Population and Habitat Viability Assessment Workshop PHVA for "Red Panda *(Ailurus fulgens)*: a Species Conservation Strategic Plan"

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Introduction & Overview

A Population and Habitat Viability Assessment (PHVA) Workshop for the Red Panda (*Ailurus fulgens*) in India was held from 26-29 November 2013 at Siliguri, West Bengal. This PHVA incorporated elements of the IUCN Species Conservation Strategy approach into the workshop process developed by the Conservation Breeding Specialist Group (CBSG). The workshop was organized by Rotterdam Zoo of The Netherlands, the Central Zoo Authority, and Zoo Outreach Organization of Coimbatore, India. It was hosted by Darjeeling Zoo, West Bengal. The *PHVA* was facilitated by a joint team of CBSG South Asia (Dr. Sanjay Molur) and CBSG Europe (Dr. Kristin Leus). Funding was provided by the Central Zoo Authority, the Rotterdam Zoo Conservation Fund and WWF Germany. Workshop participants included representatives of three range countries – India, Nepal and Bhutan as well as from Europe. The vision expressed by the participants was to "Secure, viable populations of Red Panda thriving in contiguous natural habitats across the eastern Himalayan sacred landscape; a valued flagship species for the region living in harmony with and benefitting the people".

In India, Red Pandas are found in West Bengal, Sikkim and Arunachal Pradesh. The aim of the workshop was to identify habitats, distribution ranges, degree of fragmentation and threats to Red Pandas in India and the border areas of Nepal and Bhutan and to develop a strategy to conserve them in natural habitats in these areas. The participants utilized information on habitat characteristics, identified and ranked threats, used simulation models conducted in an earlier Red Panda PHVA in Nepal in 2010, and reviewed methods and strategies for Red Panda conservation.

Participants were divided into three groups to facilitate discussion on the three aspects selected to create a vision : e.g., species habitat, threats to species and awareness strategies.

Venue-Hotel Appollo


Discussing organisal part


Red Panda in wild--Singalila NP

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Vision: "*Securing long-term viable populations of Red Panda in the eastern Himalayan sacred land-scape, by conserving habitat quality and connectivity, including requisite management initiatives, while maintaining socio-ecological stability for the region, & promot-ing the value of the species.*

The workshop used steps to achieve the vision where 3 groups discussed the aspects and goals below based on available data:

Update and describe range-wide status and distribution:
. Update information on habitat characteristics
. Identify and rank threats.
. Outreach programmes as a major awareness tools.
. Potential roles of *ex-situ* management

Each working group undertook tasks identifying specific actions to achieve their goals. These actions included important details such as individuals responsible for moving the action forward, a timeline for completion of the action, important collaborators, and specific obstacles to be overcome if the action is to be completed.

The discussions by the groups on their respective issues, e.g.

a. involving population dynamics,
b. conducting simulation models,
c. estimating population extinction (range wide, special cases),
d. defining viable population size,
e. identifying stake-holders for implementing recovery,
f. evaluate data on critical biological parameters, & trans-boundary issues,
g. developing outreach strategy and need for research.

The groups drafted a report on the discussions followed with recommendations where each group based on the above issues framed goals and defined objectives to make it achievable.

GOALS

1. To achieve/maintain viable populations of Red Panda by connecting fragmented population in the eastern Himalayan Landscape by 2050.

2. Minimize the threats imposed by dogs, poaching and upcoming developmental activities.

Inaugural Function

Inaugural function - getting ready for a photograph

Workshop in process

Group Activity-- Bhupen Roka, Sonam, Usha, JB Subba, and others

Group Presentation-- Depen Subba and Sujata Gurung

Deep deliberations on points to be presented

3. Establish Red Panda as a priority species among communities, policy makers, military and paramilitary forces and ecotourism stakeholders through popularisation of Red Panda as a model of ecological and cultural value.

4. *Ex -situ* populations to contribute most effectively to species management in the wild.

Objectives for goal 1

1. Assess the current status of the Red Panda population, habitat contiguity, connectivity, suitability & identify critical areas or sensitive corridors by 2018 in the eastern Himalayan landscapes.

2. Improve and manage Red Panda habitats (corridors as well as habitats).

Objectives for Goal 2

1. Identify threats imposed (hunting as well as disease) on Red Panda by different type of dogs and formulating a dog management plan by 2018.

2. Curb poaching and other illegal activities leading to Red Panda mortality and enhance trans-boundary cooperation on these aspects.

3. Promote eco-friendly and sustainable development with minimal impact on Red Panda habitat.

Objectives for Goal 3

1. Educate, sensitize and promote community participation to mitigate threats to the Red Panda and its habitat.

2. Develop a steering group for Red Panda in the lines of NTCA on a smaller scale to regulate, monitor and coordinate various agencies working for Red Pandas.

3. To undertake assimilation of the baseline information regarding red panda resources – physical, financial and intellectual – in India and its neighboring countries.

4. Enhance knowledge about red pandas among stakeholders across the Eastern Himalayas.

Objectives for Goal 4

1. Basic behavioural studies on *ex-situ* & *in-situ* population:

Behavioural observations of captive Red Pandas can be used to understand biology of wild populations and *vice versa.*

a. Create a knowledge base for stakeholders (Zoo Managers, Protected Area Managers and Researchers as well as local people) and aid in further studies to evaluate, manage and improve the current population.

2. Better awareness and knowledge dissemination:

There are knowledge gaps where lay person or forester may not be able to recognize for e.g. a baby Red Panda, whereas a zoo keeper would have no such difficulty.

a. Share existing information on the basic biology of the species to enhance knowledge about the species in the local communities and the frontline staff. (Research biologists, better signage at the zoo, interpretation centers, visual aids, etc. with help from international Red Panda community).

b. Raise awareness for Red Panda through various publicity campaigns (booklets, post-cards, stamps, hoardings at strategic places, occasions like celebrations of environmental days like Wildlife Week, International Red Panda Day on 3rd Saturday of September, etc.)

3. Compilation of husbandry guidelines for Red Panda:

a. Compile and share husbandry and management guidelines for red panda including rescued cubs and making them available in local languages such as Nepali in West Bengal and Sikkim.

b. Synthesizing available infor-mation to meet local needs.

c. Develop and implement guidelines for veterinarians and keepers for proper care and handling of animals to minimize disease propagation (since many locally available traditional methods are seen to work or be practiced in this region).

4. Rescue and treatment of wild Pandas:

a. Compile from local and international Red Panda community and share information on hand-rearing of wild, abandoned and orphaned cubs.

b. Capacity building for frontline staff for tranquilization, capture, handle, transport, and other rescue and care operations.

5. Formulate population management plan:

a. Formulation of species survival plan for better management of captive stock to assist *in-situ* conservation.

b. Update and maintain both national and international studbooks to ensure gene flow and diversity in captive population.

6. Translocation and restocking of wild population:

a. Identifying and testing potential habitats for soft release in the identified conservation clusters which can be developed where needed in time for future re-stocking.

b. Capacity building with concerned agencies including local participation for knowledge-sharing on the technical part.

c. Long-term monitoring of translocated/restocked animals using radio collars.

d. Seek corporate support to highlight Red Panda as a symbol of peace and harmony.

7. Zoos & other organizations routinely conduct surveys of one or one PAs (genetic/population) - to identify threats, population numbers, habitat status and genetic connectivity.

8. Opportunities for Zoo/Wildlife Veterinarians and Researchers

a. Policy interventions to create a separate cadre of wildlife veterinarians. Veterinarians have no incentive to work as zoo vetenarians and are usually on short-term deputation from Animal Husbandry Departments or on contract basis; hence need is felt.

b. Create opportunities for research biologists to conduct long-term studies on the wild/captive populations.

c. Zoos need well equipped research facilities to attract motivated veterinarians and zoo conservation biologists.

9. Upgrade the status of zoo keepers as in India, by

a. Increase the minimum qualification of zoo keepers.

b. Providing appropriate salary scales.

c. Regular compulsory training on various aspects of husbandry locally, regionally, nationally and even internationally.

d. Regular Keeper exchange programme with zoos involved in global Red Panda breeding programme.

10. Take up advanced studies with the research organisations for

a. genetic studies to understand genetic diversity in captive and wild populations and population structure in the wild.

b. germplasm banking – recovery of testes and ovaries from recent post-mortem animals and develop protocols for cryopreservation, xenografting,
IVF and embryo transfer.

c. disease screening – for outbreaks of viral or bacterial diseases.

d. hormonal & behavioural studies – to understand reproductive status and stress.

11. Organise funds for various activities

The reports from the PHVA workshop shall be a framework from which managers can develop habitat in such a way that it will help to meet the report recommendations.

The final report will include population targets and habitat recommendations that can be used by agencies, organizations, and individuals to plan, justify, and guide conservation actions.

The workshop ended with another very happy event aside from a very successful Red Panda PHVA for India. Workshop participants celebrated by honouring Dr. Kristin Leus on her birthday. A colourful cake was laid on and all enjoyed the festive occasion.

Before we spread with message for Red Panda