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Notes from the Co-chairs IUCN/SSC Asian Elephant Specialist Group

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Every species on earth requires space or rather habitat, for without that, no species can survive. Given human conversion of natural habitats for his own use, space has become one of the biggest constraints for conservation. While some species have adapted to man modified habitats or even to human habitat (e.g. pigeons, rats, numerous insects, etc.) others have not fared so well. In fact more sensitive species simply die out when their habitat is altered by humans. Some, like the elephant come into conflict with humans when their habitat is lost.

What is habitat loss? Very often, we tend to look at it primarily in terms of loss of forest cover, which surprisingly may not always be the right or only indictor of habitat loss. Habitat loss itself is easily visible and very easily measurable. But what about habitat degradation? Degraded habitat may no longer be suitable or adequate for some species that occupy them. Habitat degradation is not easily visible because tree cover remains (not necessarily, entirely) so forest cover remains. Take for example wild grazing herbivores (mammals), they can be very adversely impacted when there is overgrazing by cattle. In fact such overgrazing will certainly result in significantly reduced carrying capacity of wild grazing herbivores or even their local extinction. However, forest cover would remain intact for decades if not centuries because it may take that long or more before tree species are impacted. We need to recognize that the mere presence of tree cover does not constitute suitable habitat for some species. Here assessment of the impact would require ecological knowledge of a species and how degradation impacts the species' habitat. However, in the absence of such an assessment, forest cover equates to habitat and as such, most conservationists and managers do not see this as 'habitat loss'. People then tend to live under the illusion that there is adequate habitat remaining.

Human disturbance within a habitat, in the form of presence and noise are not fully understood. We do know that even species like elephants avoid roads and high human use areas. The mere presence of people and their cattle can deprive wild herbivores of grazing space during the day. While these areas will be accessible to wildlife, they remain unusable to wildlife during much of the day when people and cattle are present. Buffers (depending on the distance to which the disturbance extends) around roads, settlements and other developed areas are lost to elephants during much of the day. Similarly areas where there is cattle grazing, especially where cattle are accompanied by people, and NTFP collection areas may not be accessible to elephants during a certain part of the day. All this depends on the types of disturbance as also its intensity. However, as in the case of habitat degradation, tree cover remains intact and such loss is not taken into account. Again, we remain complacent believing that adequate habitat remains.

Habitat fragmentation, especially linear barriers, too is a very serious threat to wildlife habitat. They become particularly important where spatial requirements of a species are large and where the habitat available is small. For example, where home ranges of elephants are larger than 300 km^2 and the available habitat is 900 km^2, if that habitat is fragmented into three parts (200 + 200 + 500 km^2) by insurmountable linear barrier (e.g. water canals) which takes away only a small part of the habitat, then only one patch (500 km^2) will be suitable for the species concerned and the other two will be inadequate. So in real terms 400 km^2 of habitat is lost, as the species cannot survive in 200 km^2 patches, where it will become locally extinct in the long term. Unfortunately, here the habitat loss due to the canal could be very small, say a few sq. km. but the resultant impact is far greater. The persistence of a species

like the elephant, due to its long life and ability to subsist on poor habitat, would fool managers and conservationists into believing that they still have nearly 1000 km^2 of habitat.

When it comes to conserving elephants, we need to take all these factors, which affect their habitat and their potential long-term survival into account. Failure to do so would result in us securing inadequate habitat for their long-term conservation.

In addition to these 'space' related aspects, we also need to move away from myopic approaches to elephant conservation. We should not forget that one of the objectives of conservation of any species (other than the species itself) is to save the contained biodiversity of its habitat. So while we focus on elephant conservation we should not lose sight of the biodiversity, which is contained in the elephants' habitat. This is critical because we often project the elephant as a flagship species and umbrella species. These tags certainly apply to the Asian elephant as it has strong cultural and religious links to people in Asia and finds support globally. Failure to do so would be like trying to conserve the elephant in safari park or even a zoo. Such an approach is required because we also need to ensure that ecological functionality of elephants and their habitats are retained. This will automatically imply that elephant need to be conserved in all representative habitat types within which they currently occur. So conservation is not about saving one or a few populations here and there; it's about conserving a range of populations across as diverse a range of habitat types as possible. At the same time, conserving the contained biodiversity is an integral part of elephant conservation.

The challenge would be to understand elephant's spatial requirements in different habitat types. We would also need to understand the requirements of biodiversity conservation within elephant habitat. We also need to keep in mind the genetic requirements for long-term conservation. Who said conserving elephants was easy, we have a lot of work ahead and hopefully we will increase our knowledge of the species and its conservation requirements and do a good job of leaving behind a good and ecologically functioning elephant population for future generations.



Drawing by Arnab Roy