



## Interview Special

# HUMAN - ANIMAL CONFLICT

Human-animal conflict refers to interactions between wild animals and human populations that result in negative impacts on either or both sides. This can include damage to crops, property, injury or death of people or animals, and the spread of diseases. It can also include competition for resources such as food and water. The conflict often arises when human activities, such as urbanization and land use change, encroach on wild animal habitats and disrupt their natural behaviors. Examples - Elephants raiding villages for food, wolves preying on livestock, and bears breaking into homes for food.

Such conflict situations generally lead to growing antipathy among the people towards wildlife conservation resulting in retaliatory killings or injuries to animals.

### TYPES OF DAMAGES

- Loss of agricultural crops, *e.g.*, eaten by wild boars
- Loss of livestock, *e.g.*, leopards become cattle lifters
- Loss of life, *e.g.*, **Lion-Human** conflict in Gir Forest,

**Tiger** becomes Man-eater in Sundarban area + Lakhimpur Kheri

**Leopard – Human** counter in Sanjay Gandhi (Mumbai), Sugarcane farms in Maharashtra

**Wolves – Human** = Eastern UP

Rhesus Monkey (HP), Wild boars (UK), and Nilgai (Bihar)

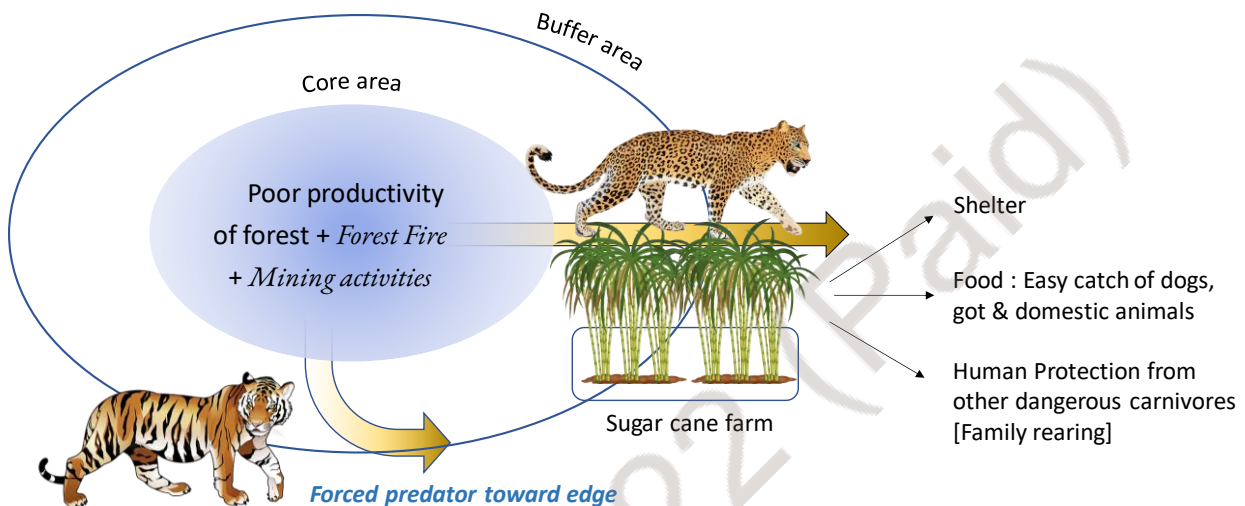
- Transmit diseases, *e.g.*, Monkey fever in Karnataka (Human beings), Rabies (Domestic animals).
- Environmental damages, *e.g.*, Exotic species

### CAUSES OF MAN-ANIMAL CONFLICT

- Loss, Degradation and fragmentation of wildlife habitat : Human activities such as urbanization, illegal encroachment, Mining, Linear projects, deforestation, and pollution can disrupt the balance of ecosystems, leading to changes in animal behavior and forcing them to adapt to new environments, which can lead to conflicts with people, *e.g.*, Sanjay Gandhi National park, Mumbai; Proposed Khandwa – Akola rail line upgradation project passes through Melghat Tiger reserve, etc.
- Competition for resources : rapidly expanding tiger population in their natural habitats after project tiger with other carnivores, they start competing for food and water, leading to conflicts over these limited resources. The substantial recovery of once dwindling population of Blackbuck (Antelope) and Nilgai (*Boselaphus tragocamelus*) outside forest has also resulted in increased conflict in agriculture landscapes. Highly nutritious and palatable food crops also promote conflicts with herbivores.



- Attraction to human settlements : *Availability of forage* attracted animals towards human settlement. Ex. Nilgai attacks are very common in the agriculture fields of UP and Bihar. *Gregarious flowering* = Rapid rise of Rodents/herbivores population = ↑ Carnivores population = Forest fire / Depletion of resources = Shifting of Elephants / Tiger population toward buffer area for food, water, and shelter, leading to conflicts with people.
- Silviculture practice : After rotational felling, the growth of unwanted plants like grasses is promoted in the region, which attracts herbivore species = Predator population = shift to farmland.



- Old age + Population ↑ (e.g. Tiger) + ↑ population of Competitive species = Fight for territory
- Disease (Teeth infection) or Damaged during hunting
- Mining Noise

- Climate change : Stenothermal species are more vulnerable to fluctuation in temperature and are more likely to migrate to other places, which makes them more susceptible to man-animal conflict. Natural calamities like floods, and droughts further aggravated the conflict e.g., Floods in Kaziranga National Park in 2020-21, push Rhino toward human settlement.
- Lack of understanding of wildlife behavior : A 2020 census by the same organisations showed that the *rhesus macaque* population in Himachal Pradesh has reduced by 33.5 per cent. Since 2016, the animal has been declared 'vermin' four times. Yet, conflicts have been increasing. One reason for the increase in conflicts is that often *unscientific killings of rhesus monkeys disrupt the power hierarchy* among them. When the alpha of a rhesus pack is killed or removed, the babies or sub-adults might not know how to behave and, thus, might cause havoc and create more conflict [Non-lethal means of human-wildlife conflict management is more effective than lethal ones].
- Lack of legal protection and enforcement : Some areas may not have laws in place to protect wild animals or enforce existing laws, which can exacerbate conflicts.
- Government policy : Till 1988, government policy was focused more on agriculture and food production. As a result, a large tract of forest land was diverted towards agriculture and set up a healthy ground for men-animal conflict.

**IMPACT**

- Positive impact
  - (a) Help in understanding animal behavior
  - (b) Better man-animal cooperation, *e.g.*, the Bishnoi community worships blackbuck, the Maldhari community of Banni grassland has co-existed along with Asiatic lions
- Negative impact
  - (a) Loss of life of an animal as well as a Human
  - (b) Spread of zoonotic disease from animal to Human, *e.g.*, Covid, Ebola, etc.
  - (c) Threat to food security



Man accused of causing the death of a pregnant elephant that died after biting a pineapple stuffed with firecrackers that exploded in its mouth. The 15-year-old Elephant was unable to eat after the injury and died in a river in Pallakad in southern Kerala



An express train runs over the Elephant and calf in Jharkhand

**STRATEGY TO MITIGATE MAN-ANIMAL CONFLICT**

It is important to understand that Human-Animal conflict is largely a human-induced phenomenon, combined with the species-specific behavioural ecology of animals and external environmental facts. Thus, all conflict mitigation measures should be developed through participation of all primary stakeholders, especially local community.

► Physiological Control

- Employ scaring technology like Firecrackers. Tiger urine repels many herbivores.
- Fencing & Trenching around the plantation areas and village boundaries. Example - Community-based solar fence in Bandipur Tiger Reserve
- Population control : (a) Capturing and translocation of Tiger, leopard, Lion, etc. In Sariska and Panna Tiger reserves, where tigers have become locally extinct, they have been reintroduced. (b) Sterilization.





- Creation of wildlife corridors and flyover for highway projects passing through wildlife areas.
- Culling of Vermin's : Several states in the past have petitioned to declare various animals to be 'vermin', including elephants, Indian porcupine, bonnet macaque, common langur and barking deer. In 2016, the Centre declared *rhesus monkeys* in Himachal Pradesh, *wild boar* in Uttarakhand and *Nilgai (blue bull)* in Bihar to be 'vermin'.
- Zoos : Catching of Man-eaters.



► Environmental Control

- Modification of agricultural practices : to make them sustainable and less attractive for the pest animals. Whereas it also needs to provide them with more attractive alternative areas (Lure crops). Example - Production of chili and ginger like non-edible crops for herbivore animals.
- Improving the Carrying capacity of the core areas through enrichment plantations, improving water and food availability, and restricting economic activities in these areas.
- Creation of alternative habitats for the predators : *Declaration of new National Parks and wildlife sanctuaries*, Creation of a *multi-use buffer area* and *eco-sensitive zones* around these habitats.
- Enhanced village relocation/rehabilitation packages for people living in core or critical (tiger) habitats from 1 Lakh/Family to 10 Lakhs/Family.



Figure : Enrichment plantation

► Administrative steps

- Modern technology (including AI) should be utilized more extensively in the animal census (particularly top carnivores, co-predators, and pre-animals) and habitat assessment.
- Deployment of frontline staff (Rapid response team), experienced local people, watch team, and Eco-development committees for monitoring of carnivores, rapid action, and timely compensation of cattle damages (If/Any).
- Sensitizing locals for safe disposal of livestock carcass
- Provide Financial and technical helps to the state under various centrally sponsored schemes, viz. Project tiger, Integrated development of wildlife habitat, etc.
- Prevent trespassing and enhance punishment for wildlife crime.

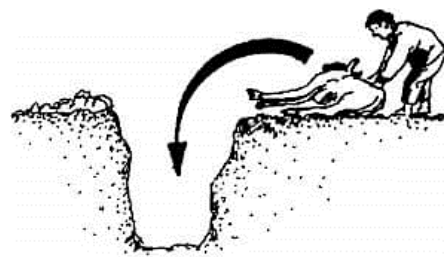


Figure : Safe disposal of Animal carcass

- **Legislative / Policy measures** : The *Wild Life (Protection) Amendment Bill, 2021* brings in a major change by reducing the number of schedules from six to four. It proposes to remove Schedule V completely. This gives the Centre direct power to declare any species to be 'vermin' and make way for them to be freely hunted. Hence, the procedure to declare animals to be 'vermin' becomes easier and the number of species labelled 'vermin' also increases.
- Also urgent need to maintain a database on the range of conflicts with the wildlife species at national, regional and State level to document frequencies of conflicts, quantum of damage to human life and property, and wildlife deaths due to conflict [[National Wildlife Action Plan 2017 – 31](#)].
  - Draw up comprehensive, science-based species-specific and region-specific, conflict-mitigation plans that can help in prevention of HWC situations and reduce the adverse impacts on both humans and wildlife. These plans should focus primarily on scientific management of wildlife populations as well as land-use practices that aid and abet conflicts in and around Pas [[National Wildlife Action Plan 2017 – 31](#)].
  - Create a centre of excellence for HWC mitigation, under the aegis of the MoEFCC, to address, develop and implement long-term and short-term measures to reduce the adverse impacts of such conflicts [[National Wildlife Action Plan 2017 – 31](#)].
  - Formulate and implement extensive education and awareness programmes to reduce the growing animosity among people towards wild animals [[National Wildlife Action Plan 2017 – 31](#)].
  - Encourage community participation in the HWC mitigation, by equipping them and training them to avoid mob formation and harassment of wild animals during operations [[National Wildlife Action Plan 2017 – 31](#)].

**IFoS 2022** : What do you understand by human–wildlife conflict? Explain with examples (15 m)

- 🌿 What are the kinds of Man-Animal conflicts observed in wildlife areas? Which are the reasons behind such conflicts? How can they be mitigated? [[GPSC \(RFO\) 2021 | 10 m](#)]
- 🌿 Provide details with examples and reasons for placing animals in the category of vermin. How does it differ from game animals? [[OPSC Forest Service \(Main\) 2019-20 | 20 m](#)]

► **Further Add-on / Statistics**

- Some 4,729 nilgais were culled from 2016-2019 after the Bihar government declared the animals to be 'vermin' to deal with crop damage.
- In 2016, the Himachal Pradesh Department of Agriculture reported a crop loss of ₹184.28 crore due to wild animals, particularly monkeys.
- **Bee fence** : Here bees and their sound are used as fencing against Elephant. Launched in Karnataka under Project RE-HAB (Reducing elephant-human attack using Bee) in Nagar hole National Park.

- Use of technology for better coordination between forest department and people. Example Chhattisgarh radio alert programme "*Hamar Hantbi hamar Gotb*".
- Uttar Pradesh government has made the man-animal conflict a '*State Declared Disaster*' bringing such incidents under the ambit of the State Disaster Response Fund (SDRF) to ensure better coordination and relief during such mishaps in the state.

### **Human-animal conflict aggravated by flawed policies?**

The Hindu, January 22, 2023

The current practice of the forest department is – (a) '*capturing' the animals in the conflict situation and translocating them* or (b) the '*shoot at sight*' orders issued to placate the local sentiments are ad hoc measures. These measures sowing failed to address the increase in human-leopard conflict, as evident in recent months. The question is doing rounds following the death of 4 persons in leopard attacks in T. Narsipura taluk (Karnataka) alone in the last three months, including two deaths in the last 48 hours. The forest department has time and again captured leopards even from villages abutting national parks and wildlife sanctuaries and translocated them into distant forests. Additional Principal Chief Conservator of Forests (Wildlife) Kumar Pushkar said since April alone, around 60 leopards have been captured and translocated from Mysuru circle alone, while the figures for the entire State were more than 100 leopards. Still, the conflict has not stopped but only increased, underscoring the exercise's futility and calling for an immediate end to the indiscriminate capture and translocation of leopards.



#### **Causes of conflicts**

- Leopard natural habitats have disappeared due to quarrying and mining, as a result of which they have shifted to man-made habitats like sugarcane fields, maize fields, and plantations. Out of 27,418 revenue villages in the State, human-leopard conflicts have occurred in over 700 villages.
- Certain flawed policies : The State government, in May 2022, issued a notification stating that nearly *1.62 lakh hectares of land are being denotified and removed from the class of deemed forest status on the grounds that it does not have more than 50 trees per hectare*. Such denotification will remove shrink the buffer and aggravate the conflict situation.
- They returned back to the original area from where they had been captured.

#### **Solution**

- A separate wing with dedicated staff and specialized training should be created within the forest department to handle human-animal conflicts.
- Expert calls for end to translocation of captured leopards; calling for new measures to mitigate human-leopard conflict, the expert suggested providing compulsory transportation for students living in conflict zones, provision of suitable lighting with solar lighting in all villages bordering forests and isolated houses in leopard habitats.