to meet the pay and allowances of Major Dinesh Sharma, an officer from military intelligence on deputation with TRAFFIC-India, for enforcement assistance at about Rs 20,000 per month for five months from February to June 1999. ■

One of the first areas of support, on the request of TRAFFIC-India, was funding for the revision and reprint of one of their useful earlier publications, "Wildlife Trade-A Handbook for Enforcement Staff." Rs 100,000 were provided for the printing of a thousand

copies which have been well received by the enforcement agencies. This handbook is now being planned for publication in Hindi for the field staff.

An extremely important initiative was taken by providing another Rs 100,000 to TRAFFIC-India for hiring contract field consultants in northern, eastern, north-eastern India and Delhi for monitoring illegal wildlife trade. However, before this work could achieve any significant results, on a request from the forest department of West Bengal, TRAFFIC-India, on a suggestion from the TCP, opted for a more focused monitoring activity of similar trade in and around the Sundarban Tiger Reserve. The TCP agreed to support this new venture and pledged over Rs 300,000 for six months work, which started in October 1998. Unfortunately, due to certain difficulties beyond the control of TRAFFIC-India, the work could not be carried out as planned and consequently the results fell short of expectations.



TRAFFIC-INDIA

## INSURANCE POLICY FOR TIGERS

Ranjit Talwar

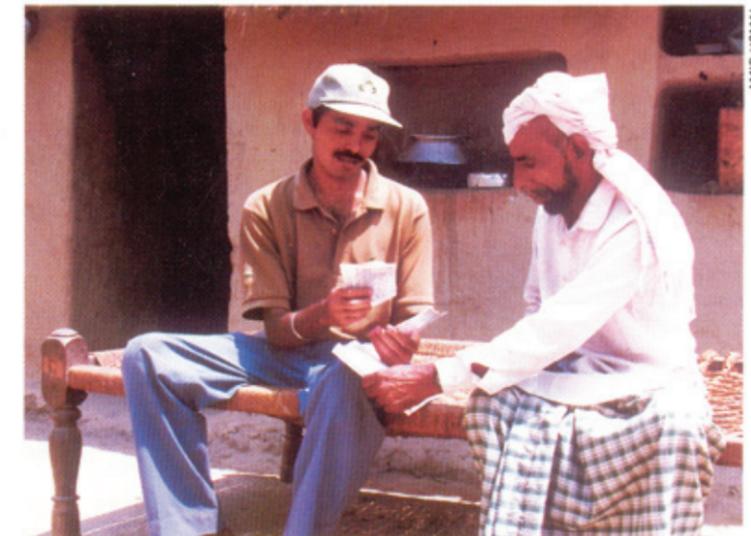
The mid-1990s were disastrous for tigers and leopards in India. The man-animal conflict arising out of cattle lifting by these large cats, compounded by a callous government attitude towards the payment of compensation and an equally shoddy implementation in the field, had given rise to great resentment among the cattle owners living within or on the periphery of tiger habitats. This resulted in large scale killing of such cattle-lifters through the poisoning of their kills. The mid-nineties were clearly a dark period in the history of tiger conservation with poisoning emerging as one of the most serious threats to their survival.

In India, the killing of tigers and leopards by poisoning their kills has a history that goes back many decades. Even during the first half of this century, when people readily accepted the loss of a few of their domestic animals as a price of the advantages they gained from the forests, stray cases of poisoning were reported. However, subsequently with the greater awareness and substantial increase in the monetary value of livestock, people are no longer willing to accept losses that accrue directly as a result of depredation from wild animals, even endangered ones.

The so called "Green Revolution" in the country of the 1960s and 1970s brought into the market a wide variety of pesticides that were freely available. The mid-1980s were particularly damaging for the tiger in the Terai region, particularly around the Dudhwa Tiger Reserve. A large number of tigers were destroyed through poisoning over a period of two years. Fortunately, there were no officially reported poisoning cases during the next 10 - 12 years, but in December 1997, a fresh wave of poisoning struck in Dudhwa and Corbett Tiger Reserves. In a little over two months, nine tigers were killed. About 1,500 kms away in Andhra Pradesh, tigers and leopards faced a similar fate. As per official admission, about 28 tigers and leopards, were poisoned to death in a period of two years. Reports of poisoning from other parts of the country were also fairly common.

January 1, 1998 was a dark New Year day for the tiger in Dudhwa. A tigress along with her three one-year-old cubs lay dead ... poisoned... when the rest of the world was ushering in the New Year. The TCP was requested for assistance by the Park authorities. An immediate trip to Dudhwa and Corbett was undertaken to study the ground realities. It was felt that unless the grievances of the cattle owners were addressed by paying prompt and adequate compensation, the problem was likely to escalate. The TCP's cattle compensation scheme was thus born and offered to the State Forest Secretary, who cut across the red tape and accepted it in just one day. By January 28, the scheme had commenced functioning in Dudhwa and a little later in Corbett and Katerniaghat. Initial feedback indicated that we were on the right track. Hence, on requests from the concerned state forest departments, the scheme, with some modifications to suit local conditions, was extended to other problem areas that included five PAs of Andhra Pradesh (Nagujanasagar -Srisailem TR, Gundla Brahameswaram, Eturnagram, Pakhal and Kinnerasani Wildlife Sanctuaries); to Palamau TR in Bihar and the Ranthambore TR in Rajasthan. On a request from the Chief Wildlife Warden of Maharashtra, the scheme has now been offered to the Tadoba-Andhari TR, where a tiger was

Below:  
Compensation  
payment,  
Corbett



AMIR USMAI



recently poisoned to death. The State's acceptance of this offer is awaited. The compensation schemes in each area are implemented through a local NGO partner. That the TCP's Cattle Compensation Scheme has been a success can be gauged from the fact that not a single tiger is reported to have been poisoned in the above mentioned PAs ever since the commencement of the scheme.

Since January 1998, the TCP has compensated for about 1,260 cattle kills at an approximate cost of Rs 12,54,802. Vehicles and other equipment costing about Rs 9,69,000 have also been provided for the efficient functioning of the scheme. However, this may be a small cost if the scheme has resulted in saving the lives of even a few tigers.

In June this year, the TCP engaged the Wildlife Institute of India (WII) to assess the impact and the functioning of the Cattle Compensation Schemes in Corbett, Dudhwa, Katerniaghat and Palamau. The rest of the areas were not assessed, as the scheme in these areas had not been functional long enough to allow an objective assessment. Dr KS Rajpurohit of WII visited all the four PAs and submitted a report in September 1999. While he found the functioning of the scheme and the delivery system praiseworthy in respect of the work of the Corbett Foundation around Corbett TR and of the Terai Conservation Trust at Dudhwa TR, certain lacunae were noticed in the work done by the Nature Conservation Society in Palamau. A more detailed enquiry entailing a check of all recipients, is being carried out.

For the impact and functioning of the scheme in Corbett, the report states: "It is observed that WWF-TCP-CCS has been highly successful around

Corbett tiger reserve in bringing about reduction in the feeling of people's animosity towards tiger/leopard and towards the tiger reserve. It is evident from the fact that 73% of the sampled recipients said that they would have felt hatred towards the tiger/leopard in case there was little recognition of their economic loss. In other words this majority would have been the vulnerable section, easily tempted to seek a solution with an anti-social mean. Overwhelming number of recipients expressed that they would have no reason to nurse an animus, if their economic loss was made good expeditiously. Almost all the recipients expressed support for Project Tiger if a caring attitude was displayed towards the loss of their cattle, as was being done currently under this scheme."

Corbett has had the largest number of cattle kills, 1,085 out of a total of 1260! Tigers of Corbett certainly like their beef! Credit must be given to The Corbett Foundation, TCP's NGO partner, for having worked extremely hard to keep pace with the immense work-load.

For Dudhwa, the report states: "It was observed that 53% of the recipients had negative feelings for the tiger for having killed their cattle. This appears to be quite normal. At the same time, the quick response of the NGO team, the timely payment of compensation surely has contributed significantly in reducing the acrimony through the spirit of its fairness. All recipients, who were sample checked, said that if they were paid timely for the loss of their cattle, they will not have any problem with the tiger/leopard. They also expressed their support for Project Tiger if compensated on time for the loss of their cattle."

In Palamau, some difficulties in the efficient functioning of the scheme were observed. The report states: "Of the sample checked, 62% of the people did not bear a grudge against the tiger or leopard for having occasionally killed their cattle as they were compensated on time. But 38% felt a strong resentment. Almost all the respondents said that they do not have anything against the tiger or the continuance of Project Tiger, if they are compensated on time for the loss of their cattle."

The values and attitude of the present day villager living on the periphery of tiger habitats in India have undergone a definite change. He is no longer prepared to accept losses accruing out of conservation schemes and wants to be compensated. The TCP's Cattle Compensation Scheme is thus like a life insurance policy for the tiger. ■

## RELIEF FOR GUARDIANS OF THE FOREST

Tariq Aziz

Protecting the tiger and its habitat is a very arduous and thankless task involving high degree of motivation and commitment. The field personnel who are the foot soldiers carrying out this key function, are the ones who have to face the wrong end of the poachers gun or get caught in the fury of angry encroachers and villagers.

When on such occasions things go wrong for these brave people who refuse to compromise with their principles and duty, the price is often dear. Families of these men are the worst hit. For the families of those who have regular jobs with the Forest Department, insurance money is made available, but that takes a long time. For those on daily wages or those who work as casual labour, this facility is not available. This demoralises the staff that witnesses one of their colleagues make the supreme sacrifice and his family facing penury. In such circumstances the only way to instill some confidence back in them is the provision of immediate relief to the bereaved families. That is the least we can do.

From its contingency funds, the WWF TCP has been giving ex-gratia money to the families of the bereaved or funds for treatment of those who are seriously injured and need specialised medical attention. So far, eleven such cases were brought to the notice of WWF TCP and in all such cases immediate relief was provided.

Perhaps the worst case was in the Palamau Tiger Reserve in Bihar. Sukhdeo Parahiya, 36, an excellent tracker of Palamau and Aziz Quraishi, 32, one of the best drivers of the same Park, lost their lives in a landmine explosion at Terhwa Nala of Chungroo village while patrolling the forests. Sukhdeo Parahiya had honed his skills in tracking down tigers and had extraordinary knowledge about it. Driver Aziz had expertise in collecting information about timber and *Katha* smugglers. The vehicle in which they were travelling was blown to pieces. Since both were daily wage workers, they got no compensation from government.

The TCP sent a cheque of Rs 30,000 for rehabilitation of their families.

In yet another incident, three men of Manas TR, Bimal Chandra Kalita, Forest Guard; Hav Bantik and Chandra Kisor Gogoi, were killed by miscreants while on duty in December, 1998. In a similar incident in Pach-mari in Madhya Pradesh and in Nagarhole in Karnataka, two Forest Guards, Kamal Singh Chauhan and PA Ponnappa, lost their lives while on duty. WWF TCP responded by providing immediate relief for the families of the deceased.

In an incident over cattle grazing in Ranthambhore Tiger Reserve, a Forest Guard was attacked by a mob of villagers in September, 1998. The Guard sustained serious head injuries and received twelve stitches. For further treatment, money was made available by WWF TCP. He is now well and back on duty.

In a similar incident at Chandan Chaoki in Dudhwa Tiger Reserve, Ramesh Kumar, a Forest Guard was beaten up by a gang of encroachers who were to be evicted from the tiger's habitat. Ramesh sustained serious injuries and had several broken bones. TCP sent money for his treatment.

The TCP also provided for the treatment of Forest Guard K. K. Das who was mauled by a tiger outside the Kaziranga National Park this August. Mr Das, along with some of his colleagues, was sent to drive the tiger back into the forests from the village into which it had strayed. Though the mission was successful, Das was severely mauled and had to be rushed to a hospital for treatment.

It is on incidents like these that a WWF response can not only provide immediate relief but also, as a natural response to support, restore confidence and morale of the field personnel. WWF's Tiger Conservation Programme salutes all the guardians of the forests who have been injured or laid down their lives while on duty. ■

## THE DUTCH FOCUS ON TCP

Usha Rai

**F**or two weeks in the latter half of 1999, a two-member Dutch team, Jeron Ex of WWF-Netherlands and Jaap Kuper, a consultant of WWF-Netherlands, visited two protected areas supported by the TCP— Tadoba-Andhari and Biligiri Rangayyam Temple. They had extensive discussions with the TCP staff and others to evaluate the Dutch support to India.

Since the Dutch provide almost 75 per cent of the \$ 1.2 million three-year budget of the TCP in India, the Dutch team was eager to ensure that the money raised in the name of the tiger is well spent in a country which has almost two-thirds of the world's population of tigers.

Following is an extract from their report:

The TCP had initially selected seven better known protected areas (PAs) for TCP support during phase I. In the second phase, the PAs supported have been increased to 16 with lesser known ones, but with good potential. At present TCP supports 19 PAs and the target is set at around 20 PAs by the end of 1999.

If the programme continues beyond 1999, the number of PAs to be supported could be increased to about 25. The WWF Global Tiger Strategy (see Dinerstein) has proposed 25 Tiger Conservation Units (TCUs) as priority areas for tiger conservation, of which 11 are located in India. TCP has however used other criteria for selection of PAs to be supported. According to the TCP workplan they would "support areas that have the potential and where, by both the inputs provided by it and inputs that should be caused by its support, the conservation status of the area could be raised".

India has over 500 PAs of which about 80 have tiger populations. During the start of Project Tiger (1973), nine of them were given the status of tiger reserves. Over the years this number has increased to 23. Only last year two new Tiger Reserves have been added, making the total number of tiger reserves in

India to 25. It should be noted that many tigers live in tiger habitat outside reserves, national parks or wildlife sanctuaries. TCP supports tiger conservation only in areas that have a protection status.

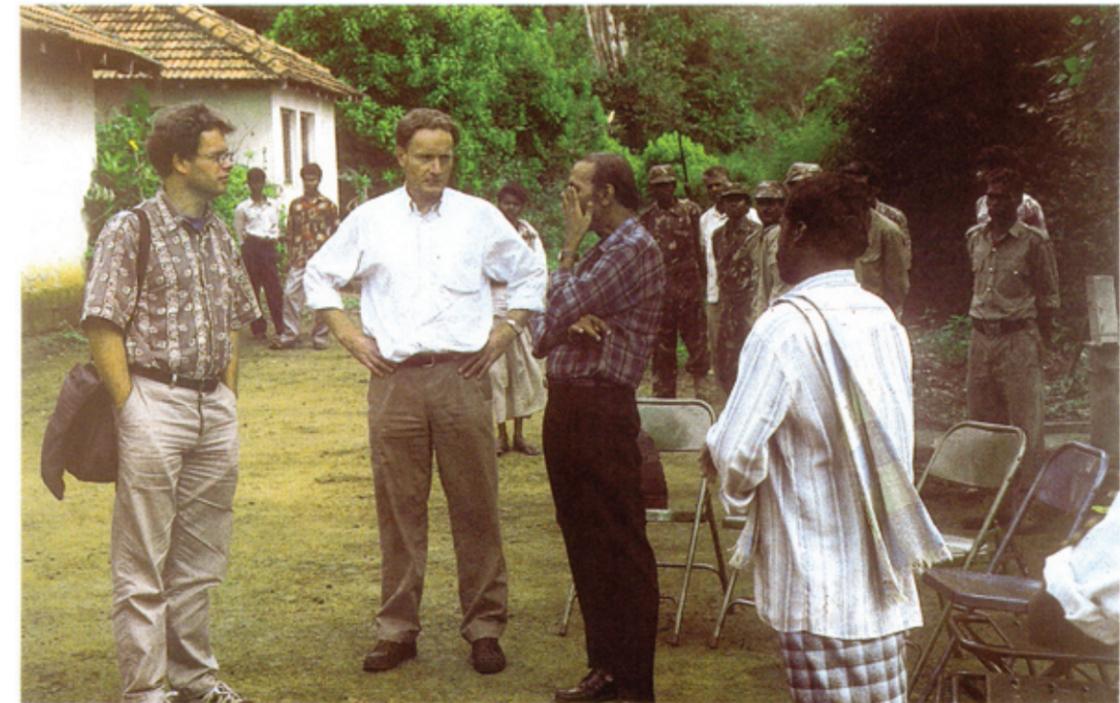
At the State level, TCP has selected various NGOs that exist in the vicinity of the supported PAs for the implementation and support to activities at the field level. WWF-India State offices have been involved in the implementation of the TCP where feasible. Where such offices are either inactive or are unable to provide the required support, other NGOs have been deployed.

### Project results

Milestones are major signals within the project environment that show if the project is being implemented according to the agreed upon workplan and is still on the right track towards reaching its targets. The accomplishment of a milestone, in contrast to indicators, is a "one-time" affair that often gets media attention and is usually celebrated by project staff.

### Major milestones in the Tiger Conservation Programme to date are:

- Direct support to parks and sanctuaries through the provision of vehicles, communication, basic equipment and other inputs to over 20 selected Indian protected tiger areas;
- The publication of "Tracking Tigers" Guidelines for estimating wild tiger populations using the pug-mark technique (first print 1000 copies; second print, also in Hindi is due);
- The announcement and granting of the WWF Tiger Conservation Awards at the Millennium Tiger Conference organized by Project Tiger;
- The news film on the success of the TCP supported Cattle Compensation Scheme by World Vision, followed by Tiger Conservation Spots on various channels on Indian TV;
- The second trans-border meeting (India - Nepal) and commitments on jointly implementing the cattle compensation scheme;



ANJIT TALWAR

- The training workshops held in legal matters for frontline staff in four tiger holding States in co-operation with the Wildlife Institute of India and the National Institute of Forensic Science and Criminology;
- The regular publication of Tiger Update, TCP's 6-page quarterly newsletter;
- The monitoring and evaluation exercises of tiger areas supported by TCP, undertaken by well-known experts not employed by WWF;
- Workshops on wildlife trade with Indo-Tibetan Border Police (in co-operation with TRAFFIC-India);
- The media trip to Dudhwa Tiger Reserve and Katarniaghat Wild Life Sanctuary which resulted in some 30 articles and news items on protected area problems;
- TCP support to flood-hit Kaziranga National Park with the help of the WWF Tiger Emergency Fund.
- Ex-gratia grants and legal support to field staff of selected tiger reserves.

Indicators are signs of project achievements in the 'real' world. They can be measured continuously before, during and after the project by the project itself or by other parties. Unlike milestones, the value of indicators may change over time.

Indicators can be grouped in Performance-(P), Success-(S) and Impact-(I) indicators (also called

response-, pressure- and state indicators). Normally performance indicators relate to the achievements of individual activities or outputs, success indicators relate to project targets and objectives while impact indicators relate to the overall project goal or purpose.

### Important indicators of success, to date, of the Tiger Conservation Programme are:

- Patrolling and communication capability has been enhanced in various Tiger Reserves;
- The TCP has created moral boosting and attitudinal changes in the staff of the Tadoba Andhari Tiger Reserve (Saxena R.C.);
- The TCP support to villagers (e.g. cattle vaccination, cattle compensation scheme) has opened better opportunities for dialogue with communities on conservation matters;
- State Government have taken care of running expenses of additional vehicles and motorcycles supplied under TCP;
- The change of status of the Satkosia tiger holding area to the wildlife wing under the forest department;
- ] Border modifications of PAs that were agreed upon by State Governments in order to avoid fragmentation of WLS and NP;
- Park staff of the government that has moved their offices into the PAs;
- Improved implementation of the cattle compensation scheme by government authorities in areas of TCP assistance;

- The risk on contagious diseases in wildlife, induced by cattle has been reduced;
- The methodology and approach that was used in combating the traditional tribal communal hunting practice called "Akhand Shikar" in Simlipal Tiger Reserves (Orissa);
- [I] Ceasing of tiger poisoning by farmers in areas where the cattle compensation scheme was implemented

#### Strengths of the Programme

- Within a relative short period the TCP has been able to boost tiger conservation in India through building up working relationships with 20 PAs, assessing their needs and actually giving them technical support;
- TCP has been able to make existing staff and equipment operational at relative low costs (low input vs. high output);
- The TCP has gained extensive knowledge on tiger conservation in India, both at the policy as well as at field level;
- The TCP has been able to set up a network of contacts that are involved in tiger conservation in India both at the National-, State- and at the PA level;
- TCP avails of a highly motivated staff that have created a strong basis for continued future tiger conservation work in India;
- With the cattle compensation scheme, Akhand Sikar support and training of field personnel in legal matters TCP has shown a way to both government and NGOs as to where they can improve their own inputs and how;

#### Challenges for the Programme

- (1) The programme components as described in the TCP workplan do cover the global tiger strategy only partially. For reasons of an unclear and limited time horizon the emphasis has been put on the support to protected areas in the initial three years of the programme. The challenge is to widen the scope of the TCP and include also other strategic and essential components as mentioned in the workplan in a structural way;
- (2) It is unclear how the present supported PAs relate to the TCU classification in the Global Tiger Strategy in terms of potential for tiger conservation and importance (priority). The challenge is to work in those PAs where the highest conservation output can be expected with minimal inputs and where sustainability and multiplication of the results are secured;
- (3) The cattle compensation scheme has yielded great response from both farmers and park man-

agers. It is increasingly being introduced in additional PAs. The principle and method seem well accepted but it is still unclear however if the budget needed for compensation can be covered from non-TCP funds in the future (sustainability). Although no more cases of tiger poisoning are reported from areas where the scheme is implemented, the challenge is to find also other indicators to measure the impact of the scheme.

(4) NGOs (including WWF) that cooperate with TCP and implement awareness and education programmes from the State level in the field seem rather 'charity oriented', a characteristic that needs to be avoided when working with communities that are to become mutual partners in conservation. The challenge is to co-operate with those NGOs that treat tribals as equal partners and that are able to find common conservation issues with or without the help of 'business partners'.

(5) The Tiger Conservation Coordinators (TCCs) that were foreseen at the State level have not worked out as hoped for. The result is that TCP has no structural independent instrument for monitoring tiger related issues at the state level. At present monitoring happens through nominated local NGOs that do this job sometimes without compensations paid. The challenge is to establish a network that feeds the TCP with relevant objective information to be used by TCP management to formulate conservation strategies.

(6) Due to various reasons the TCP steering committee had its last meeting over one- and-half a year ago. This did hamper decision making and future programme planning. At the time of the field visit the second phase of the TCP had ended over two months earlier. However, no workplan for the next phase had been formulated yet. The poor support by the TCP steering group had strong influence on the motivation of the TCP team, of which some plan not to renew their ending contracts in the coming months. The challenge is to have a platform and 'thinktank' that supports the TCP core group in strategic decisions both regularly and at crucial moments.

(7) Although conservation issues may vary from place to place, instruments like 'problem analysis' and the 'logical framework' would be very useful instruments in future project planning for TCP. The challenge is to work cause-oriented and to be able to set well defined objectives and priorities over a given time-period;

(8) Considering TCP staff capacities it would make sense to decide on either expansion of the number of supported areas or concentration on a lesser number (or a mixture of both). The challenge is to

balance well each investment (time, money and staff) with its expected impact;

(9) The support TCP provided to PAs is mainly technical support (communication equipment, tools, uniforms, etc.). Most of its support is aimed at strengthening park management' control over the park rather than focussing on solutions which could solve conflicts with tribal communities in and at the fringes of the parks. The latter was identified by the park managers as the main threat in both parks visited. The challenge is to find long term ways and means through which socio-economic threats at the fringes of the parks are being reduced and become stabilized. Here one should not think "conventional" but rather "progressive" and learn from experiences in the Indian context, but also outside of India;

(10) Assuming that the situation in non-visited Indian tiger areas is not much different the following four-pronged strategy for future TCP work is recommended. The challenges are:

1) **Continued technical support to selected PAs:** Based on gaps to be filled, a graded technical support is recommended here with criteria like building of trust, example function (multiplication by other parties) and equal distribution of TCP attention over important tiger areas in India. Although all five bio-region types are covered in the 19 PAs the TCP is supporting, the TCU classification system, which in itself is a sound theoretical framework, should be applied and verified at the field level before future choices for PAs to be supported are made.

2) **Increased attention to eco-development in tribal villages:** Aimed at decreasing the villagers dependence on the forest resource and increasing the villagers stake in conserving the forest resources. This can be reached through village development programmes (not necessarily implemented by TCP itself) that respect villagers' traditional knowledge and traditional resource use practices and incorporate these in agreements on resource management reached upon the creation of basis of mutual benefits in conservation ("conservation partners"). Emphasis should be put here on decreasing and eventually halting human pressures on the PAs. It is recommended to create incentives based on prevention, rather than on cure (e.g. fire prevention rather than fire control). Also communities as well as individual per-



RAAJIT TALWAR

**Above:** Lantana is a persistent in many tiger areas in India

sons should have a stake in conservation. This will increase the support for and thus the effectiveness of the measures.

A special issue that needs attention is the poaching issue by tribals living inside protected areas. Park staff cannot deny the villagers needs for protein sources. If the law doesn't allow hunting in PAs, it means that tribals inside reserves might have to resort to alternative protein sources that match with their needs. Creative solutions have to be found in order to solve this problem.

3) **Capacity building for PA staff:** Possible fields of attention for capacity building are; the definition of exact tasks for park staff and the improvement of the morale of park staff as conservation work is still regarded as work only good for 'dummies'. The creation of incentives based on achievement of results and the use of a monitoring system (patrolling) that collects data that can support management decisions. The improvement of safety aspects in weapon use (we saw a park guard nearly kill himself!), the legal aspects (rights and duties of suspects) and improving the communication skills, e.g., in dealing with (suspects) and, if needed, dialogue techniques in communicating with tribals;

4) **Marketing strategy for PAs:** Fields of attention in marketing: The development of the parks' conservation product including conservation specialties, tourist attractions, visitors services, information materials, advertisement and public relations, etc. If income sources could flow back to the park through marketing activities, the parks could become less dependent on outside sources of funding and less of a burden to the State and the Union Government. ■

## RAJASTHAN REWARD SCHEME

ELICITING PEOPLES PARTICIPATION IN ANTI-POACHING ACTIVITIES

Ranjit Talwar

It is generally accepted that most of the poaching that takes place in or around protected areas (PAs) is done with the active connivance of local people who are lured into this illegal activity by the promise of money, animal products, or both. Often, the actual act of killing the animal may be carried out by a local village shikari on behalf of a trader. It is an accepted fact that the local person who either assists poachers or himself kills animals for traders, gets very little money for his efforts.

Experience proves that the killing of a tiger is extremely difficult to conceal, however discreet the act of poaching. Currently, in most such cases, people who are privy to such information, choose to remain quiet. However, if monetary incentives are given to people for providing information on such poaching cases leading to their seizure, this is likely to assist the enforcement authorities in the apprehension of poachers.

The main objective of the WWF TCP reward scheme is to enlist the participation of the local people to curb poaching, and to wean away individuals assisting poachers and traders by providing them adequate monetary incentives for assisting the enforcement authorities.

The Rajasthan Government has already a provision for the creation and operation of a secret information system, wherein the park directors are empowered to utilise funds for cultivating informers and buying of information. The WWF TCP scheme that has been introduced, is designed to comple-

ment the provisions of the government's scheme. As together the two schemes will address the needs of PA managers.

Initially the scheme was introduced in the Ranthambore Tiger Reserve and its immediate surrounding areas. It has been subsequently offered to the Sariska Tiger Reserve also.

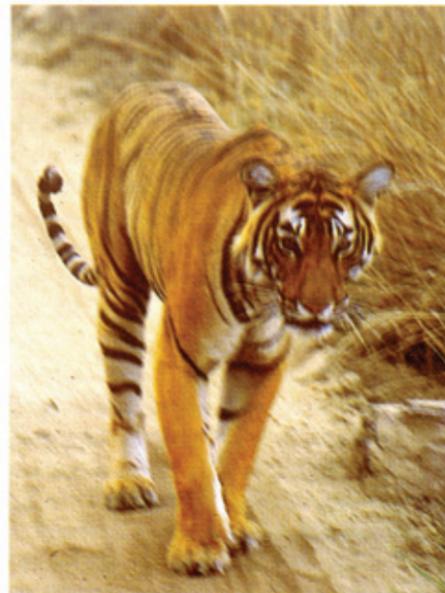
Under this scheme, any person who provides information that leads to the arrest of a poacher or trader or the seizure of illegal animal articles, with sufficient evidence for prosecution (not conviction) will be promptly rewarded at the following rates - tiger poaching upto a maximum of Rs 10,000, leopard poaching - Rs 7,000 and prey base species and other large mammals - Rs 3,000.

Since it is always preferable to prevent the actual killing of animals, any person who provides information on the intended activities of potential poachers and assists in their apprehension, with incriminatory evidence, can

also be rewarded up to Rs 10,000. The reward amount, in such cases, depends upon the evidence indicating the gravity of the poachers actions and intentions, which are assessed by the officer operating the scheme. This particular aspect has been included to wean away those individuals whose services are enlisted to facilitate the activities of outside poachers.

The WWF TCP's reward scheme was introduced in Ranthambore in July this year. It is too early as yet to assess its actual impact. ■

RANJIT TALWAR



## EXTRACTS FROM 'TIGER UPDATE'

### Daily Wagers Insured

The death of two daily wage workers in a landmine explosion in the PTR in February 1998 had more far reaching consequences than what was initially perceived. Since the State Government refused to provide compensation to the next of kin on the plea that those killed were not regular government employees, other employees in the same category refused to go into the field. As the daily wagers form the bulk of the protection and monitoring field staff, Palamau was left bare for poachers to exploit.

To get the daily wagers back into the field, security for their families was needed, such as an assurance that their loved ones would be provided for, even if something untoward was to happen to them. This assurance has now been provided by the WWF TCP by getting life insurance policies for 125 of the daily wagers. Under this scheme, for a total sum of Rs 14,045/-, each individual is covered for upto Rs 100,000/- in case of death and in case of serious disabilities for 5 years. This has had the desired effect. The daily wagers are once again back in the field.

### TCP on the Right Track

By JIKKE JONKMAN

When I had the opportunity to visit my colleagues in the Tiger Conservation Programme (TCP) of WWF, New Delhi, and then dash down to Corbett and Dudhwa Parks in the first week of May, the timing seemed just right. Though the mercury was soaring and men and animals seemed to be wilting under a blazing sun, the tiger programme was in the process of moving into its second phase. It was broadening its portfolio with infrastructure support for nine new tiger areas. Also, TCP was pushing for direct compensation scheme to check poisoning of tigers that kill cattle.

When I go on a field trip to projects funded by our Dutch office, I am almost a nuisance to my hosts. I hardly stop asking questions. Fortunately, the people I met liked talking. Moreover, they discussed the ins and outs of the programme with me, and even responded to the wild ideas I threw up - like breaking down the existing dam to get new grasslands for wildlife. Though my idea sounded brilliant to me, it carried little weight with the park managers.

The more serious discussion was the one on the compensation scheme for cattle lifting. Coming from Europe, where similar programmes for the protection of large carnivores have had little effect and have even been abused, I am quite critical of this approach. Even now I feel it is not a sustainable method. But I see the need to fill a gap by this kind of direct intervention.

The threat to the Indian tiger is serious, with an increasing number of big cats being poisoned in and around the tiger reserves of north India since 1997. For all my doubts the TCP strategy is effective: no poisoned tigers have been found since the more direct payment of compensation was put in place.

In fact I was lucky to witness a compensation case in Corbett Park. I was visiting the Corbett Foundation, the local NGO that implements the WWF scheme in Corbett in cooperation with the Park authorities, when an upset cattle owner reported a kill. On the outside boundary of Corbett, pretty close to where I was, a tiger had killed a buffalo just an hour earlier.

It took the Foundation staff just about two hours to organise a vehicle, draw the money and gather the park guard to investigate the killing and compensate the affected owner. The Foundation representa-



Above: January, 1999 issue of the Tiger Update



tive explained to me that villagers react differently to the scheme. Most villagers think that the Foundation is the official government agency for providing compensation and since they don't receive the market value of the cattle killed, they sometimes start bargaining or complaining. But our cattle owner actually cheered up when the scheme and the status of the NGO was explained to him. And he was beaming when the thick bundle of rupee notes changed hands.

Corbett Park is a superb place for a tourist. The area is well patrolled and wildlife can be relatively easily spotted. Although the few days I had were not enough to see a tiger, the hilly landscape with peacocks displaying their exotic

plumage, wild elephants, gharials and many tropical birds was impressive. Dudhwa is evenly packed with little and big creatures, but can only be reached after a full day's drive from Delhi. Also, wildlife sightings in this riverine area in the Terai is highly dependent on the height of the elephant grass. Affected by both poaching and tiger poisoning, this is a difficult area to work in. But I met extremely motivated people both at the Park, at Corbett Foundation and at Tiger Haven in Dudhwa.

Even with the improved patrol equipment, compensation schemes and dedicated naturalists, it may still take years before we see any results in the Indian tiger population. But we are definitely back on track!

*(Ikkie Jonkman is the Manager, Species Programme of WWF Netherlands)*

## Wildlife Trade Workshops with Indo-Tibetan Border police

by TARIQ AZIZ



WWF Tiger Conservation Programme (TCP) conducted joint workshops for training the Indo Tibetan Border Police (ITBP) personnel in the illegal wildlife trade, with a focus on the trade in tiger skins, bones and other parts. The workshops were successfully conducted jointly by WWF TCP, the Wildlife Institute of India and TRAFFIC India.

The workshops were aimed at familiarising the ITBP personnel with various aspects of illegal trade in wildlife and transferring knowhow on identification of various products in the trade. The ITBP personnel are posted on the sensitive Indo-Tibetan border, across which substantial smuggling of wildlife products takes place. In the Ladakh sector, ITBP also performs duties under the Customs Act. Trade researchers have opined that apart from the tiger parts, raw parts of India bears and the musk deer reach the markets in China through these borders. Shahtoosh wool, underfur of the Tibetan antelope found in Tibet, moves into India through these very borders.

The workshops were held at five field sites at Pithoragarh, Mirthi and Training Academy at Mussorie, in Uttar Pradesh, at Leh in Ladakh and at the Basic Training Centre at Bhanu in Haryana. Apart from imparting understanding of products through samples the personnel were given copies of the Handbook on wildlife trade, collection of material on wildlife trade and related laws, and TRAFFIC India posters illustrating the illegal trade. Addresses of various government and non government institutions and organisations were also given to them for possible networking with agencies for help in implementing the law and for access to specialised information e.g. the Wildlife Forensic Laboratory at the Wildlife Institute of India.

Altogether over 1,200 officers and men participated in the workshops. The response was overwhelming. It is hoped that an aware ITBP on the borders will play a positive role in curbing the smuggling of wildlife prod-

ucts across the border, especially of the tiger. It should also curb poaching around their advanced field posts.

## Prescott's kudos for TCP cattle compensation

Mr John Prescott, the Deputy Prime Minister of UK, made a laudatory reference to the WWF TCP's cattle compensation scheme at the valedictory function of the Tiger Millennium Conference. "Tigers, however magnificent, do not make comfortable neighbours and can and do threaten communities, often through attacks on people and livestock. The new cattle compensation scheme, developed as a part of the WWF Tiger Conservation Programme, can make a difference. Immediate payment of compensation for cattle killed has proved extremely effective in checking the poisoning of tigers around protected areas."

## Jeep Saves Tribal's Life

Vehicles supplied to protected areas by the WWF TCP are being used for patrolling and other responsibilities. But Mr R C Saxena, who evaluated the TCP support to Tadoba- Andhari Tiger Reserve has documented how one of the jeeps helped provide speedy medical aid to a tribal who was mauled by a bear.

Budha Bigaram Pendama of a village on the periphery of the Reserve was mauled by a bear while collecting mahua flowers. The news was flashed to the Range Officer who immediately rushed to the spot in the jeep and shifted Pendama to Chandrapur and then to Nagpur for a major surgery. The tribal's badly bruised face was restored. The department picked up the medical bills as well as provided compensation to Pendama. "Such timely relief was possible because the TCP had provided a jeep."

The morale of the staff is high because the presence of a jeep gives added security in terms of quick transport in emergencies.

## Jumbos transit Katerniaghat

There has been a visible increase in the wildlife population of Katerniaghat wildlife sanctuary of UP, bordering Nepal, says Mr V K Sinha, DFO of Katerniaghat. The sanctuary is supported by the Tiger Conservation Programme and in March this year wildlife officials of India and Nepal met in Delhi to see how best to facilitate the movement of wildlife across international boundaries.

The meeting was obviously successful for Mr Sinha reports greater movement of wildlife through the Indo-Nepal corridor along which Katerniaghat falls. On September 20, five wild elephants (one male and four females) on their trans-border migration were sighted near the metalled road of section four of the protected area. This herd even went towards the gharial centre of Katerniaghat and tried to free some domesticated elephants. The wild herd had to be driven away by beating tin plates. The next day the herd divided into two and crossed the Gerwa river back into Nepal.

## Tiger Mauls Forest Guard

The TCP has provided Rs 10,000 for the treatment of forest guard K K Das who was mauled by a tiger outside the Kaziranga National Park this August. Mr Das along with some of his colleagues was sent to drive the tiger back into the forests from the village into which it had strayed. Though the mission was successful, Das was severely mauled and had to be rushed to Guwahati hospital for treatment.

The TCP also paid Rs 5000 to Shatrohan Lal, a daily wager of Dudhwa National Park who was injured when the jeep in which he was travelling collided with a train at Kishanpur.

## Largest Tiger Habitat

The area under Project Tiger is to be doubled from the current 30,000 sq kms over the next couple of years. According to Mr S C Sharma, additional I-G Wildlife in the Ministry of Environment and Forests, to have a viable tiger population of about 4000, about 60,000 sq kms of tiger habitat will have to get the special status of tiger reserves.





Above:  
A wild dog

The Ministry is already working towards that end. The largest tiger habitat of some 5,000 sq kms will be created in Central India shortly. Satpura, Bori and Panchmarhi in Madhya Pradesh are being declared tiger reserves. A Cabinet Committee has approved the setting up of these reserves. They will then be linked to Melghat Tiger Reserve in Maharashtra and Kanha in Madhya Pradesh to form a mega reserve.

Of the 3500 tigers in the country only about 1600 are in tiger reserves. The remaining 1900 tigers are outside the reserves and need protection and special attention.

Mr Sharma said the Ministry is also proposing to link Nagerhole National Park in Karnataka to the Bandipur Tiger Reserve and create a bigger domain for the big cat. However, the approval for this is still awaited.

Pakhui and Nameri wildlife sanctuaries in Assam are also being upgraded to the status of tiger reserves and aligned. This would bring the total area under Project Tiger to 45,000 sq kms.

### THREE FOREST PERSONNEL LAID DOWN THEIR LIVES

WWF's Tiger Conservation Programme salutes the three guardians of the forests who laid down their lives while on duty at Palamau TR, Bihar, and Simlipal TR, Orissa.

While Sukhdeo Parahiya, 36, an excellent tracker of Palamau and Aziz Quraishi, 32, one of the best drivers of the same Park, lost their lives in a landmine explosion at Terhwa Nala of Chungroo village in Palamau TR while patrolling the forests in February, the body of Srikant Sethi, a dedicated forester of Simlipal TR who had seized illegal arms inside the Reserve, was found in a pit. His throat had been cut open with an axe.

Dedicated forest workers are being threatened and even killed. Demoralised, foresters are reluctant to work in areas where extremist groups operate.

While Sukhdeo Parahiya had honed his skills in tracking down tigers and had extraordinary knowledge about the king of the jungles, driver Aziz had developed expertise in collecting information about timber and "Katha" smugglers. The vehicle in which they were travelling was blown to pieces.

Since both were daily wage workers they were not entitled to any compensation from the government. They leave behind six and five children respectively. Sukhdeo's wife had died of snake bite barely eight months ago.

Based on an appeal put out by the Divisional Forest Officer of Daltonganj South Division S.E.H Kazmi, The TCP has sent a cheque of Rs 30,000 for rehabilitation of their families and the Wildlife Protection Society of India Rs 20,000. Mr Kazmi and his colleagues and friends are also rallying around to assist the families.

## VOICES FROM THE FIELD

**Usha Rai**

### TO THE RESCUE OF AN ELEPHANT

*S.P Singh, Field Director—Manas Tiger Reserve*

"When I want prompt action, emergency medicine, my mind turns to the Tiger Conservation Programme. In mid-November 1999, a six year old elephant of the Park was attacked from the rear by a tiger and its hind legs were badly hurt. The elephant received the necessary medical assistance and even surgery. But the vets treating her wanted to take no chances and decided to give her an anti-gangarene shot. However, the vaccine was not available in Guwahati.

"In desperation I turned to the TCP asking them to procure the medicine. It was an emergency. Who else could I turn to. Within a couple of days the TCP boys procured the vaccine, ensured its preservative quality by putting it in a thermos with ice and had it flown into Guwahati. The

whole operation had to be well coordinated because from Guwahati to Manas is another five hours journey by road.

"Thanks to the timely help, we are now confident of saving the young elephant."

### SECURITY IN VEERAPPAN'S DOMAIN

*V.K.Gogi, Deputy Conservator of Forests (Wildlife), Biligiri Rangayyan Temple Sanctuary*

"BRT is a paradise for wildlife enthusiasts. But it is haunted by nightmares of encounters with notorious poacher Veerappan. The sanctuary management and frontline staff always live under the shadow of threat to their lives. The TCP with its package has provided uniforms to daily wage staff which has helped them camouflage in the jungles for anti-poaching and anti-smuggling activities. As they are concealed in the jungles they feel safe.

Below:  
Forest personnel  
in a mechanised  
boat, Kaziranga





“The night shelters, also provided by the TCP, help them spend their night securely. The handheld sets, mobile sets and stationery sets have improved communications. The staff, engaged in operations, now are in touch with the Division headquarters. This keeps their morale high as they can expect immediate reinforcement when required.”

“Even though there is an outbreak of foot and mouth disease in the district, the cattle around the protected areas and the wild animals in the sanctuary have not shown the symptoms, because, thanks to another TCP gift, they have been immunised.”

#### **TIGERS MORE VISIBLE IN TADoba ANDHARI**

*Shree Bhagwan, Field Director, Tadoba Andhari Tiger Reserve*

“When my people get something, you can be sure they will give back something! The TCP has provided infrastructural support worth Rs 16 lakhs. Without the two jeeps provided it was extremely difficult to do the patrolling. This time when 200 people entered the park illegally for tendu leaf collection, we were able to apprehend them and throw them out. The uniforms provided to the van majurs (forest guards), the human health care facilities have raised the morale of the staff and helped in tiger conservation. This has had a ripple effect and the water facilities for the wildlife as well as the habitat per se has improved.”

“The tiger today strides its domain more confident and secure and there are many more sightings of

tigers now. In fact the Director of Project Tiger saw six tigers — a mother with three young cubs and two, two-year-old cubs who had not disbursed. Today there are 40 tigers in Tadoba Andhari.”

*K R Yadhav, Belrayien Range Officer, Dudhwa*

“I cover a range of 19,000 ha. I now have a jeep provided by TCP. The improved mobility has enabled us to increase the protection.”

*A.K. Srivastav, Range Officer, South Sonaripur, Dudhwa*

“The tractor provided has helped in routine forest working. We can now patrol even in the monsoon. Earlier, during the monsoons, South Sonaripur was at the mercy of God.”

#### **NIGHT OPERATIONS NOW POSSIBLE**

*Khadak Bahadur, Forester, Dudhwa*

“One night I heard felling in Gulara, the southern buffer of South Sonaripur. Thanks to the wireless sets provided by TCP, I could seek assistance even though it was late at night. A fleet of five vehicles means better protection and monitoring of the entire park.”

*Jaikaran Singh, Wildlife Guard, Dudhwa*

“Should I tell you the truth! Life has become more miserable because with the wireless network provided by TCP, officers don't just keep track of tigers, they keep track of our movements too.”



## **TIGER CONSERVATION IN THE NEXT MILLENNIUM**

## SAVING THE TIGER

MORE FUNDS HAVE TO COME FROM DONORS

S.C. Sharma

**P**roject Tiger launched in 1973, was acclaimed as one of the most successful conservation efforts. This was mainly because the state and the central governments gave highest priority to the project and international funding support for the project was also available.

The state governments selected their most dedicated officers as Field Directors of Project Tiger. The number of enforcement staff, availability of vehicles and other equipment was enhanced manifold. Flow of funds was expeditious and smooth. Therefore, the project could reverse the trend of sharp decline in the tiger population of the country through better management of the habitats and effective control of poaching. Nature also responded to the action taken by the project authorities and the tiger population all over the country increased gradually. However, the initial gains could not be consolidated further and the advantage gained in the initial years were lost. This was due to the increasing trade in tiger parts across our borders.

measures like establishment of the Global Tiger Forum and signing of a bilateral agreement with China. A Memorandum of Understanding has been also signed with the Nepal Government for control of trans-border trade. The measures taken, however, have not been able to match the well organised mafias involved in illegal trade of wildlife products. There have been several instances of destruction of wildlife habitats by encroachments and illicit felling. I feel that we are entering into the next millennium on an unhappy note.

If tiger conservation is to succeed in future, we will have to take innovative measures to instil the political will for conserving wildlife by strengthening and broadening the argument for conservation. Protection of water, soil, air and genetic resources could be valid reasons for conserving nature in the next millennium.

Since rationalising the needs of economic and social development with environmental security is going to be the main challenge for the next millennium, conservation personnel would be required to have greater skills in wildlife biology, extension methodologies and environmental accounting. They will have to acquire greater professionalism and skill in dealing with problems related to maintaining the integrity and quality of wildlife habitats. Wildlife managers, NGOs and the local communities will have to pool their resources and act jointly for conservation, instead of competing with each other for having a greater say in the field of wildlife management.

The NGOs in particular, will have to make people aware of how their actions would impact on environment and wildlife. They should be able to convince them to change their lifestyles, and learn to live in harmony with nature.

The international community will have to con-



JAGDEEP RAJPUT

Below:  
A Gaur

JAGDEEP RAJPUT



The Indian Government has taken certain mitigative

tribute towards tiger conservation in a bigger way. In the prevailing financial circumstances, the chances of government enhancing the allocations to the wildlife sector are minimal, and in the next millennium, funding for tiger conservation will have to come mainly from the international community. The substantial contributions that came from WWF International in the formative years of Project Tiger by way of equipment, vehicles - enhancing the mobility, communication and technical inputs in Project Tiger areas - would have to be revived.

An important factor that needs to be inculcated among field personnel in Project Tiger areas is a feeling of pride, especially since they are involved in a prestigious project where they have to show their mettle. State governments will have to be convinced not to treat Project Tiger placements as routine

postings. There is an urgent need for filling up the vacancies in Project Tiger areas with dedicated officers, committed to wildlife conservation. This will not only increase the manpower, but would also bring in new blood, thereby reviving the enthusiasm and courage that prevailed in the enforcement staff during the formative years of Project Tiger.

Transparency in dealings, sharing of information among all the parties having a stake in conservation and support of public at large for conservation, are going to be the main planks on which the success of tiger conservation programme in the next millennium will depend. ■

*(The author is the Additional IGF for Wildlife and Director of Wildlife Preservation, Government of India)*

## AN UNCERTAIN STRIDE INTO THE NEXT MILLENNIUM

H.S. Panwar

In the early seventies when the Project Tiger was conceived, legal and illegal hunting were perceived as the main threat. With the total ban on licensed hunting from 1970 and the coming into force of the strong penal provisions against poaching under the 1972 Wildlife (Protection) Act, a firm and enforceable clamp became available.

So, in 1973 when the Project came to be launched it was seen as a vehicle for conserving whole samples of natural ecosystems with the tiger as the umbrella species. An implicit assumption here was that the forests outside the specially created tiger reserves, and the other tiger-bearing protected areas (PAs), would continue to be safe havens for the tiger.

And then came the realisation that the ongoing habitat shrinkage and accelerated degradation deflated such an assumption. Thus though in most tiger reserves and many better looked after PAs the tiger showed marked recovery, the condition of habitats outside and with it their ability to 'sustain' the dispersing 'breeding surplus' from tiger reserves, declined.

The consequent response by way of more tiger reserves and better-managed buffer zones had limited and sporadic success. In this period several non-wood forest products, notably the tendu leaf used for making *bidis* (traditional cigarettes) and sal seed, were commercially exploited. This compromised the traditional 'utilisation discipline' of communities. The new collection methods played havoc with forest sub-canopy growth, seriously eroding habitat productivity.



Simultaneously, rural development in tracts dominated by forest and non-forest natural vegetation, suffered from inadequate inputs. The result has been a further decline in the productivity of both private and common resource base and a concomitant aggravation of poverty. This situation only helped step up the pressure on PAs further. 'White Revolution' and 'Operation Flood' did not address the large scrub livestock population and its owners, who are helpless and accelerating the degradation of village and forest pastures.

Population pressures and the ensuing massive encroachments also took a heavy toll of forest and pasture lands. These encroachments continue to be regularised even after the coming into force of the Forest Conservation Act of 1980. Development projects remained narrowly focussed on their respective limited goals. Objections against displacement of people and destruction of forests, or other natural biomass, were treated callously and disposed off without compassion. The meagre compensation given created a large mass of 'development refugees'.

Voices from the field were raised in the mid-seventies to provide sustainable alternatives to local people to mitigate pressures on the habitats. Then eco-development came to be devised, showing the right way for rural development for people inhabiting tracts dominated by forest or non-forest natural vegetation. In 1983, an IBWL Task Force working on ways and means for eliciting public support in wildlife conservation identified these formidable problems and endorsed the eco-development approach.

The Task Force's meetings with the then nodal ministries for rural development, tribal welfare and finance and the Planning Commission created a favourable climate for the initiative. Unfortunately, it took almost 10 years for a beginning to be made in a limited manner under Project Tiger. The India Eco-development Project (EDP), funded by GEF and World Bank, followed. Even this covered but a limited number of PAs in some States. Anyway, by the time these started not only had the problem aggravated but the milieu had been vitiated by a worsening interface relationship on the PA boundaries and eroding political support.

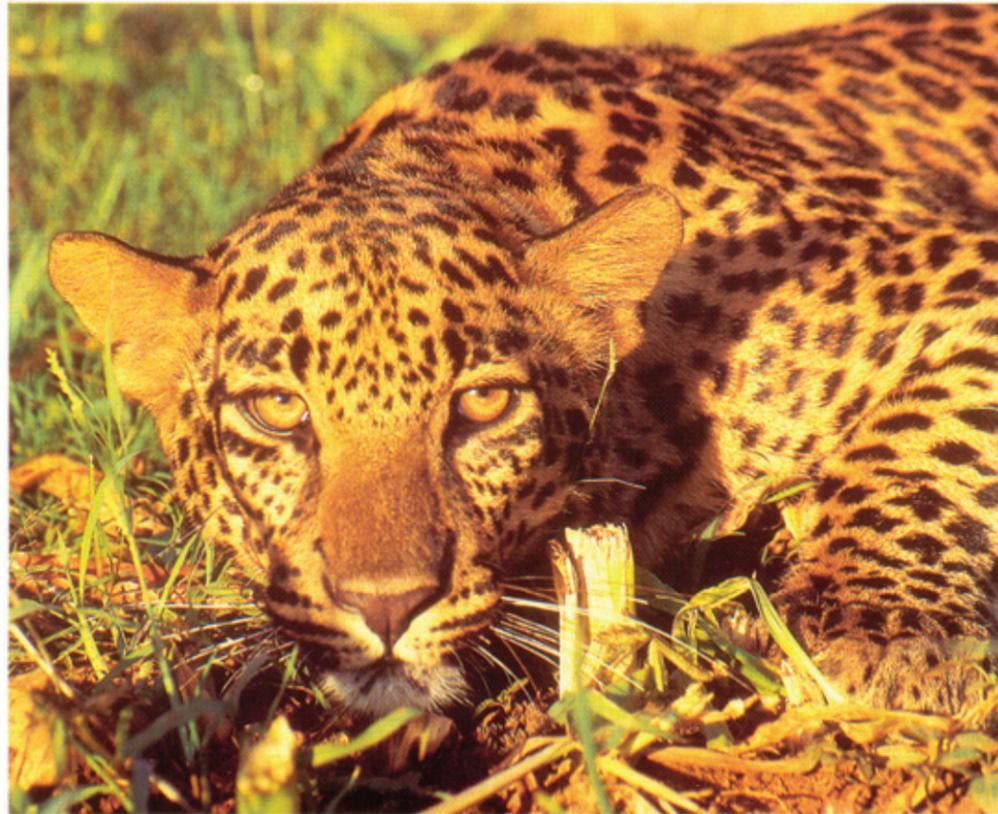
While there are successes registered at several sites, the high cost model of EDP is not regarded as replicable on a large scale, as the potentially available per capita inland resources cannot match such outlays. Perhaps it is also not possible to effectively utilise such large sudden inflows over a short period. The sites demand realistic, ground-based, people-participatory initiatives. It is such an approach, which with affordable investments, can promote recovery and self-reliance in eco-development.

In the mid-eighties the pressures on the tiger mounted again because of the demand for tiger bones. At present the tiger, symbolising a major component of Indian wilderness, is triply jeopardised. Besides the eliminative pressures there is the formidable constraint of shrinking, fragmenting and degrading habitats, whose prey bearing capacity stands compromised.

Thirdly, there is low political will and poor public support. So there is declining support to field formations from bureaucrats and politicians, and low allocations for PAs. Even these meagre funds lapse at the end of the financial year because of delayed release of funds in many States. The red tape now seems to have become a deliberate tool to temporarily or even permanently divert conservation money to other 'priority' sectors. That forest and wildlife conservation under Project Tiger is a means of water security as well as of soil and biodiversity conservation is being forgotten by the political and bureaucratic mindset.

The basic truth is that the fate of natural ecosystems and hence the security of water, soil and biodiversity of tiger-land and resident population are all inexorably linked. All these constituents would flourish or perish together. It makes a tremendous





Above:  
A leopard

ecological and political sense for the champions of these constituents to make a common cause. There has to be an acceptance by governments of such an approach, both at the Centre and States. The modalities have to be truly participatory with stakeholders involved in planning and implementation.

Conservation and eco-development can be mutual force multipliers and can generate a synergy capable of quickly transforming the landscapes by arresting degradation and re-bonding communities with their resources. This does not imply that all traditional resource utilisation practices can continue. Because of the prevailing adverse 'human to land ratio', several traditional practices have become intrinsically unsustainable, for example, slash and burn farming and raising scrub livestock on degrading pastures or over-lopped trees in forests. Instead, innovative conservation-compatible alternatives capable of sustainable higher per unit area economic productivity, should be adopted. Participatory forest management and eco-development initiatives have yielded good results in different parts of the country.

The Wildlife Institute of India (WII) and the Lal Bahadur Shastri National Academy of Administration (LBSNAA) recently conducted a workshop for finding ways of bringing in a land-

scape strategy which integrates conservation and development. The resources presently flowing to selected areas could be gainfully redirected into an integrated, people-participatory programme. There was encouraging response from several state representatives. The new initiative deserves to be supported and developed. Eric D. Wickramanayake and others in the book 'Riding the Tiger' provide a good list of 'Tiger Conservation Units' (TCU) visualised along such a landscape approach.

This mandates early attention by Central and state governments to

further inventory the suggested 'priority TCUs', make a priority list and initiate programmes. Project Tiger could spearhead this. If state governments commit to redirect inputs to such a programme, the kitty could be enlarged with Central and international assistance. The TCUs identified in India are over 300,000 sq km. Even if only a third of it were to revive as good habitat and another third as medium habitat, it could support 15,000 tigers, at one per 200 sq.km in medium, and one per 100 sq.km in good habitat. The present population base of around 3,000 can support this steady course of recovery. This no doubt is a simplistic estimate.

But India has to revive its wilderness for the security of her physical environment and for human survival. If the message registers and progress results, the latter part of the 21st century may well have a tiger population in five figures. ■

*(The author is former Field Director of Kanha National Park, Director of Project Tiger and of the Wildlife Institute of India)*

## PUTTING A SMILE ON THE TIGER'S FACE

**Mahesh Rangarajan**

April is a significant month in the history of the tiger and its often painful and torturous relations with homo sapiens. It was in April 1973 that India launched Project Tiger. In a quiet ceremony at the Corbett National Park, Dr. Karan Singh, the then Chairman of the Indian Board for Wildlife, officially flagged off a nationwide effort to protect the national animal. At the heart of the effort was the focus on a carefully selected list of nine reserves where the predator, its prey species and habitat would be brought under a protective umbrella. Today, a quarter of a century on, the major successes of the project, which now covers as many as 25 reserves, cannot in any way obscure new emerging threats to India's wildlife.

So much has been written about the spurt in the trade in tiger bone in the nineties that other perils are easy to ignore. One is the recent increase in poisoning of the great cats by irate herdsmen avenging the loss of cattle. In theory, such losses, if they occur within wildlife sanctuaries, are compensated for by the authorities. In practice, this is easier said than done. The process of laying claim to the amount and actually getting one's hands on it can take months and even years.

As is often the case, bribes have to be paid to a whole lot of people. To add to all this, the competition for living space has indeed become more intense in much of tiger country. Two years ago, as many as 20 tigers were poisoned to death in one reserve, Nagarjunasagar, alone. Clearly, such conflicts can only be reduced by swiftly and effectively providing timely and adequate compensation to herd owners.

The major change in this respect comprises initiatives among voluntary groups eager to do their bit to improve the state of human-wildlife relations in the

country. Unlike in the early seventies when there was support for nature conservation at the highest level, things are now much more disorganized. Further, with assertive state governments playing the major role, it has become essential to work with them far more than with the Union. Even as the pressures from industry to open up protected areas have mounted, the executive has tended to abdicate its role as protector or simply turned a blind eye to depredations. It is against this backdrop that voluntary groups have found the space to play a larger and more influential role.

There are two distinct strands among such groups. One is the protectionist, who hopes to strengthen and reinforce the existing structure for meeting the aims of conservation. The other, with an overlapping but distinct set of concerns, is more populist with stronger emphasis on enabling resident people to have stakes in or to control the way in which reserves are managed. As is to be expected, the former has been built around a core of wildlife enthusiasts, scientists and committed wildlife administrators. The latter is an outgrowth of grassroots groups and middle class activists who put livelihood and peoples rights at the centre of their programmes.

The most significant of the conservation oriented groups is the initiative, Tiger Link, that was formed few years ago and brings together a large number of individuals and voluntary groups. In the early seventies, the World Wildlife Fund and the Bombay Natural History Society, one a body with captains of industry and former princes at its helm, the latter a group of scientists and amateur naturalists, were the main voluntary groups involved with the runup to Project Tiger. Today, the Tiger Link network spreads out far and wide to encompass small groups in Palamau and Guwahati, and larger organizations like the





Teachers Education Group in Kerala which recently collected over 150,000 signatures in a save the tiger appeal.

Again, the WWF had raised a million dollars in 1973 in a blaze of worldwide publicity for the tiger. But over the last three years almost as much has been given directly to the tiger reserves and other protected areas in a much more low key effort. This time it has been ensured that the money reaches the state governments in time. It is being used for supplying forest guards with boots and sweaters, or to pay for the rations for elephants on patrol.

Such initiatives have won support from scientists like Ulhas Karanth whose research in various tiger habitats brings both good and bad news. It is heartening to note that intensive surveys show some tracts have very high densities of tigers. Kaziranga in Assam has 17 tigers per hundred square kilometers. This population is sustained by the rich prey base within the reserve; elsewhere even excellent forest cover holds few predators because prey animals are fewer in number. Karanth argues strongly in favour of strong protection: there is no substitute for it.

From a very different angle, the populist groups, who agree on the need to save the tiger and the forests, blame the very structures of protection for being distant from the people. The Tarun Bharat Sangh, active in the Sariska tiger reserve, has been working for a dialogue on how to evolve alternative systems that protect the forest and provide for the welfare of resident peoples. Policing is seen as only a short term solution, and is blamed for bearing down hard on rural forest users without providing viable alternatives for livelihood. Even the existence of the reserves in the long term can only be guaranteed by those

who live around them.

But this would require a very different orientation of the existing system. There are, for instance, signs of resentment against the relocation of villages in the reserves away from sites where people have lived for generations. Similarly, the closure of areas for grazing provokes strong resentment. What is important is that many grassroots groups are alarmed by the market forces that are degrading the forest, and hope to defend the interests of those who live off the land. The question for them is how best to blend these interests of survival of resource users with the existence of the forest.

Here, the two groups part company. The protection lobby feels the latter groups are often justified in criticizing the foresters for being insensitive and highhanded. But they draw the line at people having access to certain core areas of the reserves for residence or for extracting forest products. These, they argue, are incompatible with the need to retain and replenish the numbers of endangered species. In turn, the populists charge the former with putting tigers before people and shoring up a system of protection that has failed to meet its own stated objectives. Yet, the two groups also have a lot in common. Even committed advocates of protection have begun sustained work at the community level, providing health care and education to those on the fringes of tiger reserves.

Many now condemn forcible relocation and are willing for a dialogue with those with different beliefs. Grassroots groups in turn are not in favour of denotifying protected areas: often the legal cover alone has kept mining and logging interest out. Far more than in the past, even radical groups are coming round to seeing their own struggle as one that cannot be blind to the fate of the forest or to that of its fauna.

The clock ticks on for the tiger. The pessimists would say that 1998, the Chinese years of the tiger, took it yet another step towards oblivion. But the good news is that a recovery is possible. And in this contest for survival, the voluntary groups and grassroots organizations have played a key role in making the government wake up and try to get its act together. After all, public awareness of the available choices is the one thing that can put a smile on the face of the tiger. ■

*(The author is an Environmental Historian)*

## THE GLOBAL TIGER PARTNERSHIP FLOUNDERS FOR FUNDS

S.C. Dey



Although only five of the 14 tiger range countries have become members of the Global Tiger Forum, nine countries have in fact drawn up Action Plans to save the tiger. But due to lack of resources many of these wonderful action plans will remain on paper.

Countries like Laos, Myanmar, Cambodia, Vietnam and North Korea just do not have the infrastructure to activate their action plans. In North Korea there is not even a baseline study of tigers in the country, and if there are any, they are in remote, inaccessible areas.

The Global Tiger Forum, formed in March 1994 as an international and inter-governmental organisation to stem the worldwide decline of tigers, was visualised as a dynamic leader for tiger conservation. With its headquarters in Delhi its mandate was to highlight the rationale for tiger conservation and to evolve a common, global approach to safeguard the survival of the wild tiger, its prey and its habitat,

while at the same time addressing market forces.

A cash crunch seems to have dimmed the initial enthusiasm. It is estimated that about \$ 18 million will be needed annually to save the tiger. India, which holds 55% of the global tiger population, would alone require \$ 10 million annually. With an allocation of Rs 17 crores, the government is already spending about \$ 4 million on Project Tiger. Some more money is also flowing from other central and state schemes.

Only five of the 14 tiger range countries — India, Bhutan, Myanmar, Vietnam and Bangladesh— have joined the Forum. Letter of intent to join the Forum has been received from Nepal. Laos and Cambodia have also indicated their eagerness to join the global body. The Russian Federation and Malaysia have expressed support to the GTF but have not yet joined due to financial and other problems. The membership fee, which varies from \$1000 to \$ 10,000 annually for different countries,

Above:  
GTF meeting:  
delegates from  
range countries



has been a big deterrent. Thailand has also shown interest, but wants some changes in the statutes. North Korea and Indonesia have expressed inability to join the Forum currently. China has remained silent. Some of these issues are expected to be resolved at the first general assembly of the GTF to be held in Bangladesh next January.

While all tiger range countries are category A members of the GTF, B category membership is extended to non-range countries willing to support or par-

ticipate in tiger conservation programmes. Category C membership is given to non-governmental and inter-governmental organisations which have made significant contribution to tiger conservation. A fourth, D category of honorary membership, is given to individual members.

Of the non-tiger range countries, the British government has declared its intention to join the Forum. The formal induction of UK is likely at the next General Assembly. In the C category, WWF-

International has joined the Forum.

Donations to GTF have been received from the governments of U.K and Norway and from an NGO from Australia. The Chairman of GTF, who is the Indian Minister for Environment and Forests, has written letters to 10 developed nations to join GTF and contribute for tiger conservation. The US is processing a grant of US \$ 20,000 for a capacity building project for wildlife officers of India.

The capital for the GTF trust fund is garnered from

membership fees. In addition, the Forum received support from UNEP and WWF-International for holding the first and second meeting of the tiger range countries in 1994 and 1997.

At the 1997 meeting, it was decided that since the GTF is in a developing stage, it should initially support priority programmes like capacity building and exchange of information through brochures and newsletters. Also proposed were campaigns related to tiger conservation including addressing markets dealing with tiger parts, products and derivatives; and preparation of action plans for tiger conservation, specially in trans-border areas.

The GTF activities so far include support to a workshop on wildlife management and enforcement in Vietnam; training of officers in wildlife conservation and habitat assessment for Myanmar, Vietnam, Nepal and Bangladesh; drafting of revised tiger resolution in conference of parties at Harare in June 1997. In Cambodia, the GTF supported Flora and Fauna International for tiger survey and conservation programmes. It has promoted the preparation of Tiger Action Plans in nine countries and identified transboundary tiger habitats in six countries.

The GTF has also assisted in identifying problems of tiger range countries and made suggestions for overcoming them. There was similar identification of issues on poaching and illegal trade in the tiger and its parts and suggestions for control of these activities. At the Wildlife Institute of India, the GTF is supporting a forensic development programme for tiger bone identification. It is also supporting tiger conservation in three tiger reserves in India and a national park in Vietnam and developing formats for monitoring and evaluation of projects which have been circulated to the range countries.

While there have been some changes in tiger population in some countries, the overall tiger population has remained more or less stable for five years now. However, poaching of tigers, decline of its prey base, illegal trade and habitat destruction continue to be the prime threats for survival of the remaining tiger population in the wild. In a number of countries there is still inadequacy of authenticated data for scientific management of wildlife and political will to support tiger conservation. ■

*(The author is Secretary-General of the GTF)*

## VILLAGERS CAN WORK WONDERS

Ashish Kothari

I was up in Tehri Garhwal recently, walking through a 1000 hectare patch of oak and rhododendron forest that had been regenerated and protected for 20 years by nearby villagers. Once apparently wiped out, the vegetation had come back so remarkably that one could not believe it had not always been there.

And when I learnt from Mangal Singh Thapa, belonging to one of the oldest families in the village, that two of his buffaloes had been killed by the *dhari wala bagh*, I realised what a great feat this 'remote' village had achieved. Not only leopard, bear, ungulates, and myriad other wildlife had returned to this area, but so had the occasional tiger. And what about the lost buffaloes, and the increasing crop damage by wild animals that villagers were suffering? Thapa and his fellow residents were stoic, pointing out that the benefits of regenerated hillsides outweighed such costs.

This village, Jardhagaon, is not the only one with this remarkable story. There are hundreds, possibly thousands, of such instances across India. Villagers, condemned by development advocates as "backward" and by urban conservationists as the "enemies of wildlife", have shown time and again that with appropriate incentives, powers, and responsibilities, they can work wonders.

Can local communities conserve wildlife? The following examples speak for themselves:

- Over several years, villagers along with Tarun Bharat Sangh have successfully fought against mining in Sariska Tiger Reserve, something that the Forest Department was unable to do;
- Several dozen villages in Alwar district, Rajasthan, have reconstructed the water regime, regenerated forests and helped to control poaching; over an entire catchment of 400 sq. km., they have declared an Arvari Parliament which will move towards sustainable land, water, and forest use;
- Over 1800 hectares of deciduous forest, the Gram

Sabha of Mendha (Lekha), Gadchiroli district, Maharashtra, has warded off a paper mill, stopped forest fires, and moved towards sustainable extraction of non-timber produce. This forest contains considerable wildlife, including mammals like sloth bear, leopard, and giant squirrel;

- Several big dams and other 'development' projects, which would have submerged valuable wildlife habitats, have been stalled by tribal mass movements. Examples include the Bhopalpatnam-Ichhampalli dams, which would have drowned a part of the Indravati Tiger Reserve, and the Bodhghat dam, which would have destroyed rich forests in Bastar.

It is vital, however, to realise that these are not instances of villagers fighting to protect wildlife per se. The struggle, rather, is for protecting livelihood resources, for preserving some kind of ethnic identity, and for asserting the right of every community to have control over the natural resources that its survival depends on. In the process, communities also recognise that wild species benefit, and are often proud of it ... as in the case of Bhaonta-Kolyala, where a forest protected for fodder and fuel and other benefits has symbolically been declared a wildlife sanctuary.

There are several lessons in this for India's formal conservation programmes and policy:

- Governments alone cannot conserve nature; wildlife authorities have neither the resources nor the full range of expertise needed for this task, and in the face of commercial and industrial pressures (e.g. mining in Sariska), they are often helpless;
- Communities can, and will, conserve wildlife habitats, if they see in such conservation a stake for their own current and future wellbeing; but they too cannot do it all alone. They would be more effective if they had government support;



Top right: Villagers consult on increasing natural resources  
Right: Village forest regenerated by people

- Given that most protected areas in India are inhabited (with a total of over 3 million people), and that it is neither possible nor fair to kick communities with traditional rights out, the integration of livelihoods and conservation is no longer an option ... it is imperative;
- The greatest stakes in conservation are created when there is security of tenurial rights coupled with clear responsibilities; in Bhaonta-Kolyala, Jardhagaon, Mendha, and hundreds of other locations in India, the community goes all out to protect forests because they feel that they have secure access to it;
- Local community knowledge is invaluable in building appropriate management strategies for wildlife habitats.

This is not to suggest that all communities everywhere are conserving. Indeed, traditional institu-





Above:  
A tribal movement against Bhopal-patnam-Champalli dams, for saving Indravati TR

tions and practices that were conservation-oriented have weakened, members of communities have got locked into exploitative markets, the 'developmental' aspirations of the younger generation of villagers are not very different from their urban counterparts. Individual communities would also find it difficult to manage more than a few hundred hectares, though there are instances of much larger landscapes being managed by village clusters. The situation is therefore extremely mixed, and needs careful, nuanced responses.

For most of the communities that inhabit our last wildlife habitats, the most important stake is an assured access to biomass resources: to fuel, fodder, medicinal plants, thatch, honey, grass, fish, and the dozens of other natural products that they depend on for livelihood and cultural sustenance. Wildlife policies and laws have gone wrong in curtailing not only destructive resource uses but also sustainable ones; in converting legitimate users into criminals almost overnight; in forcing people to "steal", bribe, collude with poachers and undermine conservation efforts. All this coupled with the obvious hypocrisy

of the elite conservation class, which zoom about in cars in core zones from where villagers were kicked out, has made rural masses develop a strong antipathy to "sarkari tigers" and "sarkari forests".

So the first step should be to revive the biomass resource rights of people. Where this is unsustainable they should help devise alternatives. Encourage positive links between natural habitats and villagers, e.g. in the use of medicinal plants for bona fide consumption, or in the protection of sacred groves. Assist in enhancing livelihoods based on forest produce, and a responsibility towards conservation, as is being done with Soliga tribals in Biligiri Rangayan Temple Sanctuary, Karnataka.

We have to move towards an expanded set of protected area categories, which range from strictly protected ones (where all but the protection staff are barred entry), to those with minimal traditional use, to sustainable resource use ones (possibly most of our Reserved and Protected Forests), to community protected ones.

In this way, the conservation area network could expand to over 10% of our territory, double the current extent. And inviolate areas could easily be more than 1% of India's territory... provided they are declared in consultation with local people.

This also needs bold new institutional structures, legal and policy changes, and most important, a change in attitude at all levels within and outside government. Wildlife officials, NGOs, and community members, must dialogue with one other, must be able to sit on an equal plane and chalk out joint management strategies for conservation and livelihood security. Most important, they must be able to join hands to fight the 'developmental' juggernaut which, otherwise, threatens to consume every wildlife habitat as raw material and every local community as cheap labour. The recently set up Conservation and Livelihoods Network, born out of a series of national consultations, aims to build such bridges.

An appropriate combination of grassroots democracy, tenurial security to traditional livelihood sources, a clear policy of inter-departmental coordination with conservation as a priority, and continuing research using traditional and modern knowledge, is the key to wildlife conservation in the future. ■

(The author is a founding member of Kalpavriksh-Environmental Action Group and an environmental activist.)

## TIGER CONSERVATION PROGRAMME: A VISION FOR THE FUTURE

M.K. Ranjitsinh

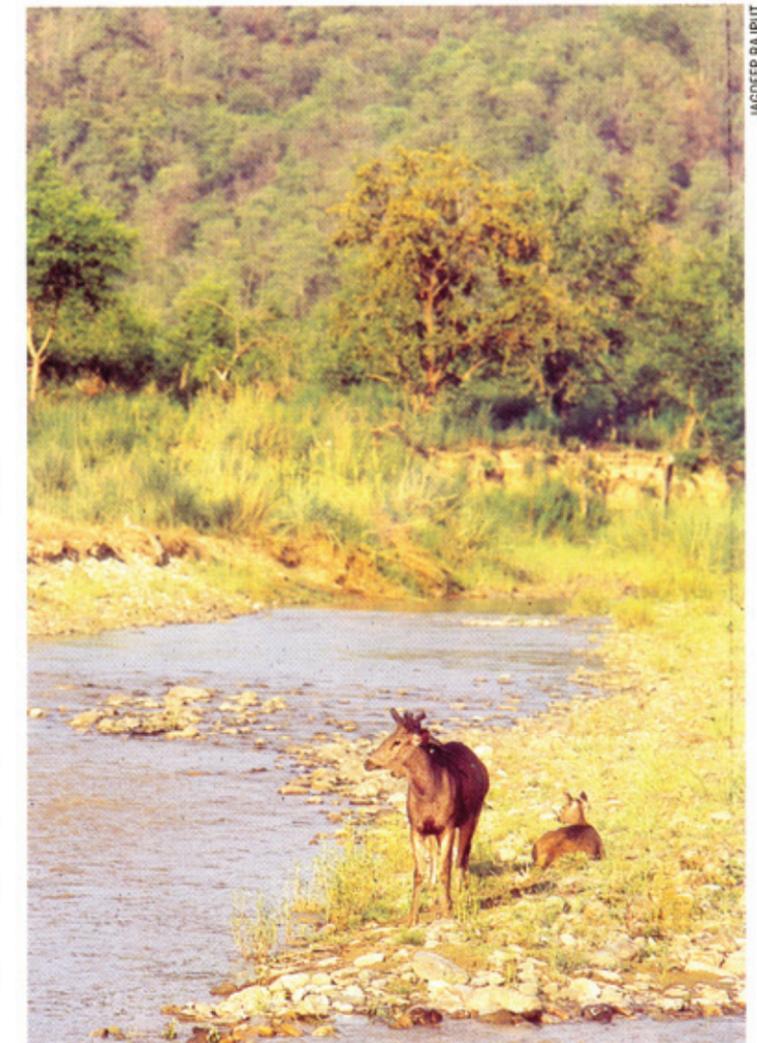
Will nature survive in the next millennium in India and many other countries and if it does not, how will it affect the destiny of man. That is perhaps the most significant question that one should be asking; yet no one is doing it. Instead, we appear to be more worried about whether the tiger or the panda will last the next century. Conservation cannot be a single species cult, however magnificent that species may be. The survival of a species can be a very effective spark to start conservation action; but it cannot be allowed to remain an end in itself with public involvement petering away once the crisis of imminent extermination is averted.

It does not require a soothsayer to predict the future of both nature and its integral part, species. Both have a hope only in effective protected areas (P.A.s) - national parks, sanctuaries and wildlife refuges. And here too there would be no assured safety if the rise in human population and the related rise in livestock numbers is not checked, indeed stopped, for which there seems to be no likelihood in the foreseeable future. No political leadership has the gumption to address itself seriously to the threat of population explosion.

If species and more importantly nature, are to survive in protected areas, their security and indeed their continuity as ecological entities assume a different dimension. The best investment under these circumstances is to obtain approval, if not at least active acquiescence, of their existence and functioning, from the people, most of all the neighbouring people. The agencies most suited for this job are the non-governmental organizations, yet not only are they not undertaking this task, but are championing causes that can and are destroying protected areas. The governments in their turn are trying to do their bit by initiating eco-development programmes around protected areas. But in the planning and execution of these projects a fundamental distinc-

tion is being overlooked. Eco-development programmes have to be materially different from the normal development programmes. Their objective and hence the yardstick of their success has to be as to how far they succeed in lessening demographic impact upon the protected areas that they are targeting. It aims at human development as a means to achieve another end.

A sambhar at Corbett



The active participation of the people in conservation will come about only through education and economic upliftment. Both are goals involving long periods of gestation, interminably long if the current track records are any indication, what happens in the interim period? What happens, as is already happening, if the people of a democratic nation want a protected area to be eradicated or diminished? If the future of Babri Masjid and of Krishna Janmabhoomi cannot be put to a vote, nor can the future of Bandhavgarh and Kaziranga. Governance is not allowing the majority to do what they want every time.

I am often asked what the future holds for the tiger - will it survive? The answer is yes, in the foreseeable future, but only in effectively managed protected areas with a substantive prey-base. Outside these areas I see little hope for the continued existence of a safe population in a given tract.

So what should be the approach and strategy for an organization like the WWF? Firstly, it must be realized that whatever the inputs it can muster, they can never measure upto those provided by the state and central governments. So the WWF Tiger Conservation Programme (TCP) must selectively complement the efforts of governments, supporting those activities and providing those inputs which the government is not undertaking, or is

doing too slowly or inadequately because of financial constraints or otherwise. While all consideration must be given to the demand of the man in charge of the PA, that must not be the sole criteria. The support should strengthen both the park and the personnel and help enable them to get better support from their professional and political masters. There should be an understanding, a partnership, that the concerned state authorities will also fulfill their part.

While equipment to facilitate better mobility, communication and law enforcement will still require a major bulk of support funds, there is only that much that is really cost effective. Besides, with the financial crunch that most states are facing, they may not even be able to operate too many vehicles. The construction of clusters of chowkies in remote parts of the PAs is a great asset to patrolling and anti-poaching efforts.

The morale of the field staff is rather low and with multitudes of unfilled posts, the daily-wage personnel often constitute the brunt of the protection staff. Yet they are not entitled to any benefits other than their wages - not even uniforms. Assisting the guards and daily-wagers, including taking out group insurance as the TCP has done, will prove most useful.

Training needs to be provided, to better operate the communication equipment, in law enforcement and prosecution, in population estimation, in fire prevention and control.

Outside the PAs and especially around them, a continuous programme for education, providing of alternatives and efforts to involve the people and wean their support, should be initiated if assured long-term funding is available and which was not available to the TCP in the past.

Public support to a PA is possible with a *quid pro quo* arrangement about the usage of usufructs in the areas buffering PAs. It is also feasible in some places in the matter of protecting species non harmful to human property and agriculture. But how does one get support for the tiger from communities whose livestock is regularly preyed upon by the feline? One cannot, so one tries to obtain acquiescence.

This is the ideology behind the cattle compensation scheme, assuaging anger at the death of one's livestock and simultaneously preventing retribution through poison. The NGO partners of TCP have rendered yeoman service in this regard and not a single carnivore has been lost despite over a thousand kills having been compensated for. The scheme must not only be continued with, but taken to fresh problem areas. It is fully realized that the scheme is a palliative, artificially resuscitating - by keeping alive- tigers that would otherwise succumb to cattle killing and certain death in the absence of natural prey. But what is the alternative, at least till such time that their habitat is rendered safe and the normal prey increases - for which there seems to be no imminent prospects. Alternatives must also continue to be provided to wean people away from communal hunts and the practice of burning forest.

A trans-boundary tiger, as indeed a trans-boundary ecosystem, is a shared resource. There is thus a great need to support trans-boundary cooperation in conservation. The TCP's assistance to an Indo-Nepal meeting must be followed by assistance to an Indo-Bhutan and an Indo-Bangladesh get together and what is more, support to translate into action the decisions taken.

Special awards for management of protected areas, for control of fire, for bravery and for suppression of illegal trade, for involvement of the people and



Above:  
A hog deer

for exemplary and innovative contribution to tiger conservation, have proved extremely useful in providing incentives through recognition of outstanding service rendered. These must continue, but they have to be selective and not devalued.

Tigers will continue to be killed till the demand for tiger derivatives and the lucrative trade that flourishes thereby, is not eradicated. This has been traditionally an area of relative failure on the part of government and hence a greater need for NGOs and particularly TRAFFIC, to play a pro-active role in assisting government. TCP must assist TRAFFIC operations in the field.

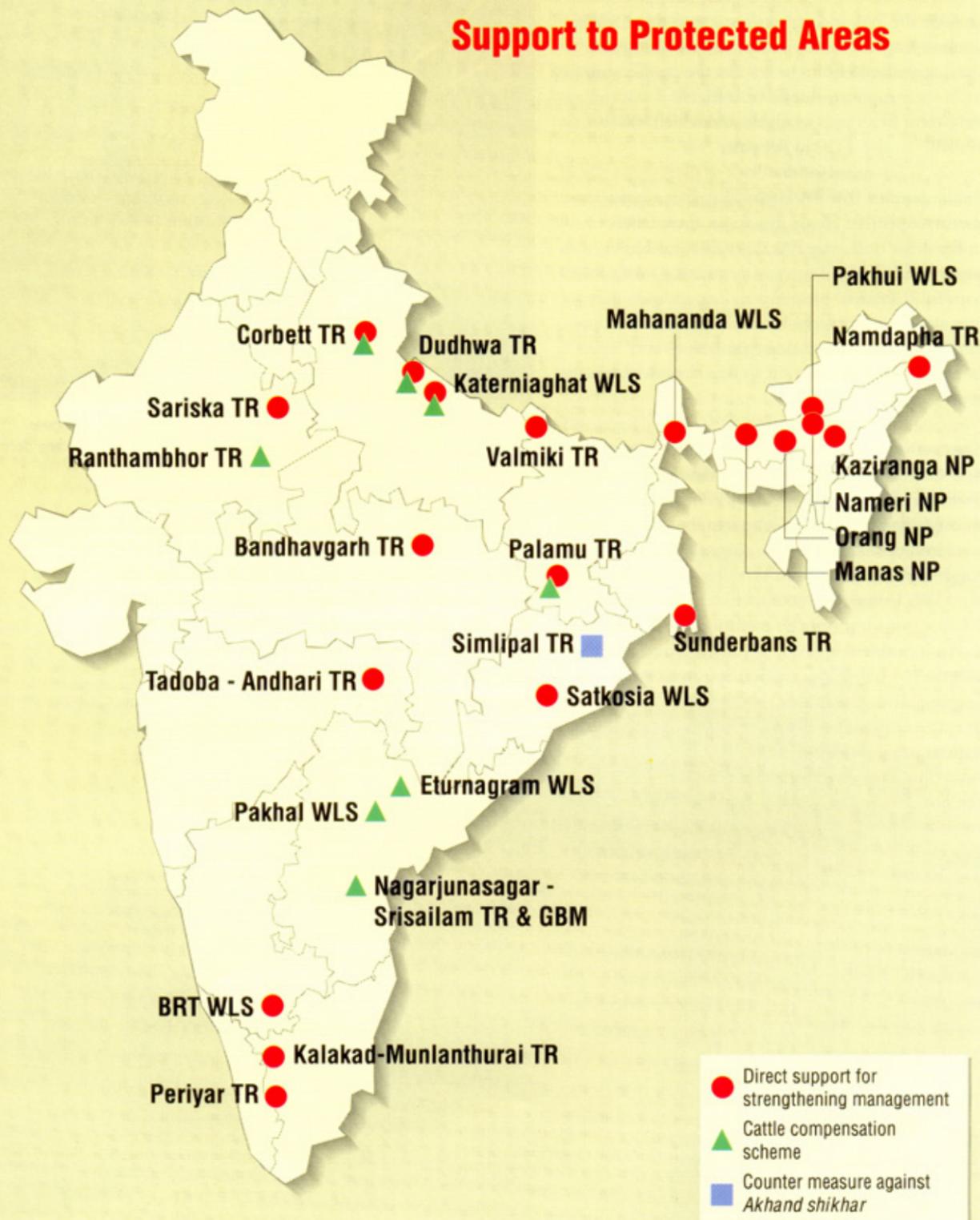
It has been the unfortunate experience in recent years that law courts are often the only recourse that that can be availed of as a last resort to effectively initiate conservation action or stop environmental damage. TCP has supported such legal redressal through public interest litigation and should continue to do so.

In the ultimate analysis the acid test of the success or otherwise of the TCP should not be the dimensions of support provided but the nature of it and the extent to which it has helped revive areas and projects that are important and hold promise, but had been dormant and languishing. It cannot do anything alone but can do a great deal through partnership. In the process, it can hopefully demonstrate how a vacant or semi-occupied niche can be filled by a non-governmental agency. ■



JAGDEEP RAJPUT

## WWF TIGER CONSERVATION PROGRAMME Support to Protected Areas



## MILESTONES

### January 1997

- WWF International and WWF India agree to set up WWF Tiger Conservation Programme (TCP) with a committed grant of Swiss Francs 1.8 million

### March 1997

- Thomas Mathew takes over as the first Director of WWF TCP and forms the core team along with Ranjit Talwar and Tariq Aziz. Amir Usmani, Renu Thapa and Izhar Ali join as support staff.
- A six month Work Plan is formalised and implementation begins in seven tiger areas.

### May 1997

- Field trip of print and electronic media to Corbett tiger reserve.
- First Steering Group meeting held at Gland.

### July 1997

- M.K. Ranjitsinh takes over as the second Director of WWF TCP.
- Two Year Work Plan finalised (July 1997 to June 1999).

### September 1997

- Nine additional PAs selected for WWF TCP support with active collaboration of State Governments.

### October 1997

- Field studies of the nine additional PAs start.

### January 1998

- Collaboration with TRAFFIC-India for work against trade in tiger parts and training of personnel on the Indo-Tibetan border.
- TCP's Cattle Compensation Scheme launched in Dudhwa and Corbett TR. Subsequently the scheme extended to Palamau and Ranthambhore TR and tiger areas in Andhra Pradesh.

### March 1998

- Scheme launched to curb Akhand Shikhar in Simlipal tiger reserve.
- Usha Rai joins as communications officer. *Tiger Update* starts.

### June 1998

- WWF TCP Steering Committee meets in New Delhi.

### July 1998

- Support from Tiger Emergency Fund reaches Kaziranga to help fight the devastation caused by floods.
- Four additional PAs selected for TCP support December 1998.
- Field trip of media persons to Dudhwa and Katerniaghat.

### March 1999

- Indo-Nepal Meeting held for Trans-border cooperation.
- WWF TCP Awards for 1998 declared and given away at the Millennium Conference.

### March-April 1999

- Evaluation of TCPs support to tiger areas by experts.

### April 1999

- 'Tracking Tigers—A field guide for estimating Tiger populations in the wild' published.

### June-July 1999

- Cattle Compensation Scheme evaluated by WII.

### September 1999

- Legal training for field staff in selected PAs commences.
- The Dutch Team visits field sites and evaluates the programme.

### November 1999

- WWF TCP Awards declared for 1999. These included a new Millennium Award for a tiger area.

### December 1999

- Presentation ceremony of TCP Awards.
- 'WWF Tiger Conservation Programme — Three Years and Beyond' a publication of the TCP released. A revised version of 'Tracking Tigers', and its Hindi translation were also released.

## THE TCP TEAM



Left to right:  
Chandan Singh Bajetha,  
Ranjit Talwar,  
Izhar Ali,  
Usha Rai,  
M.K. Ranjitsinh  
Amir Usmani,  
Tariq Aziz and  
Renu Thapa

**Thomas Matthew**, (not in picture) the former Secretary General of WWF India, was the first Director of the Tiger Conservation Programme. Coming on deputation from WWF US, he laid the foundation on which the Programme was built. An engineer by profession, Thomas Matthew is an ardent conservationist with a great deal of field experience.

The Director, **Dr. M.K. Ranjitsinh**, a member of the Steering Committee of Project Tiger as well as the Indian Board for Wildlife, was the author of the Wildlife (Protection) Act 1972 and is responsible for setting up a large number of national parks and protected areas in the country. An IAS officer of the Madhya Pradesh cadre, he was a joint secretary and additional secretary in the Ministry of Environment and Forests at the Centre, as well as Forest Secretary of Madhya Pradesh. There is hardly any national park or sanctuary in the country that he has not visited or been associated with.

**Brig. Ranjit Talwar**, the coordinator of the TCP, sought premature retirement from the Indian Army, and joined WWF India in its Education Division. He also worked with TRAFFIC India before joining the TCP. Ranjit Talwar has been facilitating support to 12 protected areas of the country and has been handling the Cattle Compensation Scheme, the Rajasthan Rewards Scheme and the Legal Workshops. Adept with the camera, he has been the unofficial photographer of the TCP.

**Tariq Aziz**, senior programme officer, has done his M.Phil in Wildlife Sciences from AMU, Aligarh. He was also a research fellow of the Wildlife Institute of India, Dehra Dun. A trained wildlife biologist, Tariq has worked with the World Pheasant Association and the Wildlife Protection Society of India. He has been eight years with WWF-India and has worked with the Communications

Division and TRAFFIC before joining the TCP. He facilitates support to nine protected areas, largely in Eastern and North East India. He has taken personal interest in changing the traditional hunting custom, *Akhand Shikar*, in Simlipal, which is responsible for senseless slaughter of wildlife. Extremely good with the computer, he brings out *Tiger Update*, the TCP's quarterly, and has helped in the production of *Tracking Tigers* — the field guide for estimating tiger numbers using the pugmark technique.

**Usha Rai**, communication consultant, brings to the TCP her vast experience as a senior journalist who has worked with the top three national dailies of India — *The Times of India*, *The Indian Express* and *The Hindustan Times*. She edits the *Tiger Update* and is responsible for the Spots on television as well as field trips for media persons. She has also been handling the Tiger Conservation Awards.

**Amir Usmani**, a professional pilot by training, he has donned the mantle of project administrator of the TCP. He has the difficult task of procuring everything from elephants to solar power panels, mechanised boats and uniforms—the requirement of parks and the men who man them. In fact he is used as the 'Man Friday' of the Programme. He is at airports at odd hours to receive visitors, and accompanies visiting TV crews for media coverage of various parks being supported by the TCP.

**Izhar Ali**, the person handling the TCP accounts, knows exactly when the Swiss Francs are coming and ensures that money received is disbursed on time to various parks and protected areas. He is constantly processing papers for cheques that have to be procured and despatched on time. Like Amir he is an indispensable member of the team.

**Renu Thapa**, the baby of the team, is the nimble fingered secretary to the Director but she is constantly helping all other members of the TCP. She handles all the despatch work and is responsible for maintaining the innumerable files of the TCP. In addition to her office responsibilities she keeps everyone in good humour with a steady supply of Polo Mints and biscuits.

**Chandan Singh Bajetha**, the TCP chauffeur, has taken Indian and foreign visitors to Tiger Reserves and protected areas all over the country. He has even taken them across the border to Nepal. He is not only in demand but is constantly on the move receiving visitors at airports or taking letters, video tapes to ministries and TV channels.

