

Population and Habitat Viability Assessment Workshop PHVA for Red Panda *Ailurus fulgens* in Nepal

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Background

On 17-19 February 2007 a unique CBSG-style exercise took place in Gangtok, Sikkim e.g. a "Pre-PHVA" workshop with participation of 22 persons from India, Nepal, Netherlands, Belgium and Germany. A Pre-PHVA Report was generated by Dipankar Ghosh, WWF, Sikkim. Angela Glatston, International Studbook Keeper for the Red Panda, Rotterdam Zoo, in her introduction, very kindly reviewed the background of the global programme.

"The proposal to hold a Red Panda PHVA originated during a master-planning workshop attended by the managers of the regional breeding programmes for North America, Europe, Australia, India and South Africa. This suggestion was brought to the attention of WWF Germany through their cooperation with the German Zoo Federation. The result was the meeting in Hamburg, referred to by Dipankar Ghosh in his introduction, which in turn lead to this pre-PHVA meeting. As a result, it now looks as if a Red Panda PHVA will be held in Nepal in the autumn of 2008. I very much hope that the zoo community will continue to cooperate with field biologists and conservationists to expedite this important endeavour."

Angela has been assiduous in her responsibility as International Studbook Keeper for Red Panda, making numerous trips to India and also Nepal, raising funds and organizing workshops, such as the one which included education that took place in Darjeeling quite some years ago and running, with help from regional coordinators, the International Red Panda Management Committee. The committee achieved its objective of organizing the various zoos and countries that held Red Panda. This is just the tip of the iceberg and would be expanded in a real history of conservation of Red Panda. Angela is writing a



book on Red Panda but I am sure she will not give herself sufficient credit. One day maybe Sally will do this if she can find time to plough through the perhaps hundreds of emails we exchanged on Red Panda activity.

She contacted Zoo Outreach Organisation for local help in coordinating Red Panda activities in India what seems a very long

time ago. During that time, Angela and I have had a running discussion about when to conduct a PHVA for Red Panda. Although I think the PHVA process is truly one of the best conservation planning activities one can arrange, I also think it is important to have as much data as conceivably possible and from my knowledge of Indian studies in earlier days, it was not enough ...

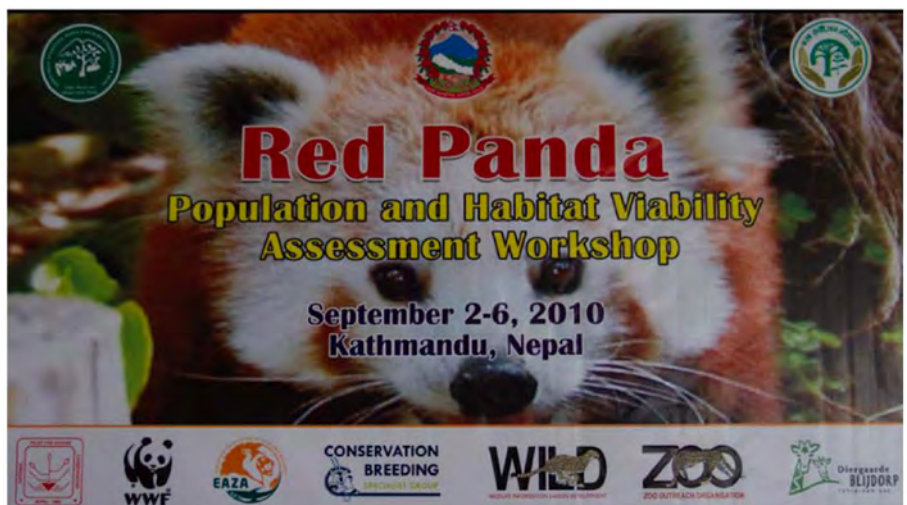
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for India in any case. So what's to harm of just having a PHVA without all you need? Without sufficient data the result is skewed, for one thing, and it costs a small fortune for the other. That is why CBSG South Asia has postponed or refused many PHVA requests. The thirty or forty thousand dollars needed for a full PHVA could buy a number of field studies and although one can't raise this sometimes as easily as one would raise funds for a PHVA, that was and still is our principle.

Thanks to her employer, Rotterdam Zoo, Angela raised significant money for field projects in both Nepal and India and ZOO/ CBSG South Asia did also after the pre-PHVA workshop (for Arunachal Pradesh, which had almost no information). Thanks to Miranda Stevenson and BIAZA, the British and Irish Zoo Association and Awadesh Kumar, a study was recently completed which will add greatly to the Red Panda PHVA for India when it occurs in a couple of years. The solution of having a PHVA only for Nepal was brilliant because there have been active studies for decades and the number of young Nepali researchers has increased over the years with studies continuing to go on. Indians were invited both so they could contribute information about localities that border Nepal and also so they could be better prepared for a PHVA focused on India. Also Bhutan was invited for the latter reason as they are initiating studies soon and in fact Bhutan seems to have the best numbers of Red Pandas with their ~75% forest cover and control over many threats that are rampant in other countries.

PHVA for Red Panda, Nepal

The PHVA for Red Panda in Nepal finally was conducted from 2-6 September 2010 in Kathmandu, at the beautiful new offices of the National Trust for Nature Conservation, NTNC. Their new quarters are enormous and the building we used provided both comfort and convenience.



The Inaugural Ceremony featured Chief guest: Krishna Acharaya, Chief of Environment Division, Ministry of Forest and Soil Conservation, Chairperson: Megh Bahadur Pandey, DDG, Department of National Parks and Wildlife Conservation, Harihar Sigdel, DDG, Department of Forest, Anil Manandhar-Country Representative, WWF-Nepal, Juddha Bahadur Gurung- Member Secretary, NTNC, Angela Glatston, International Studbook Keeper of Red Panda and the writer. The Nepal collaborators were: the Government of Nepal; the Department of Forests; the Department of National Park and Wildlife Conservation; WWF and NTNC. Other collaborators were Zoo Outreach Organisation and CBSG, South Asia were co-organisers working with Dr. Glatston for some years and more recently in the last 3-4 years very closely with NTNC on a variety of projects.

Population and Habitat Viability Assessment PHVA

Dr. U.S. Seal, Chairman of CBSG, and Dr. Thomas J. Foose, Executive Director, CBSG developed the PHVA process three decades ago. Dr. Bob Lacy, now Chair of CBSG and Population Biologist at Chicago Zoological Society led the work on VORTEX, which is the technical heart of the PHVA. Hundreds of PHVAs have been conducted around the world first by Conservation Breeding Specialist Group, which is based in Minneapolis, Minnesota and later by the various CBSG Regional Networks. The PHVA has evolved from a good planning tool for the time to a superb planning tool now. While it may be only one tool in the toolbox of conservation planning devices, it is very useful and significant tool.

People embark on a PHVA normally when a species seems to be declining due to a variety of threats, such as habitat loss, poaching or any number of other factors, which bring about difficulties for the species and their populations. For example



when habitat loss occurs in the species' and populations' locality, its food source, domicile and comfort zone suffer and this impacts the health, breeding and behaviour of entire populations. Once a population declines, survival also crashes and it is very hard to recover from this trend of loss without human intervention. A PHVA workshop attempts to identify the threats and their relationship to loss before it is too late to turn it around. A PHVA helps identify the signs and generate appropriate recommendations to do just that ... turn it around.

The PHVA workshop makes available viability assessments for each population of the species or subspecies suspected of being at risk, using its life history, population dynamics, ecology, threats, and many other factors to analyse the population in depth. The motivation or reason for conducting a PHVA is fear of loss of the species but also hope for the possibility of recovery. The workshop gathers data from biologists straight from the field, to help comprehend the status and population dynamics of the species. Current and historical data are used to make a

simulation model to evaluate factors impacting population dynamics and extinction risks.

A set of ground rules insure the workshop does waste time in non-pertinent discussion or unproductive behaviour.

Vision statement

Part and parcel of a conservation-planning workshop is developing a vision to give direction and insure that participants are together in their objectives. After an agonizing series of discussions the vision accepted was (to) "Secure viable populations of Red Panda distributed in contiguous natural habitat throughout the Himalaya regardless of national boundaries where this flagship species brings benefits to the region and is valued and protected by all stakeholders".

A variety of tools and techniques were used such as GIS technology for mapping Red Panda populations, the Vortex computer model, working groups, the Vision statement and the Ground Rules. For this workshop, ZOO made large board identification tags with the ground rules printed on the back.... just so no one would forget them!

Conclusions of Vortex were

- Very small populations, ~20-50 Red Pandas, have a high probability of extinction even without additional, human caused, threats. The majority of current subpopulations fall in this range.
- Even larger populations will become extinct if human threats, such as hunting, predation by domestic dogs, habitat loss, fire, etc. are not urgently addressed.
- To avoid extinction of Red Pandas in Nepal in the short to mid term future, it is vital that:
 - a) habitats between subpopulations are restored fully so that several subpopulations can expand their range and function as one large population;
 - b) habitat fragments within each subpopulation are linked for safe panda movement,



- c) human caused threats are immediately addressed.
- To refine the projection of future trends in Red Panda populations in Nepal and evaluate the impact of alternative management strategies, it is vital that basic data on fertility and mortality, numbers and distribution, home range size and resource requirements of wild Red Panda are urgently collected

Thanks

Zoo Outreach Organisation/CBSG South Asia thanks the following although others also played a very a big role: Shantraj Jnawali of NTNC, Nepal who organized the workshop on the ground, selecting excellent participants and contributing immensely during the workshop; NTNC itself which contributed in kind support including venue and in many

other ways (individuals will be named in the Report), all participants for their amazing focus and enthusiasm as well as information input, the sponsors, primarily WWF Germany, Rotterdam Zoo and members of the European Association of Zoos and Aquariums EAZA. Thanks to **Angela Glatston** for her patience in waiting for what I believe was the right time to have a PHVA, her Nepal focus, fund-raising and all past activities, which will continue. Thanks also to **Kristin Leus** of CBSG Europe who assisted Sanjay Molur of ZOO/CBSG South Asia in planning the modeling strategy, facilitating, modeling and report writing, and Axel Gebauer, Director, Tierpark Goerlitz for his input at the workshop, and his magnificent photographs.

Personal Commitments of Participants to Red Panda

It has been a tradition for many years that Zoo Outreach Organisation/CBSG, South Asia end its workshops and training with a session devoted to personal commitments of participants related to the theme of the workshop. We try to follow up after a few months to remind participants and see how many are undertaking these commitments. It is also our practice whenever possible to publish these commitments either in the report or in ZOOS' Print or both. This provides additional incentive to participants to undertake their promise to Red Panda, conservation and to themselves. A commitments session was conducted at the Red Panda workshop and the following people made commitments. This will be of interest to all concerned for the conservation of Red Panda... in Nepal and elsewhere.

- Kadga Basnet, Tribhuvan University, Kathmandu, Nepal. Expand my research group to conduct more scientific research (focused on range areas) on Red Panda in the year to come by collaborating with NTNC, DNPWC, and WWF. Gap areas with RP range areas will be part of focus. Try to implement workshop report.
- Brian Williams, Red Panda Network, USA: I commit to protecting 50% the confirmed Red Panda range in Nepal through 3 REDD projects by 2018.
- Bibhushan Timsina, Kathmandu, Nepal: Creation of online forum on information sharing of Red Panda in Nepal and connecting the PHVA participants virtually.
- Bhagawan Raj Dahal, Kathmandu, Nepal. Red Panda article database from the Red Panda range. Create Red Panda database.
- Jeewan Thapa, Central Zoo, Kathmandu, Nepal. work closely with field researchers to assist research, physiological profiles & for tranquilization
- Arjun Thapa, Small Mammal Conservation & Research Foundation, Kathmandu, Nepal. Take assistance of any researcher, organization which work on Red Pandas as field researcher.
- Ram Nandan Sah, Kathmandu Nepal: Conduct Environment creation in Department of Forest.
- Maheshwar Dhakal, PhD, DNPWC, Kathmandu, Nepal. Coordinate the Red Panda research across the country. Develop a robust methodology and Red Panda research.
- Prof. Karan B. Shah, TU/Nature History, Kathmandu, Nepal. Natural History Museum will put further information on its Red Panda specimens and make a diorama of Red Panda habitat to create its conservation awareness.
- Hem Sagar Baral, Himalayan Nature, Kathmandu, Nepal. Assist Red Panda National Coordinator. Feature Red Panda work more prominently on Himalayan Nature. Work with dedicated Red Panda conservation organizations.
- Hemanta Kumar Yadav, Suklaphanta, Nepal. Try to carry out research on Red Panda habitat &

population in for western Nepal. Try to collect some funds for this research.

- Sunil Shakya, Kathmandu - establish Red Panda resource center in a community level. Share information on RP collected from field experience.
- Hari Prasad Sharma, Lecturer, Tribhuvan University, Nepal. Commitment for research on Red Panda in Nepal. Population and density of Red Panda Population, Age, Sex ratio, future population trends, and diet and habitat analysis.
- Bed Kumar Dhakal, Sagarmatha National Park Awareness programs for Red Panda conservation targeted to local communities. Status survey in Sagarmatha National Park, Nepal
- Kamal Thapa, WWF – Kathmandu, Nepal. Secure fund for Red Panda research behavioral ecology & habitat management & its conservation.

Participants List

PR Kharel, CCO, DNPWC, Kathmandu
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HB Acharya, DFO, DFO, Ramechhap, Kathmandu
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BR Dahal, Country Rep., RPN, Kathmandu
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