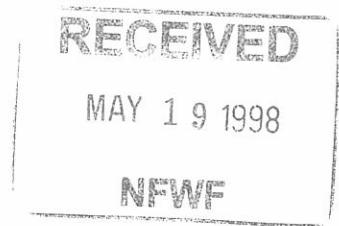


Project Title: KARNATAKA TIGER CONSERVATION PROJECT
Project #: 97-082-034
Grant period: May 1, 1997 - April 30, 1998
Report period: Final Report (report #1 of 1)
Principal Investigator: Dr. Ullas Karanth



Background: The Karnataka Tiger Conservation Project (KTCP) is a three-year project to develop and implement a population recovery plan for tiger and prey communities within the four major study areas in Karnataka State, India: 1) Bhadra Wildlife Sanctuary (BDR); 2) Kudremukh (KDM); 3) Bandipur (BDP); and, 4) Nagarhole National Park (NHL). These sites represent ecologically diverse habitats that are included within Tiger Conservation Unit (TCU) - 55 Dandeli-Bandipur — a priority tiger conservation area as identified in the joint WCS/WWF-USA study, A Framework for Identifying High Priority Areas and Actions for the Conservation of Tigers in the Wild. Dandeli-Bandipur is considered to be the most important TCU in Karnataka State for tiger conservation and research. Activities planned for these four sites build on and expand long-term tiger and prey population research and conservation efforts conducted by the Wildlife Conservation Society (WCS) since 1986. This report contains details of activities carried out, activities planned for future work, and expenditures associated with National Fish and Wildlife Foundation funds for the period ending June 30, 1998.

Project Goals:

- 1) Conduct intensive field surveys and scientific research to identify critical ecological and conservation needs for maintaining viable tiger and prey populations in the project areas.
- 2) Strengthen the material capabilities of the Karnataka State Forest Department and its staff to protect tigers and their prey in the field.
- 3) Upgrade the professional capabilities of protected area ground staff through training and by improving their morale, status, and managerial abilities with innovative incentives and welfare measures.
- 4) Establish conservation education activities that will improve local support for park protection and initiate activities to reduce park-people conflicts through pro-active interventions of local NGOs.
- 5) Set up and execute a rigorous monitoring program for both tiger and prey populations with the involvement of local conservationists to evaluate the effectiveness of the Project.

Institutions Involved: The Karnataka State Forest Department with the support of WCS, New York is implementing the Project. All Park protection measures, law enforcement efforts, and the administration of protected areas are under the direction of the Chief Wildlife Warden of Karnataka State, through the respective Wildlife Wardens and Deputy Wildlife Wardens managing the Project Parks.

A consortium of several local NGOs and non-government individuals (NGIs) has been formed to help implement the project. Wildlife First! is acting as the nodal coordinating agency for the Project, and Solus Communication Resources is a consultant on project administration and media liaison efforts. Several other local NGOs such as the Nature Lovers Guild (Chikmagalur), Greenwatchers (Tumkur), Arohana (Mangalore) and the Center for Wildlife Studies, Bangalore, are also partners in the Project. Some of the key project personnel, belonging to various NGO groups participating in the Project, are identified in Appendix 1.

Funding Agencies: The project has been made possible by a grant from WCS, New York, with assistance from the NFWF-Exxon "Save the Tiger" Fund, Gary C. Fink with MCG Healthcare Inc., and other WCS donors.

Year One Results: Because the Project had been pending with the Karnataka State Government for over a year, Dr. Karanth completed much of the preliminary planning *before* the official sanction came through in December 1997. Therefore, in the three months under current review, the Project has made significant and rapid initial progress at the field level and has created a trend-setting effort aimed at supporting and improving the conservation status at the Project sites. Results are discussed with respect to each of the goals described above.

1) Project Planning and Monitoring: The project planning process consists of two major components: biological and managerial. Planning for biological components, including research, surveys, and monitoring, are ongoing activities that provide input into management activities continuously.

Biological - Survey, Research and Monitoring (Objectives 1 and 5): WCS-India Program personnel, Dr. Ullas Karanth, Samba Kumar, Siva Sundaresan, Umesh Nair, and Farshid Ahrestani, carried out the field research and monitoring activities that dovetail with the needs of KTCP. Research and monitoring activities that permit the participation of volunteers, involve local NGO volunteers, and involve training in monitoring methodologies, were actively pursued. Wildlife First! volunteers led by G.R. Sanath Kumar participated in line transect surveys and trained new participants at Bhadra Wildlife Sanctuary during February 1998.

- **Nagarahole (NHL):** In January 1998, tiger populations in NHL were monitored using camera traps for the sixth consecutive year. And following the 1998 monsoon season, scat-encounter-rate sampling will be used to track populations of tigers and other large predators.

Currently (May, 1998) the monitoring of prey populations is taking place using line transect sampling techniques with the assistance of NGO volunteers. A comprehensive training and tiger-and-prey monitoring workshop is being held in concert with this sampling. Changes in prey abundance is also being monitored using dung decay rates and pellet densities of large ungulates.

Topographic maps at the 1:50,000 scale were obtained for NHL. Detailed mapping of the National Park, using Global Positioning System (GPS) technology, is currently underway and will be completed by June, 1998. These maps have been partially digitized using CAMRIS Geographical Information System (GIS) software.

- ***Bhadra Wildlife Sanctuary (BDR):*** Tiger populations are currently being monitored using camera traps. This monitoring will be completed in May, 1998. Seventy-two trap locations have been established along six trap line routes to sample the study area. Unfortunately, the theft of camera traps by illegal timber smugglers and poachers is proving to be serious problem in this site.

Scat-encounter-rate indices, used to track the abundance of tigers and other large predators, will be collected in addition to the camera trapping to monitor tiger population trends following the 1998 monsoon season.

Prey population monitoring, using line transect sampling techniques, was carried out in BDR during January-March, 1998. Six line transects, totaling 18.2 km, were established. Each transect was walked 40 times for a total of 728 km in order to collect ungulate density data. These data provide the first rigorous estimates of abundance of the tiger's principal prey species in BDR. Thirteen NGO volunteers participated in the training and data collection in BDR.

To keep track of changes in prey abundance, pellet and dung piles were monitored to estimate decay rate. Pellet and dung counts were completed for 183 100m² plots distributed in a representative manner throughout BDR.

Topographic maps at a scale of 1:50,000 were obtained for BDR. Detailed mapping of BDR using GPS was completed in April 1998.

- ***Kudremukh (KDM) and Bandipur (BDP):*** A preliminary survey of KDM has been completed and a survey of BDP will be initiated in June 1998. Major scientific monitoring efforts at these sites will commence after the monsoon season (September, 1998). Topographic maps at a scale of 1:50,000 have been obtained.

Managerial: Planning for the managerial component remains an important priority. An initial meeting was held with the Chief Wildlife Warden and other officials from the Project sites in January, 1998, to discuss the modalities for implementing the Project in cooperation with one another. WCS India Program, Wildlife First!, and other partners were authorized to prepare plans for each Park that identified the urgent conservation needs. This Project planning process was structured to permit active input from the Karnataka Forest Department personnel. In addition, eight more on-site discussion/meetings were held with the local Park Managers and Field staff to help in the identification of problems and the prioritization of critical needs.

A set of data forms were designed by Dr. Karanth to collect detailed information for each Park. The field activity coordinators of the Project sites, along with local partner NGOs, organized meetings with Park staff, including the Park Warden, Rangers, and Park Guard representatives from all areas of the Park. The meetings were structured so that even the lower level field staff could freely put forth their views to highlight "on-the-ground" problems. All of the problems were rated on a scale of 1-10 and prioritized for each site separately to ensure clarity and focus. At the end of the planning process and after a detailed analysis of the inputs from the meetings, a management plan outline was drafted. The plan focuses the collection of data and information on the following aspects:

- 1) Legal status of the Park and the legal gaps that need to be addressed.
- 2) Administrative setup and available infrastructure details.
- 3) Existing protection systems and practices.
- 4) Available protection equipment.
- 5) Prioritization and rating of threats to tigers, prey and habitats that are specific to each site.
- 6) Critical protective interventions needed to address the gaps and threats.

All data relevant to these aspects have been compiled for all the Project sites. It is hoped that through ensuing discussions and consultation, the specific components of these plans will be integrated with the Government of Karnataka's planned expenditures and work in the four Project sites to avoid duplication and to maximize the investments in KTCP.

2) Strengthening the Protection Infrastructure (Objective 2): In order to strengthen the material capabilities of the protected area ground staff and enhance their anti-poaching capabilities through improved mobility, nine four-wheel drive vehicles were purchased and provided. The jeeps are being used for anti-poaching patrols, forest fire control, and cattle grazing control and have greatly improved the mobility and strike capability of the protection units. Eighteen timber smuggling cases have been booked using the donated vehicles in the first three months. Jeeps have been provided for three Project sites as follows:

NHL - Four jeeps established in Thitimatthi, Kalhalla, D.B.Kuppe, and Metikuppe ranges;
BDR - Two jeeps established in Hebbe and Tanigebail ranges; and,
KDM - Three jeeps established in Sringeri, Malleswara, and Belthangady ranges.

3) Welfare measures for reserve staff (Objective 3): One of the current problems is that the Park Guards do not get a timely supply of uniforms and the Park Watchers, at the lowest level of enforcement, are not even eligible for them. Lacking this gear undermines their authority and self-confidence. In addition, they are not provided with other necessary field gear such as shoes and warm clothing. To boost morale and enhance the capacities of the Park staff, field kits containing the following items were provided to Park Guards and Watchers at three sites: khaki uniform, cap, one sweater, one pair of shoes, two pairs of woolen socks, one flashlight, and one umbrella. The inventory for these provisions is as follows:

NHL - 148 sets
BDR - 69 sets
KDM - 108 sets

The Park staff are often exposed to mob assaults, injuries, and accidents while performing their duties. Some categories of staff such as Watchers are not covered by any comprehensive insurance against death and injuries. Through KTCP, a unique insurance scheme that provides coverage to field staff in the event of death, disability, or injuries caused while conducting their duties, has been negotiated with a local insurance company. Under the scheme, insurance premiums are paid by the Project, so all staff performing risky duties are secured. Discussions are under way with the Government on the potential modalities for implementing this scheme.

Also, a system of rewards is expected to become a major component of the Project in the future. For example, recently the Project gave a reward to one local villager who provided undercover intelligence that helped the Nagarahole Park staff to investigate a case of illegal tiger bone smuggling. The tiger had died from natural causes.

4) Training and Capacity Building of Staff (Objective 3): A program to conduct three training camps on anti-poaching operations was finalized in April, 1998. The training program will upgrade anti-poaching skills, the handling and maintenance of firearms, use and maintenance of wireless equipment, and basic field craft and tracking skills. Resource people for the training program are:

Mr. K.M.Chinnappa - anti-poaching methods and systems, field craft skills, tracking skills, fire protection;
Praveen Bhargav - handling and maintenance of firearms and legal procedures in enforcement; and,
Krishna Prasad - improving wireless communication through better maintenance.

5) Community education activities (Objective 4): Six slide/talk shows were conducted in communities around Nagarahole National Park. More than 2,297 school children, 132 Teachers, and 30 villagers/public were targeted under the WCS-supported Nagarahole Wildlife Conservation Education Project (NAWICOED). NAWICOED has now been integrated with the KTCP. K.M. Chinnappa, T.S. Gopal, and Ms. Didira are involved in these activities.

Prior to the fire season, an educational campaign about the negative impact of forest fires was organized for local villagers who often burn the forests around Nagarahole National Park. An estimated 800 people, including students, participated in the rally which was organized by NAWICOED.

A film on Nagarahole that recently aired on the Discovery Channel is being modified slightly and translated into Kannada language with the help of the filmmaker Mr. Shekar Dattatri. Dr. Ullas Karanth and Mr. K. M. Chinnappa cooperated in creating additional footage that would

make the film useful as a conservation tool. With these changes, the film will convey a powerful message to the local people on conservation problems in Project sites in a language and manner that they can understand. This film will be used to educate decision-makers, the media, and the local people. It is in the final stages of preparation and will be available for use in the Project during May, 1998.

6) Community interface and conflict reduction activities (Objective 4): One new vehicle was provided for Mr. K.M. Chinnappa's use and his previous vehicle was given to Mr. D.V. Girish for use in Bhadra.

Mr. D. V. Girish, in association with the Karnataka Forest Department, organized a major "community contact" program in Bhadra Wildlife Sanctuary in February, 1998. The program involved more than 200 people belonging to 20 villages in and around Bhadra Wildlife Sanctuary. It was organized primarily to educate the villagers not to burn the forests and to discuss issues related to the resettlement of villagers from the Park.

Dr. Ullas Karanth, Mr. B. K. Sharath, and A. Suryanarayana Rao participated in seven "community contact" programs organized by the Karnataka Forest Department in the villages around Kudremukh National Park during February, 1998. More than 300 local residents participated in these meetings, the purpose of which was to gather the support of local villagers for the Park. Dr. Karanth addressed the public and students in a well-attended slide show at the local college in Ujire, near Kudremukh. The head of a locally powerful Hindu religious institution later met with Dr. Karanth and assured him of his support for the education and community interface components of the Project.

A major thrust of KTCP is to actively promote voluntary resettlement of human enclaves to locations outside of prime tiger habitats. Wildlife First! personnel, led by M. K. Appachu, have been actively involved in ensuring that resettlement plans proposed by the Government work properly and that the welfare of the affected people is enhanced during the process. Most governmental clearances have now been received for the Nagarahole resettlement. After intense follow-up work by the Project participants, a pilot voluntary resettlement program for 51 tribal families in Nagarahole National Park will begin. Similarly, the voluntary relocation of villages inside Bhadra Wildlife Sanctuary has gained momentum as a result of active interventions by NGO participants of the Project led by D.V. Girish.

FINANCIAL REPORT FOR KTCP - BUDGET AND EXPENDITURES¹:

Items	Budget	Expenditure¹	Net Balance
Vehicles	\$88,000	\$92,450	- \$4,450
Boats	\$ 0	\$ 0	
Wireless Equipment	\$ 0	\$ 0	
Field kits for staff	\$ 8,000	\$ 7,550	+\$ 450
Staff Training			
Training Camps	\$ 4,000	\$ 0	+\$4,000
Total Budget/Expenses	\$100,000	\$100,000	\$ 0

¹This financial summary only reconciles those funds allocated by NFWF for KTCP in FY-98 and does not include additional expenditures of \$40,000 covered by WCS.

APPENDIX 1. KEY PROJECT PERSONNEL INVOLVED IN KTCP.

Dr.K.Ullas Karanth (WCS India Program): Project Design, Scientific Research and Monitoring.

K.M.Chinnappa (Nagarahole Wildlife Conservation Education Project and Wildlife First!): Staff Training, Community Education.

Praveen Bhargav (Solus Communication Resources): Project Administration and Media relations.

Samba Kumar (WCS India Program and Centre for Wildlife Studies): Research and monitoring assistance.

D. V. Girish (Nature Lovers Guild and Wildlife First!): Field Conservation in Bhadra.

B. K. Sharath (Mangalore University and Wildlife First!): Field Conservation in Kudremukh.

V. Krishna Prasad (Wildlife First!): Field Conservation in Bandipur and Government Liaison.

M. K. Appachu (Wildlife First!): Community Interface: Nagarahole resettlement issues.

Ranjan Poovaiah (Wildlife First!): Field Conservation: Nagarahole.

Sanjay Gubbi (Green Watchers and Center for Wildlife Studies): Project Administration Assistance.

G. R. Sanath Kumar (Wildlife First!): NGO assistance to Field Monitoring and Training Activities.

J. Amarnath (Wildlife First!): Field Conservation in Bandipur.

G. N. Ashoka Vardhana (Arohana): Community Education work, Kudremukh.

Krishna Mohan Prabhu (Arohana): Community Education work, Kudremukh.

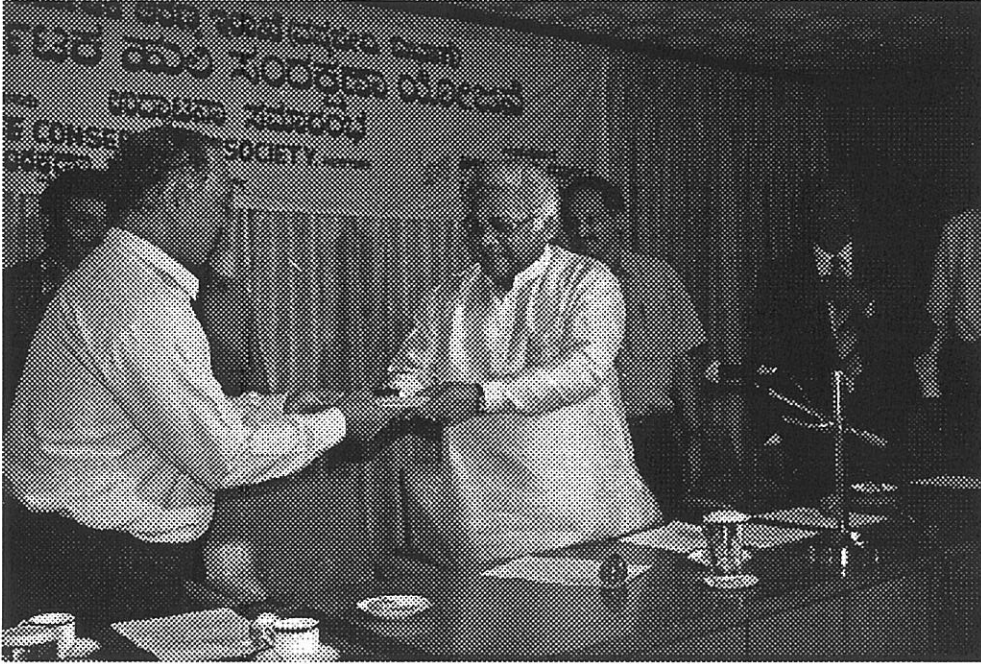
Suryanarayana Rao (Mangalore University and Wildlife First!): Field Conservation in Kudremukh.

T. S. Gopal (Srimangala College and the Nagarahole Wildlife Conservation Education Project (NAWICOED): Community Education.

Ms. Didira (NAWICOED): Community Education.

Ravindra V. T. (Wildlife First!): Project Administration Assistance

H. N. A. Prasad (Wildlife First!): Government liaison and Community Education work.



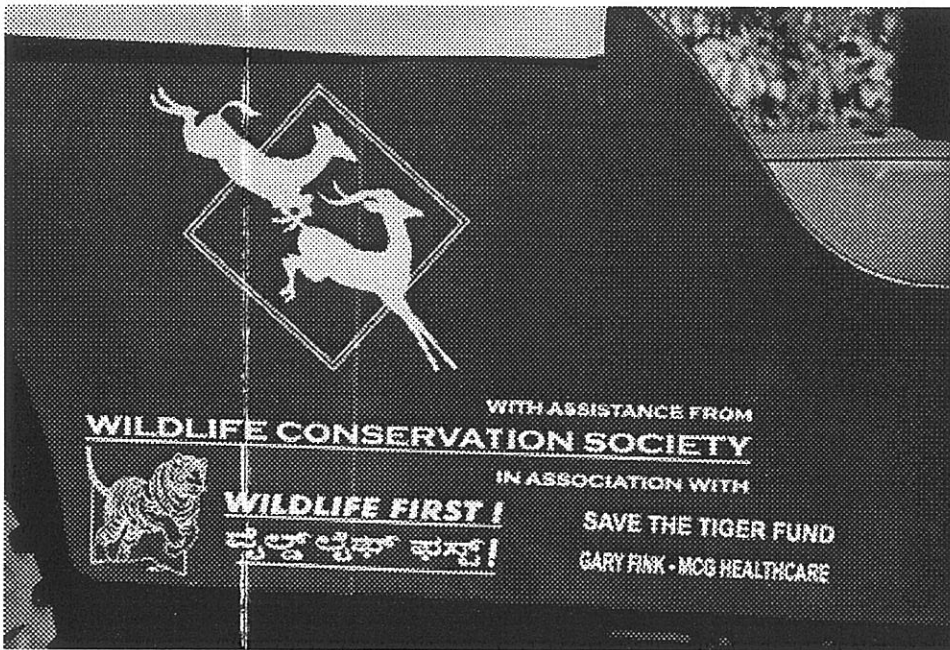
Minister of Forests (right) hands over the vehicle keys to the Head of the Forestry Department of Karnataka State, Mr. Chakravarthy (left) at the Karnataka Tiger Conservation Project (KTCP) inauguration.



Dr. Ullas Karanth (left) addresses the audience at the KTCP inauguration. The Chief of Wildlife, A.V. Karma (center) and the Head of the Forestry Department for Karnataka State, Mr. Chakravarthy (right) are also pictured.



Nine vehicles purchased with generous funding from the Wildlife Conservation Society (WCS), National Fish and Wildlife Foundation (NFWF) - Exxon "Save the Tiger" Fund, Gary Fink with MCG Healthcare Inc., and other WCS donors. Vehicles were on display at the KTCP inauguration.



Close-up of the jeeps highlighting the KTCP collaborators, Wildlife First! and the Wildlife Conservation Society, and funding agencies.