

2003 Whitley Gold Award Winner

Raman Sukumar, India

Also Winner of The Whitley Award sponsored by The Friends of WFN

The Asian elephant as a flagship for conservation of the Nilgiri landscape



The issue:

The 14,000 km² Nilgiri landscape in Southern India is a unique tropical ecosystem within the Western Ghats biodiversity hotspot. Home to many threatened species, it also has the largest population of endangered Asian elephant anywhere in the world. The elephant is an integral part of India's natural environment as well as the culture of her people. Worshipped as 'Lord Ganesha' by many, elephants were first tamed over 4,000 years ago and have played a pivotal role in political, economic and religious life across Asia.

Despite their sacred status, fewer than 45,000 Asian elephants remain in the wild, making the species ten times less common than the African elephant. The challenge is daunting because the remaining herds must now share living space with growing numbers of people. The elephant population of the Nilgiri region is large and spread over a wide area, but is highly fragmented as a result of development projects such as hydroelectric dams, railways and roads. As the habitat shrinks, conflict and competition between elephants and humans is increasing, leading to crop damage, the shooting of elephants and even human deaths.

Ivory poaching is also a serious problem. The majority of male elephants in the Nilgiri are tuskers and therefore valuable targets. Discriminate killing of mainly male animals for their tusks is rapidly changing the sex ratio of wild herds and threatens the genetic future of the elephants. With the last elephants surviving in highly

dispersed groups, conservation depends on effectively addressing continued habitat loss and conflict if efforts are to receive the crucial support of local people who share the elephant's habitat.

The project work:

Winner of the 2003 Whitley Gold Award, Dr. Raman Sukumar (pictured left) is the world's leading authority on the Asian elephant. Founder and Director of the Asian Elephant Research and Conservation Centre in Bangalore, India, he works closely with the Indian Government's 'Project Elephant' to provide technical support on national efforts to conserve India's remaining elephants. Sukumar and his team are working to save the many varied habitats of Nilgiri by using the Asian elephant as "the ultimate flagship species". By combining education with research and pragmatic conservation solutions directly involving local communities, he is showing how people and elephants can coexist in heavily human dominated landscapes. Sukumar has pioneered new techniques in conflict mitigation and was the first scientist to develop community managed elephant-exclusion fencing systems, which have proved very successful in reducing crop losses. Using this technology in combination with data from satellite-

tracking to provide critical information on crop raiding behaviour, corridor usage and trans-boundary movement, he is now developing a GIS mapping database to heighten understanding of how elephants use the habitat, which can be used to inform national policy.

The future:

Sukumar and his team are continuing their research of human-elephant conflict by monitoring the activities of radio-collared elephants in Buxa-Jaldapara and surrounding villages in West Bengal. An innovative 'early warning system' is being tested using GPS collars to alert wildlife managers of elephant locations and possible pre-emptive crop raiding. A pilot project examining alternate crop planting patterns as a means to reduce crop damage by elephants is also in development.

Sukumar is pursuing a crucial long-term objective to purchase land in critical locations to create habitat corridors that allow elephants and other wildlife to move through the landscape freely without endangering themselves or people. "Progress is being made steadily" says Sukumar. "Public awareness of wildlife corridors is increasing alongside interest in community-led wildlife management to reduce wildlife-human conflict."



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Leader Profile:

Sukumar grew up and went to University in Madras where he earned an MSc degree with specialisation in Botany. He later completed a PhD on the ecology of Asian elephants and elephant-human conflict at the Indian Institute of Science before completing post doctoral work as a Fulbright Fellow at Princeton University.

Professor at the Centre for Ecological Sciences, Indian Institute of Science, Bangalore, and Chairman (1997-2004) of the Asian Elephant Specialist Group, IUCN/ Species Survival Commission, Sukumar continues to be involved in the development of national and international conservation policy. He is also a member of the Indian Board for Wildlife, chaired by the Indian Prime Minister, the Project Elephant Steering Committee and the Karnataka State Wildlife Advisory Board.

Sukumar has authored several books, scientific papers and articles and in 2003 published *The Living Elephants: Evolutionary Ecology, Behaviour, and Conservation*, acclaimed as the "most comprehensive elephant text yet".

Key Threats & Objectives

Threats

- **Habitat fragmentation** – India’s growing population has had substantial impact on forest habitat through deforestation and extraction of forest products. In addition to habitat loss, development continues to isolate and divide elephants.
- **Human-elephant conflict** – Crop stealing by wild elephants is common both along forest edges and in cultivated enclaves, leading to direct conflict.
- **Ivory poaching** – male tuskers are illegally targeted for their ivory, resulting in sex ratio skews and permanent changes in population structure.

Objectives

- **Mapping the Nilgiri landscape** – GIS mapping using data on elephant abundance, vegetation type, agricultural activity and recorded conflicts allows priority areas to be identified, enabling more informed policy.
- **Non-lethal control workshops** – to teach villagers how to manage conflict with elephants using electric fences and ditches without resorting to lethal methods.
- **Community participation & education** – to help locals understand elephant movements, why they feed on crops,



and empower them to reduce elephant-people conflict.

■ **Capacity building to monitor elephants** - by working with the government to train state employees in effective monitoring methods in order to strengthen 'Project Elephant'.

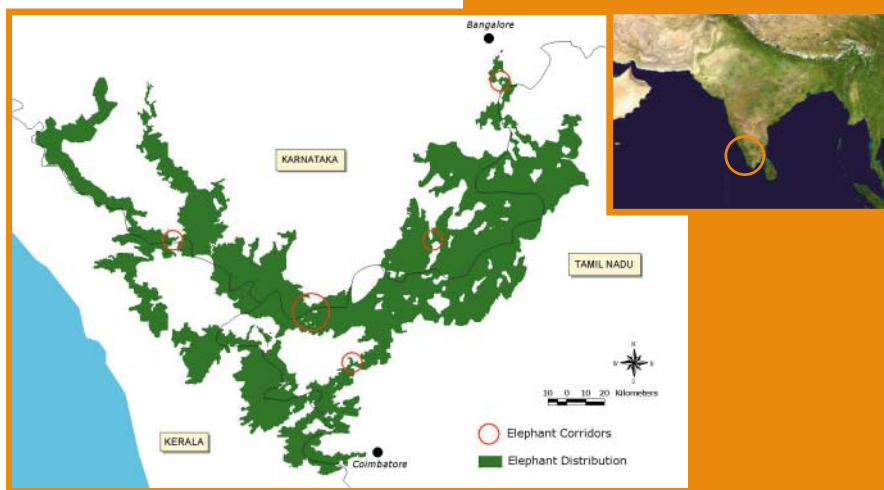


Collaborative Organisations

- Asian Nature Conservation Foundation
- State Forest Department of Karnataka
- The Project Elephant Directorate, Government of India
- Wildlife Trust of India
- Flora and Fauna International, UK

Location of Project

- Place/ Town** Bangalore
- Region/s** Nilgiri landscape, Western Ghats
- State/s** Karnataka, Tamil Nadu, Kerala
- Country** India



Key Project Team Members

- Dr. Natarajan Baskaran**
Research Scientist & Head, Field Surveys
- Mr. Surendra Varma**
Wildlife Biologist
- Mr. Annadana Madhusudan**
Coordinator of community participation
- Ms. Nandita Mondal**
GIS Specialist
- Mr. G. Kannan**
Field Biologist

Project website
www.asiannature.org



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