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Need for national policy to recover endangered species

By **Ravikanth G. and Aravind N.A** - 05/03/2017

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India is bestowed with world's four mega-biodiversity hotspots. In fact, India is the only country that is blessed so many of these biodiversity regions. However, this rich biodiversity is under severe threat owing to the increasing population as well as indiscriminate extraction from natural populations. Unplanned land use in the name of economic development have rendered a number of species in the under the threatened category. In the most recent update, the International Union for Conservation of Nature (IUCN, 2016) assigned a total of 1052 species as red listed. Of these, 75 animals and 77 plants are in the critically endangered list with many others being in the endangered and vulnerable categories. What is even more worrying is the fact that a large number of species have been reduced to incredibly small numbers due to either habitat degradation or illegal hunting/harvesting. Unless immediate measures are taken up, a number of these species could be in the red-list within a matter of few years. Unfortunately as of now, except for few attempts, there has been no concerted program in the country to address the restoration of the threatened species.

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Recovering critically endangered species have received worldwide attention and are increasingly engaging conservation biologists as probably the only strategy for halting the loss of natural populations and species. A species is considered as critically endangered when there is a drastic reduction in the number of individuals of that species and unless measures are taken to restore the species, they may become extinct. While globally there have been many programmes to recover the endangered species in the form of species restoration or species reintroduction, there have been only a handful of attempts being made in India. Species recovery involves arresting the decline of threatened species and threats that are reducing their numbers are mitigated so that the species survival in the wild can be ensured.

In India, as in many other tropical regions of the world, extensive land cover and land use changes have led to forests being highly fragmented and/or degraded. Consequently a large number of species, especially the endemics have become rare, endangered or threatened. Of these, eight plant species are already extinct. In India, 665 animal species and 387 plant species are severely threatened. The major threat for many of these endangered species is their extremely small population sizes, far smaller than that is required to sustain them. Populations of many of the species are smaller than that reported for some endangered animals such as the great Panda, Cheetah, or the Grey Wolf.

A number of medicinal plants are specifically precarious in India. It is estimated that about 100 species of medicinal plants in the Western Ghats alone are highly threatened due to excessive harvesting. Such small population sizes can lead to loss of genetic variability resulting in inbreeding depression, and an overall loss of genetic impoverishment. Thus, unless urgent conservation action is taken up in recovering these species, many of them may be completely lost.

In the absence of any well-defined program, in India, research on recovery of rare, endangered or threatened (RET) species has suffered from lack of focus and has often tended to be ad-hoc. Many of the species recovery programs in India have traditionally been charismatic animal centric, being carried for tiger (project Tiger), gharial, elephant (project elephant) and lions. The Convention on Biological Diversity of which India is a signatory specially provides for identification of red listed species and their recovery. Because of high degree of endemism of the country's flora and fauna, it could be reasonable to assume that a substantial proportion of the endangered species, if not saved, could be lost from the face of the earth. India, with its dubious distinction of having the highest population growth rate compared to all the mega-diversity centers in the world and with the highest economic growth is going to add tremendous pressure on its biological diversity and the pressure is never going to relent. Further, with the explosion of herbal drug industries and with large number of communities still dependent on forest resources, India is going to witness a further avalanche in the endangered species list. With the natural resources treated as semi-public goods, there is absolutely no regulation of the level of extraction. In the light of these pressures, it is anticipated that the unless there is a national policy for the recovery of the species, a large number of species might be on their

way to be marginalized in their populations and possibly be locally, regionally or in case of narrow endemics even be globally extinct.

India needs concerted efforts on the part of the forest department (state Governments), academicians and scientists (to identify the factors driving the species to endangerment and develop strong models of recovery) as well as private parties (other stakeholders) to develop laws and regulations and to reach agreements to protect the threatened species. A species is considered “recovered” when the factors that initially led to its decline are remedied and protection is no longer needed. For many species, adequate legal mechanisms are needed. The national agenda can subscribe to the following major mandates: a) Document, as exhaustively and as scientifically as is possible, the conservation status (red listing) of plant species, b) Identify the extrinsic and intrinsic factors driving species to red status, c) Based on (b), formulate appropriate strategies for the restoration and recovery of the red listed species, d) Develop specific management plans for sustainable utilisation of the species (in case, it is economically important) and e) Develop long-term monitoring programs to periodically assess the population/genetic changes of the red listed species and potentially de-list species from the threatened category.

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