

CBSG RSG Working Group Reports

Small Mammal Reintroduction Working Group

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The group started by defining what were the normal species of 'small mammals' that release was being considered for. The list is not necessarily definitive but rather gives an idea of the sorts of species which are being considered: Rusty-spotted Cat, Fishing Cat, Jungle Cat, Leopard Cat, Lorises, Giant squirrels, Porcupine, Black-naped Hare, Civets, Otters, Mongoose, Mouse Deer, Bats.

The main reasons for which releases involving small mammals are potentially required in the region were discussed and there were considered four main reasons.

1. Conservation Breeding; involving species like Rusty-spotted Cat, Fishing Cat, Lorises, Civets and Mouse Deer.
2. Rehabilitation; involving species like Giant squirrels, Bats, Fishing Cat and Rusty-spotted Cat.
3. Conflict translocations; involving species like Fishing Cat, Giant squirrels, Civets, Otters, Mongoose, Porcupine and Bats.
4. Rescue translocations from habitat destruction; involving species like Giant squirrels, Fishing Cats, Lorises, Civets, Otters, Mouse Deer and Porcupine.

For each of these main reasons the group considered the main issues or features of importance for that type of release;

1. Conservation Breeding

- Many species have a fast reproductive rate
- Often populations have low genetic diversity due to fragmentation
- These species are often important links in the food chain
- Many species have high natural mortality and short lifespans
- They often play an important role in controlling pests
- Large numbers are often required for successful reintroduction
- Post release monitoring (e.g. radio tracking) would be required
- Often they have comparatively small home ranges
- Often they live at comparatively high densities
- They are often prey species
- Conservation breeding & reintroduction programmes require lots of planning
- A sustainable breeding programme is required BEFORE releasing
- Information from the field should indicate a need to reintroduce

- Poor knowledge on conservation status of many small mammals
- Choosing release sites can be difficult and they must be capable of supporting a viable population
- Intensive health screening is often required
- Pre-release training of captive bred animals in hunting/ life skills may be required

2. Rehabilitation

- Release should be as soon as possible
- A transition period may be required in order to triage, treat animals and assess fitness for release
- Knowledge on existing populations at the release site is preferable
- The release site should have sufficient carrying capacity to accommodate the released animals
- The cause of the original problem/hazard should ideally be resolved; habitats improved or invasive species removed if possible
- Release at the original wild locality of the individual is preferable if the hazard is removed
- CARE must be taken with hand-reared/imprinted orphans which may lack life skills
- Released animals may have a homing instinct to return to their original range if translocated
- Post-release monitoring is required
- Potential release animals should be held separated from long term captive or display animals
- Human interactions MUST be kept to a minimum
- Individuals for release should ideally have access to natural foods and environments whilst in captivity
- (Pre-release training may be required for some individuals, especially if orphaned and reared in captivity)

3. Conflict translocation

- Consider trying to remove the cause of conflict in preference to translocation.
- Finding release sites for animals that have caused conflicts can be difficult
- Capturing animals can be difficult, especially to be sure of removing all individuals causing conflict
- Release should be as soon as possible after capture
- Post-translocation monitoring should be carried out especially looking at survival rates and causes of mortality
- Public support may be difficult for the release of animals that have caused conflicts and an education/ awareness programme may be required
- Released animals may have a homing instinct to return to their original range
- The conservation status of the species concerned may affect the desire to translocate

4. Rescue translocations from habitat destruction

- Consider restoring the habitat in preference to translocation
- Measure to prevent habitat destruction such as ecotourism may prevent the need to translocate
- The provision of connecting corridors of habitat may allow animals to disperse in preference to translocation
- Law enforcement may prevent illegal habitat destruction
- Capturing animals can be difficult, especially to be sure of removing all individuals in danger

- Release should be as soon as possible after capture
- Post-translocation monitoring should be carried out especially looking at survival rates and causes of mortality
- Released animals may have a homing instinct to return to their original range
- The conservation status of the species concerned may affect the desire to translocate

The group then discussed the actions required to progress the issue and developed a list of priority actions to be completed:

1. Develop species/project specific plans and protocols for planned programmes, including; conservation breeding, site selection, pre-release training, health screening, release and post-release monitoring.
2. Develop collaborations with appropriate organisations to assist with planned releases.
3. For important conservation releases field studies should be carried out to ascertain the status of species.
4. Funding sources should be investigated.
5. Staff capacity building training should be carried out in the following areas:
 - Post release monitoring and field study techniques
 - Capturing, handling and transport techniques
 - Hand-rearing techniques
6. Develop plans for rehabilitation facilities necessary. Particularly for Sri Lanka with the construction of the new zoo and safari park.
7. Investigate appropriate identification and monitoring techniques.
8. Keeping records of releases is important and should be compiled and analysed to help inform future practice and improve techniques, these to include; source of the animals, veterinary treatment, release site, results of post-release monitoring, problems or issues.

Human-Animal Conflict Working Group

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Conflict-making animals in different regions

Animals	Region within South Asia
Elephant	Whole region
Rhino	India, Nepal
Primates – Macaques	Whole region
Large Carnivores - Leopard, Tiger, Sloth Bear	India, Bangladesh, Nepal, & Sri Lanka (except tiger)
Wild boar	India, Nepal & Sri Lanka
Crocodile	Parts of India & Sri Lanka
Small mammals	Sri Lanka, India & Nepal
Ungulates – Deer	Nepal, India & Sri Lanka
Fruit Bats	India, Bangladesh, Sri Lanka
Snakes	Whole Region

Primary Conflicts

- Crop damage
- Damage to human properties and habituations
- Killing / injuring humans
- Killing / injuring animals
- Zoonotics

Secondary Conflicts

- Conflicts between the society and the management
- Loss of peace in mind and security

Prioritization of Issues relevant to Human-animal conflicts

Issue	No votes	Rank
Crop damage	10	2
Damage to human properties and habituations	5	3
Killing / injuring & harassing humans & vice versa	11	1
Zoonotics	0	4

Conflict Resolution for three major prioritized issues

Animals	Issue	Solution
Elephants	Killing / injuring humans by animals	Create corridors, improvement of habitats, awareness on prevention and avoidance, domestication, culling. Translocation is not recommended
	Killing / injuring animals by humans	Awareness Legislation
Big cats & Sloth Bear	Killing / injuring humans by animals	Keeping in captivity, declare more reservations, culling, Translocation is not recommended
	Killing / injuring animals by humans	Legislation, Relocation of villagers, Awareness
Crocodiles	Killing / injuring humans by animals	Fencing bathing & washing area, Awareness
	Killing / injuring animals by humans	Awareness Legislation
Primates	Crop damage	Best practices for crop protection, Selection of non-palatable crop species, Increase in food plants in natural habitats (non-conflict oriented), awareness, garbage management, netting, fencing, crackers, sounds, harvesting early.
Elephants, Monkeys & Bats	Damage to human property and habitation	Fencing (natural & artificial) around parks and villages, repellents, using proper construction material for houses, Provision of alternative routs (ladders for monkeys) and roosts (for bats)
Snakes	Killing / injuring humans by animals	Improvement of habitats, Awareness on prevention and avoidance, translocation
	Killing / injuring animals by humans	Awareness, legislation

Limitations

Limitations were identified as

- Lack of knowledge on best practices
- Lack of resources – finances
- Lack of awareness
- Lack of commitment to address the issues

Global Climate Change and its Impact on Habitat & Species

Working Group Members:

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The group discussed and listed the following factors as having impact on Habitat

- Sea water level rising
- Scarcity of food
- Alteration in habitat
- Habitat and species shifting
- Increasing temperature
- Increase UV Radiation
- Loss of habitat
- Desertification
- Forest die back
- Salinity fluctuation in costal belt's habitat
- Melting of glaciers thereby undue flood as well as wilds being homeless
- Frequency of natural catastrophes increases and thereby massacring habitat of wild species.

The group discussed and listed the following factors as having impact on Species

- Extinction of species
- Changing flowering pattern
- Animal behavioural changes
- Changing food habits
- Increasing stress, mortality and morbidity
- Genetic variability
- Species imbalance
- Increase in the number of endangered species
- Changing reproductive characteristics of animals
- Increasing outbreak of Diseases (chytrid), Bird Flu, malformation, teratogenic growth
- Impact on off springs with particular reference to aquatic species, terrestrial species

The Working Group listed recommendations on how to address the issue :

1. Zoo and Botanical Garden, aquarium should be a center of education
2. Creating public awareness
3. Further understanding the problems
4. Research and monitoring
5. Conservation breeding and translocation

6. Fund raising
7. Assess species diversity
8. Habitat restoration, eco-restoration
9. Afforestation
10. Efficient way of using fossil fuel – alternate fuel
11. Minimize using animal products
12. Formulation and implementation of environmental laws and regulations
13. Counselling among politicians and policy makers
14. Minimize release of green house gases
15. Training and capacity building (translocation, conservation breeding, taxonomy, habitat development)
16. Sharing resources and knowledge among the regional countries
17. Trans-boundary cooperation
18. Alternative, renewable, recycling energy sources
19. Creating alternative livelihood
20. Waste management practices
21. Environment education – developing new education materials suitable to South Asian audiences
22. Liaison/Coordination with implementing agencies/ stakeholders

Working Group Members made the following Commitments :

- **Bhatta:** Will create awareness programmes in three protected areas; Chitwan, Bardia and Sukhlaphanta.
- **Shahriar and Shafiqur:** Print some dos and don'ts at the reverse side of the zoo entrance ticket; establish a butterfly corner.
- **Rabbani:** will make bill board with necessary instructions to create awareness.
- **Sahu:** Raise funds for proper research fund.
- **Bahir:** will do some species assessment in Sri Lanka.
- **Daniel:** Develop and distribute a manual on climate change education.
- **Thasun Amarasinghe:** Awareness – to school children and undergraduate students and government bodies with Dinesh. Research on malformation of frogs by Thasun.
- **Dinesh:** Monitor special areas in Sri Lanka; Horton Plains.
- **M. Chowdhury:** create awareness programme on waste management for school children.