

Reintro Redeux

IUCN / SSC Reintroduction Specialist Group, South & East Asia



No. 2, December 2005

It's been a year since the last (first) issue of *Reintro Redeux*, and the last Annual Meeting of RSG South and East Asia and CBSG South Asia at Lahore in Pakistan. The RSG like other SSC IUCN specialist groups has had to reform itself for the next quadrennium (2005-2008) since the last World Conservation Congress held at Bangkok last November. The formalities of the RSG and its regional networks have just been completed with the RSG Chair, Fred Launay inviting all the regional chairs to continue in the new quadrennium.

The RSG like the other inter-disciplinary specialist groups retained its place for the quadrennium unlike many other taxonomic specialist groups that have been disbanded due to a major shake up in the SSC structure. The new head of the Species Survival Commission, Dr. Holly Dublin along with other steering committee members is revisiting the functions and effectiveness of taxon-based global and regional specialist groups.

As Chair and Co-Chair of the South and East Asia region of RSG, we have committed to do the following in the new quadrennium:

1. Annual meetings during the latter half of each year.
2. Training in reintroduction protocol during field techniques workshops on different taxonomic groups.
3. Continue with compiling release/reintroduction information from the region.
4. Develop web accessible database for input and continuous updation by members
5. Analyse projects undertaken scientifically according to the reintroduction guidelines.
6. Scientific publications on the projects conducted through analysis and lobbying with concerned departments and individuals for standards.
7. Follow up on post release monitoring of certain instances of release of animals such as surplus captive deer and urban primates into forested areas to document the successes/ conflicts, etc.
8. Continuously circulate RSG guidelines to foresters and zoo personnel to keep up with awareness on this subject and constant transfer system.
9. Develop more basic abstracts from guidelines for several target audiences.
10. Publish Reintro Redeux Newsletter as frequently as possible.
11. Provide technical inputs in projects related to release/ reintroduction if and when consulted.
12. Help develop guidelines for release of rehabilitated confiscated / rescued animals from a regional perspective for global standards.
13. Involve in RSG activities regionally and internationally as the need arises.

Sanjay Molur and Sally Walker

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RSG South & East Asia Co-chairs: Sanjay Molur & Sally Walker

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REPORT OF THE SECOND JOINT MEETING OF IUCN SSC CBSG, SOUTH ASIA NETWORK & IUCN SSC RSG, S&E ASIA, 29-30 NOVEMBER 2004, LAHORE, PAKISTAN

In 2003 the first South Asian Regional CBSG/RSG meeting was conducted, just following the South Asian Zoo Association for Regional Cooperation (SAZARC) annual conference in Colombo, Sri Lanka. With the idea of establishing a regular tradition, again a CBSG / RSG meeting was organised for the South Asian region in connection with the 5th SAZARC conference, this year in Lahore, Pakistan. The external sponsor for the CBSG / RSG meeting was Chester Zoological and Botanical Gardens, which sponsors the IUCN SSC RSG, South and East Asia Co-Chaired by Sanjay Molur and Sally Walker.

After registration, welcome and introductions, presentations on South Asian Regional activities on behalf of the Conservation Breeding Specialist Group and Reintroduction Specialist Group were made by Sanjay Molur and Sally Walker. Sanjay Molur described the scope of RSG South and East Asia as: South Asia with 7 countries, South East Asia with 10 countries and East Asia with 3 countries. He described the goals and activities of RSG S&E Asia as follows : to

- identify re-introduction projects in the region
- network re-introduction practitioners
- compile all releases until date
- segregate scientific/well planned and unscientific releases
- publish a newsletter
- conduct training which would aid understanding of how to plan
- conduct appropriate and correct releases.

He described the different kinds of reintroductions as "some appropriate and effective". Too many typical exercises undertaken in the name of Re-introduction, however, have been for name and fame, excess stock release, animal welfare, Man-animal conflicts, and afforestation. Sanjay described some well meaning reintroductions and called for everyone to familiarise themselves with the Guidelines of the Reintroduction Specialist Group and advised the institutions and agencies accordingly. He suggested "revisiting" reintroduction as described in the first issue of the RSG S&E Newsletter "Reintroduction Redeux" which was released at the meeting without fanfare. See www.zoosprint.org for a copy.

Sally Walker described the activities of the South Asian CBSG and what made it different from some other CBSG national and regional branches. Essentially this is because the South Asian exercises (tools of CBSG – CAMP, PHVA workshops) are underpinned by organised

and systematic taxon and thematic networks such as Invertebrate, Amphibian, Reptile, Chiroptera, Rodent, Insectivore, Lagomorph and Primate and CBSG/RSG itself.

Following tea there was a question session regarding regional Specialist Group activities and subject areas as well as short presentations by participants about national, institutional or individual problems and potential regarding Conservation Breeding or Reintroduction.

The flights of resource persons, the Chair and Programme Officer of IUCN SSC CBSG and RSG respectively were both delayed so their presentations were postponed for the afternoon and the following day. After lunch Pritpal Soorae, had arrived and gave a presentation on the Reintroduction Specialist Group and its work around the world. He also described the RSG Guidelines entitled "Planning Reintroductions" (see graphic below) and focused much attention on this aspect. He commented at the end of his presentation " I would like to thank the organizers of this workshop to allow me the privilege to present some information on re-introductions which are at best difficult, long-term and expensive projects. Hopefully the information presented here will prove to be useful to re-introduction practitioners contemplating reintroductions."

Stages of Reintroduction

Bob Lacy gave a presentation on the work of the Conservation Breeding Specialist Group. He first showed some slides of dramatic, beautiful and highly threatened species, commenting that they may soon disappear unless dramatic and efficient steps are taken. "Conservation is difficult", he said, "due to the fact that species and ecosystems are threatened by so many processes, such as diverse human activities. Threats are difficult to stop or reverse, and threat interact in complex ways. In attempting to conserve wildlife we run into competing needs, interests, backgrounds, kinds of knowledge, and ideas. In order to bring these needs, interests, ideas, knowledge and backgrounds together, CBSG works with almost 900 members all over the world in order to bring about positive movement and change for conservation. He described the activities of CBSG as:

- Assisting wildlife agencies and conservation organizations in careful and systematic assessments of conservation problems, leading to solutions that work.
- Assisting zoos in managing their animals in such a way as to be useful to conservation both *in situ* and *ex situ*
- Assisting zoos by providing their expertise to save species in the wild.

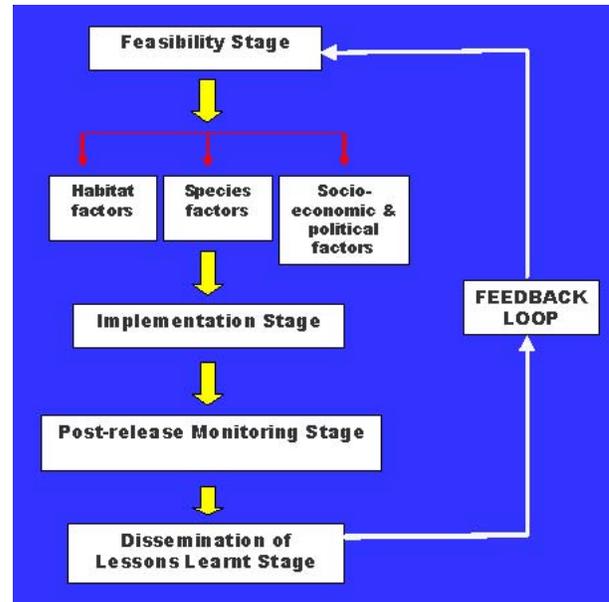
Dr. Lacy described the CBSG Workshop Processes which include the elements of Stakeholder participation, Consensus, Common goal, Knowledge in experts' heads, Product owned by participants, and Results considered advisory.

CBSG's Philosophy and Workshop Rules as related in Bob's presentation are that there can be multiple needs, and definitions of the problem, that everyone can participate, that all ideas are valid and worth exploring. There should be transparency – record all assumptions and ideas with reflective listening, respect and valuing each perspective. CBSG provides trained people to act as neutral moderators of the various exercises and processes conducted by CBSG.

He stressed the need for “the best science and the best people”. He said “We need good science – tested and validated methods for accomplishing our goals, but even the best science doesn't help unless we work together to make it serve all of our needs. He said that the best people were those who are committed, hard-working, willing to share their knowledge, willing to listen, willing to learn – *e.g. the people at this meeting.*

He concluded saying “Conservation isn't easy – but there are many of the best people who are willing to help! “

CBSG Equation
Good Science + Good Process + Good People =
Conservation Success



Working Groups and Reports

After these presentations, the assembled group formed into working groups and discussed some of the General Problems and Possible Solutions for Reintroduction In S. Asia:

Working group members

Dr Miranda Stevenson, Facilitator; Md. Abdur Razzaque, Presenter; Dr Md. Salim Iqbal, Recorder; Mr Muhammad Akbar Syed Zagar-ul-Hassan; Aurangzeb Awan; Ravi Sharma Aryal; R.K. Sahu; Mudassir Qazi, Md Mafizur Rahman from Bangladesh, India, Pakistan, Nepal, & UK

The problems were identified as:

1. Habitat destruction: more information is required on the loss of habitat and fragmentation of habitat
2. There is a general lack of knowledge on:
 - a. Data on some species in habitats
 - b. Techniques for monitoring of species after release
3. Lack of trained staff to carry out reintroductions and what is involved, and lack of public awareness of what reintroduction actually is and what it involves
4. Problems with captive populations
 - a. Too many of some species
 - b. Inbreeding of captive populations
 - c. The sex ratio of zoo populations
5. Confiscated animals and what to do with them
 - a. Lack of a rescue centre to cope with problems such as confiscated animals
6. Lack of inter-ministerial cooperation – i.e. between departments

7. Pressure from various groups (varies with country):

- a. Judiciary
- b. Political groups
- c. Administrative groups
- d. Various NGOs
- e. Media
- f. Activists and terrorists are a problem in some areas

8. Animal-human conflict is a problem with some species

9. General lack of funds in all areas

10. Lack of knowledge about participation in organisations such as RSG, CBSG, SAZARC which can help in many of these areas

Possible solutions to address the above are:

1. Strong laws (but those that can be enforced) and planned afforestation and deforestation programmes – these must involve the participation of the local communities who should be involved in these.
 2. Practical training programmes provided by experienced wildlife management experts and also those from the RSG (Reintroduction Specialist Group) and CBSG (Conservation Breeding Specialist Group). (2,3)
 3. Increase public awareness through (3):
 - a. Education programmes in zoos, schools, colleges and universities
 - b. Use of electronic media
 - c. Workshops and seminars
 - d. Religious leaders
 4. Ensure planned breeding in all zoological gardens through managed programmes and (4,3,5,10):

4

- a. Creation of rescue centres to house surplus of confiscated stock
b. Increase the number of scientists and participation in CBSG, RSG and SAZARC.
5. Increase of global, regional and national cooperation would help in all areas (4,5,10)
6. Sensitisation and awareness raising of policy makers and others through (6,7):
a. lobbying
b. developing strong linkages between agencies such as the judiciary, political, administrative, NGOs, media and activist/terrorist (although the latter may be difficult!).
c. IUCN on behalf of RSG, CBSG and SAZARC can play a leading role in the respective countries.
7. Regarding animal – human conflict the following is required (8):
a. Compensation, research, proper funding, awareness raising etc.
8. Overall priority should be given to reintroduction projects which are well planned and funds should be allocated to these (9).

Another working group discussed the Reintroduction of Blackbuck into Pakistan. Their report is as follows :
Reintroduction of Blackbuck into Pakistan with special emphasis on where it follows reintroduction guidelines flow chart?

1) Is there a need for reintroduction?

- | | |
|---|-----------|
| a) Species survival | NO |
| b) Restore natural biodiversity | YES |
| c) Conservation awareness | YES |
| d) Viable population | YES |
| e) Political desire | YES |
| f) Benefits vs potential risks | NOT KNOWN |
| g) And need further studies particularly on social organisation | |

2) Overall assessment

- | | |
|--|-----|
| a) Habitat suitability | YES |
| a.i) Prolonged cyclic droughts | |
| b) Socio economic problems prepare communities | |
| c) Financial | |
| d) Legal restrictions | NO |
| e) Stock suitability | NO |
| i) Genetic issues (sources) | |
| ii) Need more studies | |
| f) Veterinary | NO |
| i) Need detailed analysis | |
| ii) Disease survey in site required | |
| g) Post release monitoring is not at present planned | |

3) Multidisciplinary team

- | | |
|---|----|
| | NO |
| a) Team | |
| i) This needs to be addressed WL dept and houbara foundation + WWF (?) + locals | |
| b) Aims and objectives have not been decided and need to be done in a proposed time frame | |
| i) Involve local communities | |
| ii) Peer review | |

4) Veterinary Programme

- | | |
|--|---------------|
| | NOT DEVELOPED |
| a) Involvement of livestock department | |
| b) Development of buffer zone | |
| c) Screening | |
| d) Education on techniques of disease risk assessment. | |

5) Habitat suitability

- | | |
|----------------------------------|------|
| | DONE |
| a) Carrying capacity (not known) | |
| b) Live stock competition | |
| c) Water holes | |

6) Socioeconomic and legal issues

DONE

7) Release stock suitability

- a) Veterinary screening – will be done
b) Vaccination – will be done
c) Abnormal behaviours – NONE
d) Genetic status
 i) To be studied
 ii) Other populations of blackbuck (?)

8) Transport and final release

9) Post release

- a) Monitoring required
b) Documentation required
c) Information dissemination required

Another working group made recommendations for dealing with surplus stock in the region.

Recommendations for dealing with surplus stock in South Asia (differs according to country - all suggestions have been listed however):

- Surplus stocks should be sold to the public – Pakistan
- Domestic Animals should be removed – India
- Excess stock to be used for
 - Research
 - As prey
 - For trophy hunting
 - Game farming – controlled hunting
 - Shifted to wildlife centres
 - Exchanged with other zoos
- Capacity building is required
- Need to identify prioritise species for captive/conservation breeding
- Zoos should be responsible
 - Native species
 - Status in the wild
 - Critical stage – *in-situ* impossible so concentrate on *ex-situ*
- Population control measures – e.g. systematic sterilisation
- Zoos/breeding centres should be linked through the net -- Excess stock for education
- Cull excess stock
- Exchange animals to avoid inbreeding

Dissemination

- Involve university students in reintroduction studies, habitat studies, monitoring, veterinary protocol etc.
- Dissemination of reintroduction guidelines and publicise
 - Focused documentaries
 - Press
 - Letters to policy makers
 - Educate government departments pursuant
- Letter to governments (& relevant depts) from the Chair of the RSG
- Participants should circulate RSG information to policy makers
- SAZARC could have national representation
- Incorporation of zoo ethics and reintroduction in school curriculum
 - Monitoring of already released animals
 - Include wildlife practical training in veterinary courses
 - Develop educational programmes on captive breeding and reintroduction for children
 - Proceedings of this meeting should be sent to heads of departments
 - Proceedings of this meeting should be communicated to IUCN heads in respective countries
 - Training to be organised frequently by stakeholders
 - IUCN country offices should be encouraged to inform relevant

agencies from time to time involving reintroduction of wildlife due to transfer of officials

- Mechanism for developing strong linkage between *ex-situ* and *in-situ* conservation
- Intensive education of policy makers
- Successes and failures sent to superior offices with recommendations

Another working group made recommendations for the proposed reintroduction of Blackbuck in Cholistan Desert, Pakistan.

Reintroduction of Blackbuck in Cholistan Desert Pakistan

The blackbuck reintroduction in Cholistan using the existing semi-wild population bred at Lal Suhandra National Park should be done after giving due consideration to the following points :

1. Selection of proper site : The site for starting reintroduction should be selected very carefully. Relatively less-disturbed areas with known historic occurrence of the wild blackbuck population should be given priority over other areas.
2. Causes of extinction : a study should be carried out to define and enlist causes, factors that were responsible for exterminating the species from the area.
3. Mitigation measures: Proper mitigation measures should be adopted to redress all the factor/causes identified through 2 above before attempting reintroduction.
4. Habitat studies: studies should also be carried out to assess habitat requirements and use by blackbuck in Cholistan and the suitability of the habitat patches identified for reintroduction.
5. Studies should also be carried out on the behaviour of the blackbuck, its social structure and reproductive behaviour and proper sex ratio to minimize mate competition and optimize breeding rate.
6. Genetic Diversity: the animals selected for reintroductions should be studied for the diversity in genetic material or gene pool; the selection should be applied to maximize genetic diversity.
7. Health screening : Before releasing animals in the wild they should be screened with respect to their general health also. Only healthy animals should be considered for introduction.
8. Risk assessment for transmission of diseases. The reintroduction attempts always carry risk of transmission of disease from captive to wild ranging animal and *vice versa*. They should be a careful risk assessment with respect to this aspect of animal health care.
9. Protection measures: Before reintroduction there should be an assessment of the need for protecting newly introduced animals and the available resources. If required additional resources should be devoted for this purpose.
10. Pre release pens – pre-release training. As part of the reintroduction strategy pre-release pens should be provided in the reintroduction programme. If necessary, the animals should be actively trained with respect to the required responses to external factors.

A final working group made recommendations for Policy Issues for Zoo Animal Exchange Program in SAZARC Region

Policy Issues for Zoo Animal Exchange Program in SAZARC Region :

Working Group members : *Mr. Razzaque, Dr. Sahu, Dr. Jayanti, Dr. Ravi Sharma Aryal, Mr. Mansoor Qazi, Mr. Fazal. Afganistan, India, Bangladesh, Pakistan.*

Problems with reference to Inter-country Movement

- Permits and clearance
- Procedural Delay
 - Between Two zoos
 - Between Local authority
 - National Authority
 - Inter Ministry

- Legislative – Limitations
 - CITES
 - Inter- State or inter Provisional political conflicts
 - Relationship between the countries
 - NGOs Role
 - Media/Press/ Civil Society
- Funds -- Flight/Transportation/Direct Flight/Pressurize facility
 - Cargo
 - Freight
 - Crates
 - Trained Staff
 - Guaranteed Facilities
 - Creation of proper enclosures/Habitat

Solutions For The Problems Identified

- A.To Request the respective Governments to help the cooperative Breeding Exchange Program of SAZARC (Simplify procedure)
 - To Expedite paper work
 - To sensitize the bureaucrats
 - Lobbying
 - Building Network animal exchange Program

Establishment of a committee of SAZARC for

- B. Abide by CITES
- C. Sensitizes the Politician
- D. Use of Diplomats
- E. Use of Media
- F. Co-ordination through WAZA & SAZARC
- G. Convince and positive use of NGOs
- H. Sensitize and lobbying through media and along with successful stories of cooperative exchange/breeding programming, SEAZA, WAZA
- I. Funds- Transportation- Sensitize the Airlines/Look for Sponsor
- J. Sponsors for Raw Material / Govt. Budget
- K. Trained staffs through Govt., SAZARC, WAZA and Other Organization
- L. Request government sponsors
- M. Sponsors, Use allocated money, from budget, use of experts

The first issue of *Reintro Redux* is available on the web at www.zoosprint.org.

Subsequent issues will be published online with very few hard copies.

We solicit articles and notes on any reintroduction activities taking place in South and East Asia, as well as exercises in releases from the region.

You can also pose queries to the newsletter of doubts you have regarding reintroduction, such as the principles, science, protocol, rationale, etc. for answers from the chairs of the Reintroduction Specialist Group or its regional networks.



CBSG S ASIA / RSG S&E ASIA ANNUAL MEETING, 28-30 NOVEMBER 2005

Background

The Conservation Breeding Specialist Group's regional network CBSG, South Asia and the Reintroduction Specialist Group, South and East Asia traditionally meet once a year immediately before the annual conference of the South Asian Zoo Association for Regional Cooperation (SAZARC). CBSG's long term Chairman, Dr. U.S. Seal, now sadly deceased, attended the first CBSG, India meeting in 1991 at the Sangai PHVA, held in Mysore Zoo, India. Dr. Seal was also present and conducted a CBSG meeting in 2000 at the first meeting of South Asian zoo directors which led to the formation of SAZARC. In 2003 Sanjay Molur became Chair of the Reintroduction Specialist Group, South and East Asia and it was decided to conduct the annual CBSG and RSG meeting together when appropriate as the two groups have much in common. This convention means that many more people can attend, particularly in the host country as well as those who come from other countries to attend SAZARC.

In 2003 the meeting was held at National Zoo, Sri Lanka and linked to an SSC meeting in Colombo, Sri Lanka which conveniently met at a perfect time for this collaboration; Fred Launay, Chair, RSG and Pritpal Soorae, EO, RSG attended and gave basic presentations on RSG. In 2004 the meeting was held in Lahore before the annual SAZARC meeting. Bob Lacy, Chair, CBSG attended and presented basic presentations on CBSG and its activities, followed by Pritpal Soorae presenting on various aspects of reintroduction. Following the presentations, several reintroduction topics having to do with real situations in Pakistan were prioritised and working groups formed and deliberated on them, assessing work that had been done and giving suggestions for future work. It was a most productive meeting.

2005 meeting

In 2005 SAZARC meets in India in Coimbatore, Tamil Nadu. For this year's CBSG/RSG meeting, we have selected a theme which is equally relevant to both zoo and field personnel and to both CBSG and RSG, that is, human/animal conflict with a special emphasis on non-human primates.

This meeting is timely as many countries now have reported epidemic-like difficulties with burgeoning monkey populations in cities, towns and villages. Almost every country has the problem and, due to religious, cultural and welfare sensitivities it has been very difficult to come up with viable solutions which do not cause further problems. Several aspects of this topic will be discussed from different perspectives by forming working groups to assess current methods of handling this problem and perhaps finding additional solutions with a scientific basis.

RSG has drafted Guidelines for the Reintroduction of Nonhuman Primates but we have heard from primate experts from the region of South Asia that there are some difficulties in the guidelines insofar as conditions and scenario in South Asia is concerned. The Nonhuman Primate Reintroduction Guidelines copy will be

communicated to all potential invitees and even persons who are not attending but whose views should be sought.

Another feature of this workshop will be a discussion and a special working group on the proposed IUCN SSC RSG 'guidelines for the release of rehabilitated animals' which are currently under discussion in preparation for drafting. The purpose of these guidelines is to provide global guidance on the issues and risks that should be considered when rehabilitating (as opposed to reintroduction, introduction, strengthening, etc.) activities. Dr. Mike Jordan, Curator of Mammals, Chester Zoo and Chair, IUCN SSC RSG, Europe and Central Asia has been tasked with coordinating the preparation and drafting of these guidelines, aided by a small core group. Dr. Jordan will find participants of the CBSG/RSG meeting extremely useful for consultation as the region of South Asia has been particularly plagued by the need to rehabilitate animals in trouble and causing trouble.

Rehabilitation is a widely practised act right across the world for a whole series of different local reasons. Often at the core of these reasons are individual animal welfare, but economic damage and even legislation can be the causes. Whilst it is sometimes viewed as being exclusively a welfare issue, the increasing use of rehabilitation as a solution to wildlife problems means that in many circumstances; it is either a conservation activity in itself, or has serious conservation implications for existing populations of animals at sites chosen for release.

Rehabilitation organizations work around the world under highly differing scenarios and pressures, therefore after a core group representing both conservation and rehabilitation organizations drafts the guidelines, there will be a widespread review process in order to make the end product as inclusive as possible. Thus, the guidelines are envisaged as being a risk assessment based document that details the issues and risks associated with different activities and scales, rather than a prescriptive protocol.

The project also will necessitate involvement at related conferences/ meetings during the first stages of the preparation to help encourage and guide the exchange of information necessary and technical support required to produce the guidelines. This meeting will be one of the first of this series of meetings.

Logistics

CBSG SA and RSG S&E Asia invites persons who are interested to declare their interest and send their name and particulars (address, phone, fax, email – email is obligatory) to Sanjay Molur and Sally Walker c/o zoocrew@vsnl.net. You are welcome to copy your mail to Sanjay and Sally at their own emails but to keep up with all in a unified manner, please send first to zoocrew email, particularly if you have attached information. We would also be grateful if you would give us a paragraph or two stating your special interest in the topic, your experience and proposing topics for discussion. We also welcome case

studies along with your particulars and other information. If you have written articles about projects you have been involved in we would like to get reprints either by post, fax or email. We will compile all ideas, case studies, accounts, articles, etc. into a CD for each participant and a printed compilation available at cost on request. There will be a few printed copies for use by working groups.

We will invite participation to subsequent meetings conducted after the upcoming November 2005 meeting based on your submissions. What support exists will be largely decided on a first come first served basis so please send your particulars, interest information, case studies and reprints or reports.

Working Group abstracts for the November 2005 meeting

Troubled Translocations Introduced by Janaki Lenin

Translocation is the standard response of the authorities in mitigating any wildlife conflict situation. Contrary to popular opinion evidence is now mounting against translocation as a strategy as it seems to cause a lot more problems than it solves. Besides shunting the conflict to a new area, translocation is believed to upset the social hierarchy in resident animals and obviously places a greater stress on the available resources. The various animals known to have been so targeted are leopards, tigers, crocodiles, snakes, monkeys, deer and antelopes. The RSG believes that translocation as a strategy should be used only for conservation benefit where the population of a species has declined drastically. There is a need for the various biologists and wildlife management experts working with these taxa to come to a consensus on translocation and formulate appropriate alternatives. And this meeting is the ideal forum to take this forward.

Rehabilitation Guidelines for IUCN SSC RSG Introduced by Mike Jordan

Rehabilitation is a widely practised act right across the world for a whole series of different local reasons. Often at the core of these reasons are individual animal welfare, but economic damage and even legislation can be the causes. Whilst it is sometimes viewed as being exclusively a welfare issue, the increasing use of rehabilitation as a "solution" to wildlife problems means that in many circumstances; it is either a conservation activity in itself, or has serious conservation implications for existing populations of animals at sites chosen for release. In addition, rehabilitation organizations work around the world under highly differing scenarios and pressures, often with unknown outcome due to lack of monitoring.

A project is underway to create IUCN Guidelines for Rehabilitation. A core group will be formed, representing both conservation and rehabilitation organizations to draft the guidelines. There will be a widespread review process in order to make the end product as inclusive of the differing scenarios and pressures as possible. Thus, the guidelines are envisaged as being a risk assessment

based document that details the issues and risks associated with different activities and scales, rather than a prescriptive protocol. This complex project will necessitate involvement at related conferences/ meetings during the first stages of the preparation to help encourage and guide the exchange of information necessary and technical support required to produce the guidelines. This meeting is one of the first of these.

Reintroduction Guidelines for Primates

The Guidelines of the IUCN SSC Reintroduction Specialist Group have been detailed to address some different taxon groups, such as primates and African elephants. There have been rumblings from time to time that the official Primate Reintroduction Guidelines are, in places, not satisfactory for South Asia. Participants may like to consider a working group on this issue, going through the Primate Guidelines and discussing the problematical ones with representatives from RSG and one another. We need someone to take responsibility for introducing this group, if there is anyone with interest in this particular topic.

Substandard Zoos Introduced by Sally Walker

There may be as many as 10,000 institutions in the world calling themselves "zoos". These vary from the worst roadside or restaurant menagerie to the best conservation centres. Substandard zoos give good zoos a bad name. The word "zoo" is defined as much or more by the worst examples as by the best.

Not only that. Substandard zoos hasten the extinction of some species by bad practices – capturing animals from the wild, purchasing wild caught animals from dealers; inbreeding, overbreeding or crossbreeding animals; breeding outside cooperative programmes, releasing surplus animals to wild habitats inexpertly and inappropriately, keeping single animals for exhibition only, keeping animals in substandard conditions leading to loss of fitness and early death, etc.

Recently, a Substandard Zoos Working Group at the Annual meeting of IUCN SSC CBSG responded to a forthcoming WAZA initiative by formulating a statement to express what good zoo personnel feel about the issue of substandard zoos. The statement was taken to the President of WAZA and Chair of the WAZA Welfare and Ethics Committee who created a Subcommittee or Working Group organise information and coordinate strategic action on this issue. The Subcommittee will work through national and regional associations to inventory the substandard zoos of their region and discuss how to help them raise their standard to acceptable and ultimately excellent.

Much of the impact of substandard zoos is a topic that might be addressed both by CBSG and RSG, so this meeting is an excellent forum for discussion of the issue precedent to the SAZARC meeting. SAZARC may benefit by the output of this group and begin to develop a strategy for improving, dissolving and preventing more substandard zoos in each country of South Asia.

A COMMENTARY ON THE 'ACTION PLAN FOR CONTROL OF STRAY ANIMAL MENACE (MONKEYS, STRAY DOGS, STRAY CATTLE AND PIGS)' AS PROPOSED BY THE MINISTRY OF ENVIRONMENT AND FORESTS'

Janaki Lenin

• *Author's comments*

• The Ministry has clubbed animals (monkeys or more correctly, non-human primates) with the highest protection under the Wildlife Protection Act, 1972, along with domesticated animals. This is a serious drawback as some of the species that can be called "monkeys" are Near Threatened or Endangered. The following is the list of non-human primates followed by their listing under the WPA and their conservation status as listed by the IUCN:

1. Indian Rhesus Macaque *Macaca mulatta mulatta* - Schedule I – Least Concern (R)
2. Dark-bellied Bonnet Macaque *Macaca radiata radiata* – Schedule II - Least Concern
3. Pale-bellied Bonnet Macaque *Macaca radiata diluta* – Schedule II - Least Concern
4. Western Hanuman Langur *Semnopithecus entellus achates* - Schedule I - Least Concern
5. Deccan Hanuman Langur *Semnopithecus entellus anchises* - Schedule II – Near Threatened
6. Bengal Hanuman Langur *Semnopithecus entellus entellus* – Schedule II - Near Threatened
7. Central Himalayan Langur *Semnopithecus entellus schistaceus* – Schedule I - Near Threatened (R)
8. Coromandel Grey Langur *Semnopithecus priam priam* – Schedule II - Vulnerable
9. Grey Langur *Semnopithecus priam thersites* – Schedule II - Endangered
10. Himalayan Grey Langur *Semnopithecus entellus ajax* – Schedule II – Critically Endangered

The MoEF's Action Plan begins by detailing the proposal submitted by the State of Himachal Pradesh which includes as its strategies: (1) augment natural food base of monkeys in forests, (2) create awareness among the public, (3) sterilize male monkeys (*more on this later*). Then it goes on to say that based on a 2 day survey they estimate the state's monkey population to be 60,000 to 2,00,000.

• The Status of South Asian Primates CAMP Workshop Report, 2003 says that the population of the state of Himachal Pradesh is 12,000 strong with 5,000 mature individuals.

The State correctly vetoes translocation because it said translocation did not solve the problem. Instead some of the significant strategies were: (1) convert commensal monkeys to non-commensal habits [*no details provided on how this is to be achieved*] (2) plant fruit trees in the forest (3) "stop voluntary feeding of monkeys" (4) "establishment of feeding points for monkeys" (5) "putting monkeys in large cages near religious centres."

Under the sub-section "Management Controls" the State advocates releasing langurs near monkey troops, patrolling

by trained dogs and spraying crops with chemicals to repel monkeys (*there is no mention of what chemicals they propose using*).

• Using langurs and dogs will only cause the macaques to go to the next street or locality and cause a problem there. It is not a solution.

• Now comes the most controversial section – Biological Control. While euthanasia is an accepted option in nuisance animal control throughout the world the suggestion in the HP Govt's proposal to inject lethal virus and bacteria into monkeys and poisoning them is definitely not the means to use.

Taking into account the suggestions made by the State of Himachal Pradesh, a Board constituted by the MoEF came up with an Action Plan:

They place the blame squarely on poor or improper disposal of solid wastes and indeed one-third of the Plan goes in great detail about how this can be set right.

• No other strategy in the Plan has been dealt with in such detail. Being one of the most resourceful animals, the non-human primates will gravitate toward other sources of food like stealing from shops, markets, houses, wedding halls, if one avenue, viz., garbage, dries up. While proper garbage disposal is needed, it cannot be the primary means of solving the problem of nuisance non-human primates.

The other commendable strategy the Plan proposes is creating public awareness. But amending the State's recommendation on translocation, the document says that – urban monkeys will be maintained in "waystations" and after that they may be translocated "to the wild localities and forest areas adjoining the cities after planting wild fruit trees and shrubs from such waystations. [...] From these waystations, the monkeys would be translocated to specially created sanctuaries and adjoining wild areas, which may be termed as rehabilitation conservation reserves."

• In the absence of definitions for such terms as "waystations" and "sanctuaries" it is assumed that waystations are enclosures and sanctuaries are wild areas. The Plan also does not specify how long the animals will be contained in these enclosures before being translocated to sanctuaries, nor does it spell out how the captive animals are to be acclimatized to the wild. Different species of plants and trees come into fruit at different times of the year. Assuming that it is possible to plant several species of fruiting trees in the sanctuaries to provide food for the troops throughout the year, does the Plan suggest that the animals be kept in captivity up to five years at least until the trees begin to fruit? If the non-human primates do not find food readily in the forest as they have at the waystations and in the town or city where they came

from originally, there is every chance that the non-human primates will return to their former territories or find the closest human settlement to continue thieving, begging and crop raiding. The Plan gives no specifications for the size of the waystations, the number of non-human primates to be held in each enclosure nor does it stipulate that family troops have to be kept together. A town may have 2 or 3 troops and the Plan does not mention how these troops will be spatially separated from each other (to avoid conflict between them) at the waystations or sanctuaries. Neither does the Plan take into account the possibility of resident monkey troops in the area where these urban non-human primates are going to be released. In fact that is the one problem with this Action Plan – there are no clear definitions for terms used, no parameters for goals set, no qualifications for personnel involved in the various activities mentioned – all necessary features of an action plan.

Elsewhere the plan says that “un-urbanized monkeys can be translocated to their natural habitat.

- No doubt this will be a death sentence for the non-human primates concerned. By “un-urbanized” it is assumed that the MoEF is talking about rural non-human primates that raid crops. No animal used to easy living – raiding crops grown round the year and with ready access to water from irrigation canals is going to know which fruits and berries to eat in their “natural habitat” unless they are taught. They will have no knowledge of natural predators – in fact the only predators they would know to avoid are domestic dogs – and releasing such animals into forests is sentencing them to a death by starvation or predation. Their behaviour pattern suited to long years of commensal living also make them unfit to live in forests.

The final strategy is the sterilization of all male monkeys with this caveat – “However this methodology can follow the restocking of the forest areas and creating awareness.”

- As a means of population control male sterilization is useless because any immigrating intact male could potentially impregnate every female in the population - non-human primates are polygynous. Therefore females, not males, need to be the target of sterilization. Secondly, neutering male non-human primates is not going to make them any less aggressive towards humans because they want food from us, not sexual favours. If the animals are to be maintained in captivity, then male sterilization may not be a bad idea. But in free-living populations, male sterilization is useless.

- It's arguable whether the non-human primates are moving to towns and cities because of degraded forests or they gravitate towards the easiest sources of high nutrition food supply. Most towns and cities where non-human primates are found have trees or safe buildings where the animals can spend the night, have easy access to food, no predators and it's not hard to see why (1) they find living with humans lucrative and (2) they will do poorly when translocated and have to fend for themselves. Non-human primates used to living with humans will have a habitat preference for such human centric villages, towns and

cities.

With a view to enhancing the MoEF's Action Plan, a group of primatologists and conservationists proposed a Revised Action Plan (RAP). The following are the salient points of the RAP:

1. In line with IUCN recommendations the RAP totally vetoes translocation as a strategy for dealing with animals in conflict situations.
2. It spells out the system of committees which will receive, process and act on the complaints of nuisance non-human primates received from affected people.
3. It splits the species and subspecies of non-human primates according to their conservation status. Developing the idea of permanent shelters mentioned in the MoEF's Action Plan further, the RAP provides that species and subspecies listed as Least Concern will be maintained in permanent captivity in shelters and will be permanently sterilized. Species and subspecies listed as Near Threatened are to be held in captivity in shelters or zoos and implanted with temporary contraceptives. Species and subspecies listed as Vulnerable, Endangered, Critically Endangered will be held in zoos.
4. These shelters will be maintained by non-profit private organizations or trusts. The specifications for the design and size of enclosures, the number of animals per enclosure, the mandatory presence of a vet are all provided.
5. The RAP demands that animal trappers be put through a certified course in animal handling and trapping. It spells out the design of the traps, transportation cages, and the protocol to be followed for trapping animals.
6. The RAP agrees with the MoEF's Plan on the following points:
 - Ban of public feeding
 - Proper disposal of garbage and deployment of animal-proof bins
 - Create public awareness

For more details, please refer to the Action Plans.

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IUCN/SSC GUIDELINES FOR RE-INTRODUCTIONS

Prepared by the SSC Re-introduction Specialist Group
Approved by the 41st Meeting of the IUCN Council, Gland
Switzerland, May 1995

INTRODUCTION

These policy guidelines have been drafted by the Re-introduction Specialist Group of the IUCN's Species Survival Commission (1), in response to the increasing occurrence of re-introduction projects worldwide, and consequently, to the growing need for specific policy guidelines to help ensure that the re-introductions achieve their intended conservation benefit, and do not cause adverse side-effects of greater impact. Although IUCN developed a *Position Statement on the Translocation of Living Organisms* in 1987, more detailed guidelines were felt to be essential in providing more comprehensive coverage of the various factors involved in reintroduction exercises.

These guidelines are intended to act as a guide for procedures useful to re-introduction programmes and do not represent an inflexible code of conduct. Many of the points are more relevant to re-introductions using captivebred individuals than to translocations of wild species. Others are especially relevant to globally endangered species with limited numbers of founders. Each re-introduction proposal should be rigorously reviewed on its individual merits. It should be noted that re-introduction is always a very lengthy, complex and expensive process.

Re-introductions or translocations of species for short-term, sporting or commercial purposes - where there is no intention to establish a viable population - are a different issue and beyond the scope of these guidelines. These include fishing and hunting activities.

This document has been written to encompass the full range of plant and animal taxa and is therefore general. It will be regularly revised. Handbooks for re-introducing individual groups of animals and plants will be developed in future.

CONTEXT

The increasing number of re-introductions and translocations led to the establishment of the IUCN/SSC Species Survival Commission's Re-introduction Specialist Group. A priority of the Group has been to update IUCN's 1987 Position Statement on the Translocation of Living Organisms, in consultation with IUCN's other commissions.

It is important that the Guidelines are implemented in the context of IUCN's broader policies pertaining to biodiversity conservation and sustainable management of natural resources. The philosophy for environmental conservation and management of IUCN and other conservation bodies is stated in key documents such as "Caring for the Earth" and "Global Biodiversity Strategy" which cover the broad themes of the need for approaches with community involvement and

participation in sustainable natural resource conservation, an overall enhanced quality of human life and the need to conserve and, where necessary, restore ecosystems. With regards to the latter, the re-introduction of a species is one specific instance of restoration where, in general, only this species is missing. Full restoration of an array of plant and animal species has rarely been tried to date.

Restoration of single species of plants and animals is becoming more frequent around the world. Some succeed, many fail. As this form of ecological management is increasingly common, it is a priority for the Species Survival Commission's Re-introduction Specialist Group to develop guidelines so that re-introductions are both justifiable and likely to succeed, and that the conservation world can learn from each initiative, whether successful or not. It is hoped that these Guidelines, based on extensive review of case - histories and wide consultation across a range of disciplines will introduce more rigour into the concepts, design, feasibility and implementation of re-introductions despite the wide diversity of species and conditions involved.

Thus the priority has been to develop guidelines that are of direct, practical assistance to those planning, approving or carrying out re-introductions. The primary audience of these guidelines is, therefore, the practitioners (usually managers or scientists), rather than decision makers in governments. Guidelines directed towards the latter group would inevitably have to go into greater depth on legal and policy issues.

1. DEFINITION OF TERMS

"Re-introduction": an attempt to establish a species(2) in an area which was once part of its historical range, but from which it has been extirpated or become extinct (3) ("Re-establishment" is a synonym, but implies that the re-introduction has been successful).

"Translocation": deliberate and mediated movement of wild individuals or populations from one part of their range to another.

"Re-inforcement/Supplementation": addition of individuals to an existing population of conspecifics.

"Conservation/Benign Introductions": an attempt to establish a species, for the purpose of conservation, outside its recorded distribution but within an appropriate habitat and eco-geographical area. This is a feasible conservation tool only when there is no remaining area left within a species' historic range.

2. AIMS AND OBJECTIVES OF RE-INTRODUCTION

a. Aims:

The principle aim of any re-introduction should be to establish a viable, free-ranging population in the wild, of a species, subspecies or race, which has become globally or locally extinct, or extirpated, in the wild. It should be re-introduced within the species' former natural habitat and range and should require minimal long-term management.

b. Objectives:

The objectives of a re-introduction may include: to enhance the long-term survival of a species; to re-establish a keystone

species (in the ecological or cultural sense) in an ecosystem; to maintain and/or restore natural biodiversity; to provide long-term economic benefits to the local and/or national economy; to promote conservation awareness; or a combination of these.

3. MULTIDISCIPLINARY APPROACH

A re-introduction requires a multidisciplinary approach involving a team of persons drawn from a variety of backgrounds. As well as government personnel, they may include persons from governmental natural resource management agencies; non-governmental organisations; funding bodies; universities; veterinary institutions; zoos (and private animal breeders) and/or botanic gardens, with a full range of suitable expertise. Team leaders should be responsible for coordination between the various bodies and provision should be made for publicity and public education about the project.

4. PRE-PROJECT ACTIVITIES

4a. BIOLOGICAL

(i) Feasibility study and background research

- An assessment should be made of the taxonomic status of individuals to be re-introduced. They should preferably be of the same subspecies or race as those which were extirpated, unless adequate numbers are not available. An investigation of historical information about the loss and fate of individuals from the re-introduction area, as well as molecular genetic studies, should be undertaken in case of doubt as to individuals' taxonomic status. A study of genetic variation within and between populations of this and related taxa can also be helpful. Special care is needed when the population has long been extinct.
- Detailed studies should be made of the status and biology of wild populations (if they exist) to determine the species' critical needs. For animals, this would include descriptions of habitat preferences, intraspecific variation and adaptations to local ecological conditions, social behaviour, group composition, home range size, shelter and food requirements, foraging and feeding behaviour, predators and diseases. For migratory species, studies should include the potential migratory areas. For plants, it would include biotic and abiotic habitat requirements, dispersal mechanisms, reproductive biology, symbiotic relationships (e.g. with mycorrhizae, pollinators), insect pests and diseases. Overall, a firm knowledge of the natural history of the species in question is crucial to the entire re-introduction scheme.
- The species, if any, that has filled the void created by the loss of the species concerned, should be determined; an understanding of the effect the re-introduced species will have on the ecosystem is important for ascertaining the success of the re-introduced population.
- The build-up of the released population should be modelled under various sets of conditions, in order to specify the optimal number and composition of individuals to be released per year and the numbers of years necessary to promote establishment of a viable population.
- A Population and Habitat Viability Analysis will aid in identifying significant environmental and population variables and assessing their potential interactions, which would guide long-term population management.

(ii) Previous Re-introductions

- Thorough research into previous re-introductions of the same or similar species and wide-ranging contacts with persons having relevant expertise should be conducted prior to and while developing reintroduction protocol.

(iii) Choice of release site and type

- Site should be within the historic range of the species. For an initial re-inforcement there should be few remnant wild individuals. For a re-introduction, there should be no remnant population to prevent disease spread, social disruption and introduction of alien genes. In some circumstances, a re-introduction or re-inforcement may have to be made into an area which is fenced or otherwise delimited, but it should be within the species' former natural habitat and range.
- A conservation/ benign introduction should be undertaken only as a last resort when no opportunities for re-introduction into the original site or range exist and only when a significant contribution to the conservation of the species will result.
- The re-introduction area should have assured, long-term protection (whether formal or otherwise).

(iv) Evaluation of re-introduction site

- Availability of suitable habitat: re-introductions should only take place where the habitat and landscape requirements of the species are satisfied, and likely to be sustained for the foreseeable future. The possibility of natural habitat change since extirpation must be considered. Likewise, a change in the legal/ political or cultural environment since species extirpation needs to be ascertained and evaluated as a possible constraint. The area should have sufficient carrying capacity to sustain growth of the reintroduced population and support a viable (self-sustaining) population in the long run.
- Identification and elimination, or reduction to a sufficient level, of previous causes of decline: could include disease; over-hunting; over-collection; pollution; poisoning; competition with or predation by introduced species; habitat loss; adverse effects of earlier research or management programmes; competition with domestic livestock, which may be seasonal. Where the release site has undergone substantial degradation caused by human activity, a habitat restoration programme should be initiated before the re-introduction is carried out.

(v) Availability of suitable release stock

- It is desirable that source animals come from wild populations. If there is a choice of wild populations to supply founder stock for translocation, the source population should ideally be closely related genetically to the original native stock and show similar ecological characteristics (morphology, physiology, behaviour, habitat preference) to the original sub-population.
- Removal of individuals for re-introduction must not endanger the captive stock population or the wild source population. Stock must be guaranteed available on a regular and predictable basis, meeting specifications of the project protocol.
- Individuals should only be removed from a wild population after the effects of translocation on the donor population have been assessed, and after it is guaranteed that these effects will not be negative.
- If captive or artificially propagated stock is to be used, it must

be from a population which has been soundly managed both demographically and genetically, according to the principles of contemporary conservation biology.

- Re-introductions should not be carried out merely because captive stocks exist, nor solely as a means of disposing of surplus stock.
- Prospective release stock, including stock that is a gift between governments, must be subjected to a thorough veterinary screening process before shipment from original source. Any animals found to be infected or which test positive for non-endemic or contagious pathogens with a potential impact on population levels, must be removed from the consignment, and the uninfected, negative remainder must be placed in strict quarantine for a suitable period before retest. If clear after retesting, the animals may be placed for shipment.
- Since infection with serious disease can be acquired during shipment, especially if this is intercontinental, great care must be taken to minimize this risk.
- Stock must meet all health regulations prescribed by the veterinary authorities of the recipient country and adequate provisions must be made for quarantine if necessary.

(vi) Release of captive stock

- Most species of mammal and birds rely heavily on individual experience and learning as juveniles for their survival; they should be given the opportunity to acquire the necessary information to enable survival in the wild, through training in their captive environment; a captive bred individual's probability of survival should approximate that of a wild counterpart.
- Care should be taken to ensure that potentially dangerous captive bred animals (such as large carnivores or primates) are not so confident in the presence of humans that they might be a danger to local inhabitants and/or their livestock.

4b. SOCIO-ECONOMIC AND LEGAL REQUIREMENTS

- Re-introductions are generally long-term projects that require the commitment of long-term financial and political support.
- Socio-economic studies should be made to assess impacts, costs and benefits of the re-introduction programme to local human populations.
- A thorough assessment of attitudes of local people to the proposed project is necessary to ensure long term protection of the re-introduced population, especially if the cause of species' decline was due to human factors (e.g. over-hunting, over-collection, loss or alteration of habitat). The programme should be fully understood, accepted and supported by local communities.
- Where the security of the re-introduced population is at risk from human activities, measures should be taken to minimise these in the re-introduction area. If these measures are inadequate, the re-introduction should be abandoned or alternative release areas sought.
- The policy of the country to re-introductions and to the species concerned should be assessed. This might include checking existing provincial, national and international legislation and regulations, and provision of new measures and required permits as necessary.
- Re-introduction must take place with the full permission and involvement of all relevant government agencies of the recipient or host country. This is particularly important in re-introductions in border areas, or involving more than one state or when a re-introduced population can expand

into other states, provinces or territories.

- If the species poses potential risk to life or property, these risks should be minimised and adequate provision made for compensation where necessary; where all other solutions fail, removal or destruction of the released individual should be considered. In the case of migratory/mobile species, provisions should be made for crossing of international/state boundaries.

5. PLANNING, PREPARATION AND RELEASE STAGES

- Approval of relevant government agencies and land owners, and coordination with national and international conservation organizations.
- Construction of a multidisciplinary team with access to expert technical advice for all phases of the programme.
- Identification of short- and long-term success indicators and prediction of programme duration, in context of agreed aims and objectives.
- Securing adequate funding for all programme phases.
- Design of pre- and post- release monitoring programme so that each re-introduction is a carefully designed experiment, with the capability to test methodology with scientifically collected data. Monitoring the health of individuals, as well as the survival, is important; intervention may be necessary if the situation proves unforeseeably favourable.
- Appropriate health and genetic screening of release stock, including stock that is a gift between governments. Health screening of closely related species in the re-introduction area.
- If release stock is wild-caught, care must be taken to ensure that: a) the stock is free from infectious or contagious pathogens and parasites before shipment and b) the stock will not be exposed to vectors of disease agents which may be present at the release site (and absent at the source site) and to which it may have no acquired immunity.
- If vaccination prior to release, against local endemic or epidemic diseases of wild stock or domestic livestock at the release site, is deemed appropriate, this must be carried out during the "Preparation Stage" so as to allow sufficient time for the development of the required immunity.
- Appropriate veterinary or horticultural measures as required to ensure health of released stock throughout the programme. This is to include adequate quarantine arrangements, especially where founder stock travels far or crosses international boundaries to the release site.
- Development of transport plans for delivery of stock to the country and site of re-introduction, with special emphasis on ways to minimize stress on the individuals during transport.
- Determination of release strategy (acclimatization of release stock to release area; behavioural training -including hunting and feeding; group composition, number, release patterns and techniques; timing).
- Establishment of policies on interventions (see below).
- Development of conservation education for long-term support; professional training of individuals involved in the long-term programme; public relations through the mass media and in local community; involvement where possible of local people in the programme.
- The welfare of animals for release is of paramount concern through all these stages.

6. POST-RELEASE ACTIVITIES

- Post release monitoring is required of all (or sample of)

individuals. This most vital aspect may be by direct (e.g. tagging, telemetry) or indirect (e.g. spoor, informants) methods as suitable.

- Demographic, ecological and behavioural studies of released stock must be undertaken.
- Study of processes of long-term adaptation by individuals and the population.
- Collection and investigation of mortalities.
- Interventions (e.g. supplemental feeding; veterinary aid; horticultural aid) when necessary.
- Decisions for revision, rescheduling, or discontinuation of programme where necessary.
- Habitat protection or restoration to continue where necessary.
- Continuing public relations activities, including education and mass media coverage.
- Evaluation of cost-effectiveness and success of re-introduction techniques.
- Regular publications in scientific and popular literature.

Footnotes:

(1): Guidelines for determining procedures for disposal of species confiscated in trade are being developed separately by IUCN.

(2): The taxonomic unit referred to throughout the document is species; it may be a lower taxonomic unit (e.g. subspecies or race) as long as it can be unambiguously defined.

(3): A taxon is extinct when there is no reasonable doubt that the last individual has died

The IUCN/SSC Re-introduction Specialist Group (RSG) is a disciplinary group (as opposed to most SSC Specialist Groups which deal with single taxonomic groups), covering a wide range of plant and animal species. The RSG has an extensive international network, a re-introduction projects database and re-introduction library. The RSG publishes a bi-annual newsletter RE-INTRODUCTION NEWS.

If you are a re-introduction practitioner or interested in re-introductions please contact:

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EXECUTIVE SUMMARY

IUCN GUIDELINES FOR THE PLACEMENT OF CONFISCATED ANIMALS

Live wild animals are confiscated by local, regional, and national authorities for a variety of reasons. Once they have taken possession of these animals, these authorities must dispose of them responsibly, in a timely and efficient manner. Prevailing legislation, cultural practices, and economic conditions will influence decisions on appropriate disposition of confiscated animals. Within a conservation context, there are several possible options from which to choose:

- 1) to maintain the animals in captivity for the remainder of their natural lives;
- 2) to return the animals to the wild;
- 3) to euthanize the animals, i.e., humanely destroy them

The IUCN Guidelines for the Placement of Confiscated Animals discuss the benefits and risks involved in each of these options. These Guidelines should be read in conjunction with the IUCN Guidelines for Re-introductions (IUCN 1998), annexed hereto. They should also be read with reference to the CITES Guidelines for the Disposal of Confiscated Live Species of Species Included in the Appendices (Resolution Conf. 10.7) and the IUCN Guidelines for the Prevention of Biodiversity Loss due to Biological Invasion.

Returning confiscated animals to the wild is often considered the most popular option for a confiscating agency and can garner strong public support. However, such action poses real risks and problems and generally confers few benefits. These risks and problems include, but are not limited to, the following.

1. The mortality of animals released from captivity is usually high. Confiscated mammals and birds captured as juveniles have not learned the skills they need to survive in the wild. Other animals may be weakened or otherwise affected by their time in captivity and, thus, less able to survive. Finally, there is little chance of survival if the animals are released at a site that is not appropriate for the ecology or behavior of the species.
2. Animals released into the wild outside of their natural range – if they survive at all – have the potential to become pests or invasive. The effects of invasive alien species are a major cause of biodiversity loss, as such species compete with native species and in other ways compromise the ecological integrity of the habitats in which they have become established.
3. Having been in trade or a holding facility often in association with other wild animals and, in some instances, domesticated ones, confiscated wild animals are likely to have been exposed to diseases and parasites. If returned to the wild, these animals may infect other wild animals, thus causing serious, and potentially irreversible, problems.
4. In many instances, confiscated wild animals have been moved great distances from the site of capture and changed hands several times, such that their actual

provenance is unknown. It may, therefore, be impossible or very difficult to establish an appropriate site for return to the wild that takes into account the ecological needs of the species, the animals' genetic make-up, and other attributes that are important to minimize risks (e.g., competition, hybridization) to wild populations at a release site.

5. In cases where the provenance is known, the ecological niche vacated by that animal may already be filled by other individuals and replacing the animal could result in further undesired disturbance of the ecosystem

6. Responsible programs to return animals to the wild (c.f. IUCN 1998) are long-term endeavors that require substantial human and financial resources; hence, they can divert scarce resources away from other more effective conservation activities.

If returning confiscated animals to the wild is to be consistent with conservation principles and practice, it should a) only be into a site outside of the species' natural range if such an action is in accordance with the IUCN Guidelines for Reintroductions for a conservation introduction; and b) only be practiced in cases where the animals are of high conservation value and/or the release is part of a management programme. Any release to the wild must include the necessary screening and monitoring to address potential negative impacts, as set forth in the IUCN Guidelines for Re-introductions (IUCN 1998).

Retaining confiscated wild animals in captivity is a clear – and, in most cases, preferable – alternative to returning them to the wild. Clearly, returning animals to their owners will be required in cases of theft. There are a number of options for keeping animals in captivity; however, each of these also has costs and risks.

- As confiscated animals are likely to have been exposed to diseases and parasites, if held in captivity, they may infect other captive animals, causing serious, and potentially irreversible, problems.
- Finding an appropriate home for confiscated animals can be time-consuming, and caring for the animals during that time can be expensive.
- Wild animals have specific nutritional requirements and require specific care. Short-term and long-term humane care of confiscated wild animals requires space, finances and expertise not readily available in many countries.
- Transfer of ownership from a confiscating government authority to a private entity – individual or non-commercial or commercial care facility – can raise complicated legal and ethical issues, which are difficult – and time consuming – to address. Sale or transfer of ownership may – or may be seen to – stimulate demand for these animals and exacerbate any threat that trade may pose to the species. It may also give the appearance that the government condones illegal or irregular trade or, in the case of actual sale, is benefiting from such trade.

In addition to avoiding risks to wild populations engendered by return to the wild, keeping confiscated animals in captivity provides other benefits, for example:

- Confiscated animals can be used to educate people about wildlife and conservation, as well as the consequences of trade in live wildlife.
- Confiscated animals placed in captivity can provide breeding stock for zoos, aquariums, and other facilities, thus potentially reducing the demand for wild-caught animals although the opposite effect may also occur.
- In specific instances where the provenance of the confiscated specimens is known, these animals can provide the nucleus, and breeding stock, for possible reintroduction programs.
- Confiscated animals can be the subject of a range of non-invasive research, training and teaching programs with important potential benefits for conservation.

Euthanasia must be considered a valid alternative to placing animals in captivity or returning them to the wild. Although it may appear counter-intuitive to employ euthanasia, it is by definition a humane act and can be wholly consistent with both conservation and animal welfare considerations. Further, although many confiscating authorities may be wary of criticism elicited by a decision to euthanize confiscated animals, there are a number of reasons to justify its use, including the following:

- In many, if not most, circumstances, euthanasia offers the most humane alternative for dealing with confiscated wild animals.
- Euthanasia eliminates the genetic, ecological, and other risks that release to the wild may pose to wild populations and ecosystems.
- Euthanasia eliminates the serious risk of spreading disease to wild or captive populations of animals.
- Euthanasia will often be the least costly option.

Establishment of an overall policy framework, with specific procedures for confiscating authorities, will facilitate consideration of the above three options for disposition, including the logistical, legal, and ethical questions that these authorities must address.

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EXECUTIVE SUMMARY

IUCN RE-INTRODUCTION GUIDELINES FOR NONHUMAN PRIMATES

The *IUCN/SSC Re-introduction Specialist Group: Guidelines for Nonhuman Primate Re-introductions* is intended as a guide to re-introduction programmes. The priority has been to develop standards that are of direct, practical assistance to those planning, approving, or implementing reintroductions. The primary audience of these guidelines is the re-introduction practitioner.

Because re-introduction projects are often restricted by location, resources, and other limitations, this document is meant as a “best-practice” model, or an ideal code of conduct. Re-introduction managers are strongly encouraged to use this document as their principal guide to primate reintroductions.

Each re-introduction project should develop written guidelines that apply specifically to its taxon, region, legal structure, etc. These customised documents should be updated over time and eventually result in a re-introduction manual for the taxon of interest. They should also directly relate to this existing document, so these guidelines can be regularly updated with new information and techniques. *Guidelines for Nonhuman Primate Re-introductions* covers the main steps of a re-introduction effort. The steps are listed in a suggested order of execution, although some steps overlap with one another (see “Basic Principles of Reintroductions,” below). It is realised that many projects have been operating for some time, so managers of these projects should attempt to integrate the guidelines as soon as possible into their current operating procedures and protocol.

Before initiating any re-introduction project, managers must clearly define why that project is needed and conduct a rapid overall assessment to ensure key requirements, such as habitat suitability, can likely be met. **The main goal of any re-introduction effort should be to re-establish self-sustaining populations of primates in the wild and to maintain the viability of those populations.** Although exceptions to this, such as trial re-introductions of common species and rescue/welfare releases, should also adhere to these guidelines as much as possible, such projects are not considered true re-introductions or conservation approaches and are not specifically covered in these guidelines.

Re-introduction practitioners are strongly encouraged to contact the IUCN/SSC Re-introduction Specialist Group (RSG) and present and discuss their re-introduction proposals and results (see Annex III, Page 54). As a result, a network of contacts can be developed and information from various projects shared.

Note that details regarding the care of animals held in captivity prior to release, such as enclosure enrichment, are not specifically covered in these guidelines. However, where appropriate, important points regarding these topics will be noted.

II. Context of Guidelines

The IUCN/SSC Re-introduction Specialist Group was established in 1988 in response to an increasing number of plant and animal re-introductions worldwide. Although the *IUCN Guidelines for Re-introductions* covers key issues regarding re-introductions, it is a general policy document that applies to both plants and animals. Due to the many unique aspects of re-introducing primates, it was determined that taxon-specific guidelines were needed.

The *Guidelines for Nonhuman Primate Re-introductions* has been prepared for the Re-introduction Specialist Group by Lynne R. Baker. It is based on current IUCN policy documents, a review of case histories, and consultation across a range of disciplines. Comments were solicited from a large group of experts and interested parties, and a thorough review was done by a Core Review Board (see Annex IV, Page 56).

It is important that these guidelines are implemented in the context of IUCN’s broader policies pertaining to biodiversity conservation and sustainable management of natural resources. The philosophy for environmental conservation and management of IUCN and other conservation bodies is stated in key documents such as *Caring for the Earth* (IUCN, 1991) and *Global Biodiversity Strategy* (WRI, 1992). Other valuable resources are the IUCN/SSC Primate Specialist Group’s Action Plans for Africa, Asia, and Madagascar, as well as its regional newsletters: *Lemur News*, *Neotropical Primates*, *African Primates*, and *Asian Primates*.

Primate re-introduction projects should be conducted in accordance with these guidelines, and the following IUCN policy documents: *IUCN Guidelines for Re-introductions* (1998), *IUCN Guidelines for the Placement of Confiscated Animals* (2002), *IUCN Guidelines for the Prevention of Biodiversity Loss Caused by Alien Invasive Species* (2000), *Translocation of Living Organisms* (IUCN Position Statement, 1987), as well as the *CITES Guidelines for the Disposal of Confiscated Live Species* (1997).

III. Introduction

The latest release of the *IUCN Red List of Threatened Species* (Hilton-Taylor, 2000) reveals that the greatest change among mammals is the number of threatened primates. The total number of primate taxa currently recognised is 621, according to Conservation International. Of these, 52 are considered critically endangered; 92 are endangered; and 80 are vulnerable. Because primate taxonomy is rapidly changing, the IUCN/SSC Primate Specialist Group recommends that the primate “unit of conservation action” should be the lowest-named taxon, which includes subspecies and not just currently recognised species. Re-introduction managers and others involved in primate conservation should thus recognise and work toward the conservation of all named taxa of primates.

Because many primates worldwide are facing extinction, conservation measures beyond or in conjunction with protection from hunting pressure, habitat preservation, and other approaches are underway. One such measure is the restoration of primates to their natural habitats. Worldwide there are several facilities with aims to re-introduce captive primates or translocate wild primates, with some projects already well established.

Some primate re-introduction projects have been scrutinised for not adhering to proper standards for veterinary clearance, tourism management, and prevention of ecological risks to wild conspecifics. Although the issues involved with re-introduction can vary greatly depending on the taxon and region, general rules do apply. Developed in response to the increasing occurrence of primate reintroduction projects and thus the growing need for specific policy guidelines, this document will help ensure that such re-introduction efforts achieve their intended conservation benefit without causing adverse side effects of greater impact.

NOTE: In the context of these guidelines, references to "primates" refer to nonhuman primates.

IV. Definition of Terms

RE-INTRODUCTION APPROACHES

NOTE: For the purpose of this document, unless stated otherwise, "re-introduction" is used to refer to any of the approaches listed below, except Translocation and Rescue/Welfare.

a) Re-introduction: the re-introduction of a primate

taxon in an area from which it has been extirpated or become extinct ("re-establishment" is used to indicate that the re-introduction has been successful).

b) Reinforcement/Supplementation: the addition of individuals to an existing population of conspecifics ("re-stocking" is a synonym).

c) Conservation Introduction: the introduction of a primate taxon, for the purpose of conservation, outside its recorded known distribution, but within an appropriate habitat and eco-geographical area. This is a feasible conservation tool only when there is no suitable habitat remaining within a primate's historic range. Because of the risks associated with introducing a non-native species into an area, this approach should be considered a last resort.

d) Substitution: the introduction of a primate closely related to another taxon that has become extinct in the wild and in captivity. The introduction occurs in suitable habitat within the extinct taxon's historic range.

e) Translocation: the deliberate movement of wild primates from one natural habitat to another for the purpose of conservation or management.

f) Rescue/Welfare: the movement of wild primates from one area to another to rescue them from a hazardous situation or to resolve human-primate conflicts, or the release of captive primates, such as orphaned or surplus animals, to attempt to improve their welfare.

Basic Principles of Re-introductions

1)	Identify the need for re-introduction and conduct a rapid overall assessment (determine if the key requirements-habitat, socioeconomic, financial, legal, management, release-stock suitability, veterinary, post-release monitoring-are likely to be met).
2)	Define aims, objectives, and time frame.
3)	Establish a multidisciplinary team.
4)	Assess the proposed release-site habitat and determine its suitability.
5)	Review the socioecological and behavioural data on the taxon of interest.
6)	Determine if the socioeconomic, financial, and legal requirements can be met in the short and long terms.
7)	Assess the suitability of the release stock.
8)	Evaluate the genetic status of the release stock.
9)	Ensure release stock has been cleared for release by a qualified veterinary team.
10)	Develop strategy and time frame for transport and final release of animals.
11)	Establish and enact post-release monitoring and other follow-up activities.
12)	Document project outcomes on an ongoing basis.

◀ **Begin development and implementation of a quarantine and veterinary programme**

◀ **Co-ordinate simultaneously**

NOTE: Some steps such as 4-8, will likely overlap.