HUMAN-ELEPHANT CONFLICTS AND REMEDIES: AN OVERVIEW

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1. INTRODUCTION

Interactions between humans and elephants have a huge impact on human existence, however in recent years conflict has primarily resulted in extinction of elephant (Graham, 1973; Hoare, 1999). Other social and economic losses associated with human-wildlife conflict can surpass the actual costs of agricultural destruction, and constitute significant possibilities of conflict when locals perceive it (Dublin, 1997). Human as well as elephant death is a serious problem resulted in elephant human conflicts, but other instances include movement restrictions, competitiveness for freshwater resources, the necessity to safeguard the properties (which may result in sleep deprivation), and lower school involvement due to sleep disturbances or fear of travel. Humans continue to exploit the land for the agriculture and other purposes by destructing the habitats of wildlife especially elephants; elephant human conflicts have started on this basis and elephants begin to penetrate into the human areas (Graham, 1973). Human–elephant conflicts has lately appeared as a prominent matter of concern for elephant conservationists (Dublin, 1997), also it has immediate adverse consequences for both humans and elephants, and it is recurrently identified as a starting point to further declines in the population of African elephants.

2. METHODOLOGY

Google scholar data base was used to obtain relevant publications on human-elephant conflicts and remedies. The conference proceedings are excluded.

3. RESULTS AND DISCUSSION

2.1 Reasons behind the increasing pattern of human-elephant conflicts

1. Land use patterns and geographical changes

Humans and wildlife have become increasingly compete for territory and resources when loss of habitat and regional threats to elephants reduce the geographical range of human-elephant contact over most of Sri Lanka (Barnes, 1996; Kiiru, 1995). Habitat loss and poaching have crowded the elephants into smaller area. Crop cultivation in the surrounding areas is inextricably linked to localized high densities (Barnes et al., 1995).

2. Man made changes in elephant behavior and socio-ecology

Human conflicts have relocated elephants and forced them to rely on crop cultivation as a means of survival in areas lack of resources.

3. Social, economic and political changes in human societies

Crop guarding has declined as people are migrating to cities in search of work, while youngsters are becoming more educated than before. Therefore, crop and livestock protection against wild animals become more difficult and farmers are started to use dangerous ways to control the disturbances by wildlife.

a. Conflict alleviation techniques

1. Traditional methods

   Most traditional deterrence tactics are ineffective, temporarily relieving the problem or relocating it to another location. The main issue with traditional approaches, especially in the long run, elephants get used to the deterring methods and resist them without any reflection. Elephants are intelligent animals that swiftly resist the techniques of abolition such as, fear of fire, noise, or other disruption when they realize there is no risk at all.

- Crop guarding

  Farm security officers asleep on guard towers with some means of warning the people about crop-raiding elephants (e.g. whistles) are an important part of any conventional deterrent technique, even those aren't really deterrents.

- Noise

  One of the most prevalent tactics is to beat on drums or make any form of noise. Farmers in the Maputo Elephant Reserve are employed noise generated by beating on tins and pots to scare elephants away, however only 52% of farmers said it was effective.

- Fire

  The majority of wild animals avoid contact with fire. Short-term deterrents like bonfire at field boundaries or at elephant entry points are effective, although they are not suitable for long periods of time because it requires significant swaths of forests or vegetation to be taken down (Nelson et al., 2003).

- Air-borne missiles

  Few well-known tools used as airborne missiles include sticks and stones, as well as flaming tinder and spears. The nature of the contact is particularly dangerous; this frequently results in tragic incidents on both sides (Nelson et al., 2003).

2. Disturbance methods

   Disturbance measures bring immediate relief in human elephant conflict. The failure in transport the elephants quite far away across a vast region or to prohibit the returning of elephants and subsequent behavioral changes are the flaw with isolation or disturbance approaches (Nelson et al., 2003).

- Firing weapons

  Many localities have utilize firearms to fire in an air to scare the elephants or chased off from the cropping area. It is successfully utilized in many countries in conjunction with electric fencing (Nelson et al., 2003).

- Killing elephants

  Problematic elephants have been and continue to be killed as a short-term remedy for human-elephant conflict. Though killing elephants has a quick impact, every elephant population (with available replacements) is likely to have a problem component, making this an ineffective long-term solution (Nelson et al., 2003).

- Translocation

  In general, translocations tend to be the best option among other disturbance methods. The problematic animal is moved to a location where it will come into less interaction with people and their crops. It prevents elephants from being killed, replenish the reserves that have been ravaged by illegal hunting.

3. Repellent methods

   Elephant repellents both olfactory and auditory are still in the initial phases of development; particularly with olfactory repellents, and they are expected to play a role in conflict deterrent measures in the future. Chilli oil or grease on the fences is currently being investigated as a repellant on conventional barriers surrounding the farms in Zimbabwe.

4. Physical barriers

   In human-elephant conflict scenarios, physical barriers are frequently considered as the long-term solution. People prefer to put up walls even though there are lots of disagreements among the farming communitie.

- Electrified fences

  In the case of human-elephant conflict, electrified fences are seen to be the best option. They can only succeed with meticulous planning, expensive construction, and a commitment to maintenance, as well as some other method of evicting and/or penalizing errant elephants.

- Stone walls

  Relatively high building costs and a scarcity of useable stones in most places further hampers constructions of stonewalls. Elephants can break them with the might of their chests. According to Nelson et al. (2003), stonewalls with a reinforced concrete top or an electric current running along the top could be considered as effective solution.

4. CONCLUSION

Elephant-human conflict is one of the most important problems in agriculture-based communities. Elephants can cause death to the humans, however elephant human conflicts resulted in extinction of wild elephants. Therefore, conflict between elephant and human should be solved or reduced to conserve our environment where elephants are being as a hot spot of particular ecosystem. In return to the end of this study, humans are the initiators in this regard and still they engaged to increase the conflict with elephants. However, there are lot of conventional and modern techniques are in practice to reduce the human elephant conflict. And translocation of problematic elephants and electrified fences are seeming to be best option among all other methods. Some other alternative ways to reduce human elephant conflict can be recommended after this detailed study are, people should be more considerate about the

environment and prevent the deforestation in order to construct the human settlement and farming. As a responsible human being we should not block or disturb the elephant lanes, otherwise we need to establish the elephant lanes which are more convenient to man and elephants. With this we can conclude that, human should behave with humanity with other living creatures while their own development.

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