FROM THE LIVING DEAD TO THE VISIBLY THRIVING

Conserving the Remnant Rainforests of the Colombo District and an Endemic Critically Endangered Monkey

Project for Conservation of the WPFL and its Forest Habitats

PROBE *for* Nature (Pvt) Limited
& THE FOREST DEPARTMENT OF SRI LANKA

- Conservation of the endemic Critically Endangered western purple-faced langur ***Semnopithecus vetulus nestor*** and its forest habitats
- Water for people • Enhanced watershed function of WPFL forest habitats
- Reduced monkey-human conflict
- Socio-economic development of local people and conservation of canopy cover go hand in hand
- Replicable model for management of WPFL forest habitats : • enrichment • restoration • buffering • linking • people's participation

Sri Lanka's remaining lowland tropical forests are well known as hotspots for biodiversity and are critically important habitats for many endangered faunal species, especially for primates, birds and reptiles. As a part of the rainforest biome, the forests of the Colombo district are crucial faunal habitats, help offset the carbon footprint and maintain carbon stocks to mitigate climate change, and provide a multitude of ecosystem services to local inhabitants: most importantly the provision of water.

Managing these forests to form enriched and linked small forest systems would create the necessary habitat for the Western Purple-faced Langur (WPFL) an endemic but Critically Endangered monkey, reduce crop raiding by monkeys, ensure a consistent water supply for local people, and protect the last rainforests of the Colombo district – a win-win situation for monkeys, people and nature.

Prepared by **PROBE *for* Nature** (Pvt) Limited

Innovate to conserve the Critically Endangered western purple-faced langur (WPFL) and its diminishing small wet zone forest habitats with people's participation

Background

Monkeys and their forest habitats are a valuable part of Sri Lanka's natural capital. Our project promotes conservation of *Semnopithecus vetulus nestor,* the western purple-faced langur (WPFL): an endemic Critically Endangered monkey, restricted to the biologically rich western wet lowlands of Sri Lanka. It is now listed among the 25 most endangered primates in the world, due to the rapid loss of tree cover in village gardens—its main habitat, compounded by the lack of sizable forests in its range due to historic reasons. The only hope for this langur is to restore, enrich, buffer, and link its small forest habitats to form viable small forest systems in ecological networks. This, however, requires "a landscape approach" with active management of its small, degraded and fragmented forests that need buffering and linking via village home gardens and rubber plantations, with the active participation of local communities. As people view monkeys as serious crop raiders, however, engaging local people to conserve the WPFL and its forest habitats needs tangible benefits from conservation ventures, including alleviation of crop raiding by langurs and macaques.

Our project is carried out in and around the Indikada Mukalana Forest (IMF), one of the last remaining patches of rainforest in the Colombo district. It seeks to provide a model for conservation of an Endangered monkey and its degraded habitats with the participation of local people. The project uses an innovative multifaceted approach that includes research, forest restoration, minimising human-monkey conflict, local livelihood development, and re-branding ecotourism, supported by strategic use of education and communication. It seeks to pilot test conditional socio-economic upliftment of local communities, in lieu of their help to buffer, enrich, and link small rainforest fragments, with the support of private and public sector partners. The project provides the research base to test forest restoration and enrichment with the engagement of local people and forest managers. This will provide more food for monkeys within forests, and thereby reduce monkey–human conflict in villages bordering degraded forest fragments. Promoting forest restoration (including re-wildling) has many other benefits, such as conserving the rich biodiversity of Sri Lanka's wet lowlands, and protecting watersheds in small forests that supply piped water to a large segment of the country's population.

PROJECT GOAL: Conservation of the Critically Endangered western purple-faced langur (WPFL) and its forest habitats

OBJECTIVE: Establish a viable and innovative model for conservation of the WPFL and its forest habitats, and reduction of monkey-human conflict, with people's participation.

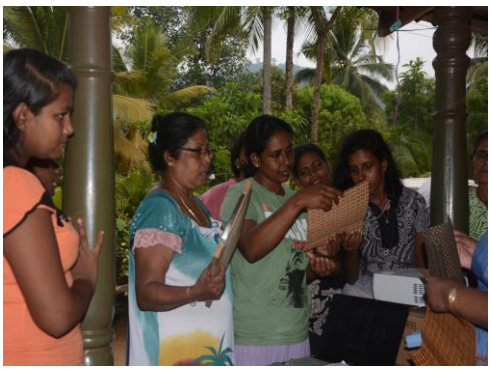
WHAT HAS BEEN DONE UNDER PHASE I?

During 2007-2010, Dr Jinie Dela and Dr UKGK Padmalal (Open University), in collaboration with the Forest Department, carried out a comprehensive >7000 km survey of the historic range of the WPFL in six administrative districts. The survey included spot-checks for the WPFL, rapid interviews with local people, and detailed household interviews where the langur was spotted. The team visited over 70 forests and traversed 46. The project, was carried out by PROBE *for* Nature (Pvt) Limited, with the support of 35 Forest Department field staff and 18 volunteers who worked with the project's core staff and experts. The survey:

- Re-defined the current geographic range of the WPFL
- Identified forests where the WPFL still ranged, though they were not confined to them
- Identified the major threats range-wide for the WPFL, and the sites of serious monkey-human conflict
- Revealed that WPFL habitat loss was mainly due to home garden fragmentation and resultant loss of canopy cover; resulting in pocketing these monkeys in tree-rich areas, which also increased human-monkey conflict
- Showed that home gardens and rubber plantations would not accommodate viable populations of the WPFL in the long-term; nor can small, isolated and degraded forest habitats of the WPFL that are surrounded by other land uses, and have insufficient food to retain monkeys within their boundaries
- Revealed that WPFL forest habitats need to be buffered, linked and enriched with the help of local people, and managed as linked small forest systems in ecological networks within the larger landscape to secure the survival of the WPFL and its forest refuges.

WHAT IS DONE OR PROPOSED?

- **Continuing pioneering and exciting research** on the behaviour and social organisation of forest living WPFL and sympatric macaques in the *Indikada Mukalana* (IMF) forest to better understand how they use the forest and to know their food preferences. This is supported by **comprehensive vegetation and forest condition studies** of the varied vegetation types in the 573 ha, very heterogenous *Indikada Mukalana* forest. By surveying the forest on foot and mapping vegetation types, the project team will continue to gain vital information on areas: (a) with good quality rainforest to preserve, (b) that need assisted natural regeneration, (c) with forest plantation that should be enriched, and (d) that are best suited for ecotourism and visitor facilities. Up-scaling the findings to other small wet-zone forest habitats of the WPFL and beyond is anticipated.
- **Supporting the Forest Department** for forest enrichment, with strategic use of WPFL (and macaque) food species identified from past and ongoing research. *Funds are being sought for this component.*



- **Socio-economic surveys and community consultations** in selected villages around the forest, jointly with the Forest Department, have helped identify and promote innovative community-based livelihood development initiatives, in lieu of people establishing "food forest gardens" around and between forest fragments. Working with small groups, the project seeks to promote local enterprise development with private and public sector partners for skills development, and to create links with markets for high-end products and services. Enterprises to be supported are: cultivation of ginger, turmeric and cardamom under shade in home gardens; bee keeping; and use of an invasive bamboo in the forest for top-end handicrafts. This would provide the FD with a viable model for sustained community participation to conserve degraded wet zone forest fragments with people's participation. Community mobilisation is continuing, and the methods used are evolving. *Partners and funds are sought for community skills building and markets for produce. Some partners have already been contacted.*
- **Investigating potential for niche-market nature-based tourism** in the IMF to be carried out with the Forest Department has been a key activity of the project. The forest is a birder's paradise, and offers a unique opportunity to gain an authentic forest experience close to Colombo. Ways of re-branding nature tourism with novel tourism experiences for small groups, based on primates and biodiversity rich forest habitats, have been explored. Excellent interpretation possibilities and nature trails have been identified, and will be tested. Experiential tourism programmes including forest bathing; camp sites; be a forester/primatologist for a day; schools programmes; a small but world-class visitor centre with digital technology (if funds permit); a sales outlet, craft demonstration and cookery workshops, and a high-quality restaurant run by local people with local food, are options identified for future development. *Partners and funds are sought to make this component a reality. While COVID-19 stopped activities for 2 years, we are now gearing to charge ahead.*

SUMMARY OF PROJECT OUTCOMES AND OUTPUTS *(some outputs have already been achieved)*

Outcome 1: **Enriched and linked forest habitats for the WPFL**

Output 1.1: Comprehensive research data on WPFL and macaque food and preferred forest habitats to guide forest restoration.
Output 1.2: Forest restoration, rehabilitation and enrichment to create viable WPFL habitats and to reduce human-monkey conflict.

Outcome 2: Sustained community commitment to link, buffer, enrich, and restore WPFL forest habitats

Output 2.1: Appropriate skills training, services, products, and markets for livelihood development to be pilot tested as incentives for people to maintain "food forest gardens" using "permaculture" to buffer and link rainforest fragments.
Output 2.2: Functional *Vandhura, Vanaya saha Viyana* (VVV) small groups/CBOs for enterprise development and sustained community commitment.
Output 2.3: Short-term benefits for local people through home garden management, organic vegetable gardening, and cultivation of timber and fruit trees backed by skills training, schools' programmes, and establishment of model home gardens.

Outcome 3: Research, education, strategic communication and ecotourism initiatives at the Indikada Mukalana forest (IMF) to enable self-sustained long-term conservation of the WPFL and its forest habitats with people's participation

Output 3.1: A Conservation, Education, Research, Visitor services and Ecotourism (CERVE) Centre, nature trails with interpretation.
Output 3.2: An IMF Management Plan complete with zonation for different forest activities.
Output 3.3: Special programmes and materials for customised communication and education based on a Strategic Communication Plan.
Output 3.4: A tourism plan that includes novel and customised ecotourism programmes for different target groups, with excellent interpretation, campsites and top–end experiential tourism products.

Outcome 4: **Reduced crop raiding around the Indikada Mukalana forest**

Output 4.1: Knowledge and techniques to reduce crop damage by monkeys to be tested and provided to local people.
Output 4.2: Expertise built in the community to alleviate human-monkey conflict in general, and macaque crop raiding in particular.

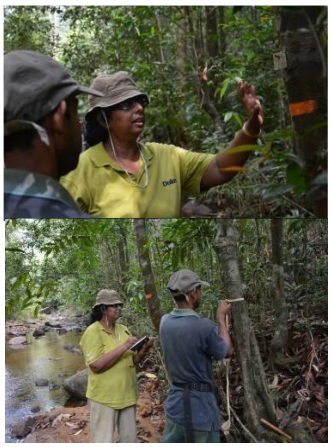
Outcome 5: A pilot tested model to manage small forest systems with people's participation provides forest refuges for the WPFL

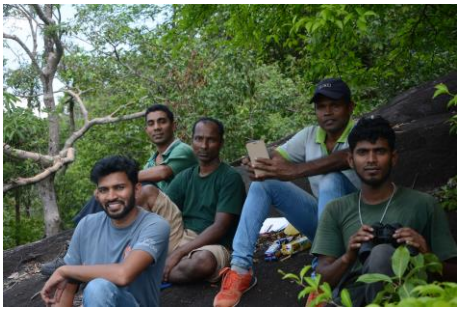
Output 5.1: Forest policy and laws enable linking, restoring, enriching and managing WPFL small forest habitats through private-public partnerships and people's participation.
Output 5.2: The piloted model at the IMF is up-scaled elsewhere to create WPFL refuges in enriched, restored and/or re-wilded forest fragments.
Output 5.3: Designation of the *Indikada Mukalana* National Man and Biosphere Reserve as a model to spread the concept of UNESCO's Biosphere Reserves more widely in the country and to address the restoration of small forest WPFL habitats.

WHY WE ARE CAPABLE OF DELIVERING RESULTS FROM THIS PROJECT

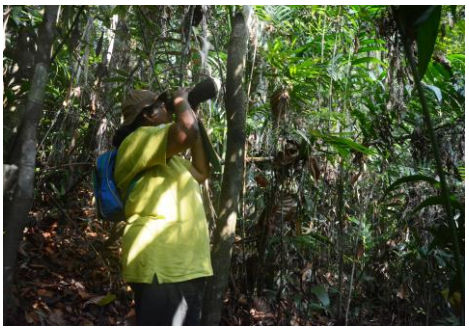
We think and act differently, and are able to draw on a wide array of partners to reach the project's goals and targets. Dr Jinie Dela, a primatologist and ecologist pioneered research on the WPFL, and has over 30 years experience on WPFL ecology and behaviour in both human-modified environments and forests, and on monkey-human conflict. She also brings to this project her long-term experiences on forest conservation, education and communication, biodiversity, climate change, Protected Areas—including World Heritage Sites and Biosphere Reserves, landscape management planning, nature-based tourism, and community participation for forest conservation. Dr UKGK Padmalal, a zoologist with overseas training in park planning, animal behviour and ecology, has more than 30 years of experience in biodiversity surveys island-wide, and has worked on another rare and endemic primate: the red slender loris of Sri Lanka. Chinthaka Ganegama Hakmanage is fully qualified in Remote Sensing and GIS for our mapping and spatial data interpretation. The Forest Department is well experienced in forest restoration and participatory projects with local people for forest conservation. The project is extremely well placed due to the close collaboration of primate experts, experts in botany, private sector, universities, other state sector agencies, and forest managers. The participation of the Forest Department will enable institutionalizing outputs and outcomes in the long-term. This project is not expected to "end" when funding ceases, as most successful primate projects have long life-spans. It will seek to develop means of self-sustenance. Phase I of the project was funded by Primate Conservation Incorporated (PCI) USA and Mathhydopower LTD. Phase II of the project was funded by PCI and the National Science Foundation (NSF) of Sri Lanka. PCI has continued seed funding for Phase III. Other funds are being sought to reach the project's varied goals and outcomes.

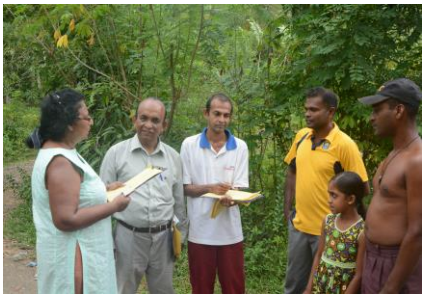
An important outcome of this project will be the training of young people to become ambassadors for conservation, with the required skills, knowledge, perceptions, and passion. It has already resulted in an M. Phil. in Primate Behaviour and a postgraduate diploma in Remote Sensing. We hope to carry out the project activities with renewed vigour now that the COVID-19 related restrictions and fuel restrictions are no longer a serious barrier for travel and group work.





The Team at work





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