

## Participatory Development in Nepal: Challenges and Opportunities for Conservation in Managing Human Elephant Conflict

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### Introduction

Human Elephant Conflict (HEC) is increasing with the continuous conversion of elephant habitat for human use, subsequently creating conflict between rural farmers and elephants, and becoming a major conservation concern across Africa and Asia (Sukumar 1989; Osborn & Parker 2002). Addressing the issue of HEC is imperative as this continuing conflict not only jeopardizes the survival of elephant populations, but also contributes to the loss of human life whilst undermining collective conservation efforts within local communities (IUCN; Nelson *et al.* 2003; Chong & Norwana 2005).

In the past HEC has been addressed on a technical level, investigating tangible mitigation methods available. However it is not possible to address the problem of HEC effectively without information about what it is elephants are damaging, and where and when these damage incidents occur (IUCN). Data on HEC distribution, frequency and severity needs to be gathered through deliberate and standardized field research as incidents occur in order to understand the causes and scale of the problem (IUCN; Desai 2002; Nelson *et al.* 2003; Chong & Norwana, 2005), so a broad picture of the key explanatory factors will allow for the development and implementation of effective, site-specific solutions, mitigation and management plans (IUCN).

At the same time key ideas in participatory development of including those living in poverty within their own development have been registered as a key factor in the success of development projects. This success acknowledges the need to include those who are most affected by HEC to become involved with the solution (Nelson *et al.* 2003). Recent literature also reflects this in an

increase of grassroots rhetoric, heralding HEC as more of a developmental issue.

This paper is based on information gathered as part of a six month field expedition in Nepal, from August 2006 to February 2007 and operating under the WWF that investigated HEC between Bardia National Park in Nepal and Katarniyaghat Wildlife Reserve in India. It supports the notion that there is a demand for greater enumeration of HEC incidents, and offers suggestions for marrying enumeration and local participation in development projects. It supports Osborn and Parker (2003) suggestions that an integrated community-based, low-tech approach will be the most sustainable solution to conflict.

### Participatory development

With habitat loss and environmental degradation being the underlying causes of HEC (Desai 2002 as cited in Chong & Norwana 2005) and both often facilitating [the need for] protected area strategies the 'Yellowstone model' has been adopted in many areas, however has not met with great success in many developing countries (Gurung 1995; Schelhas 2001); and in some circumstances can be attributed to having accelerated the impact of some Human Wildlife Conflict (HWC).

In response to the challenges associated with the Yellowstone model's 'fence and fines' approach to nature conservation, participatory approaches such as Integrated Conservation and Development Programs (ICDPs) have been applied into many protected area strategies (Gurung 2006; IIED 1994). The reorientation of Nepal's conservation endeavours to encourage a more participative approach, and the success of the KMTNC's (King Mahendra Trust for Nature Conservation)

Annapurna Conservation Area Project (KMTNC/ACAP), influenced national conservation policies and paved the way for community initiatives in Nepal (Gurung 2006), reflecting the paradigm shift away from 'top down' approaches to more so called 'bottom up' approaches. This move towards ICDPs acknowledges that people need to be engaged within the development process if conservation strategies are to be sustainable in the long term (Parker 2004).

Despite this reorientation, some past strategies remain unchanged in Nepal's Terai and patterns of rural development have fuelled the expansion of the agricultural frontier. In doing so, islands of suitable habitat arise amongst a sea of agriculture, putting humans in direct conflict with wild animals and uncultivated landscapes (Sanderson 2004). As a result, subsistence farmers bear the cost associated with maintaining wild elephant populations, (Osborn & Parker 2003) making HEC a crucial issue for Nepal (WWF).

### Enumeration of Human Elephant Conflict

The IUCN's present data collection and analysis protocol for HEC situations in Africa propose using a combination of sampling methods, in order to obtain primary data. This involves the reporting of HEC incidences to trained enumerators who visit the site of the incident, and interview the affected person(s) as soon as possible after the incident. The enumerator makes their own assessment of the incident by completing an Elephant Damage Report Form, as well as asking the complainant to provide them with retrospective details about



**Figure 1.** Elephant proof trench digging.

the incident (IUCN). This information is then analysed allowing sites to be compared.

These protocols have been initiated in some regions on the African continent but not yet in Nepal, and it is felt that a more stable political situation is required before such a protocol could be implemented (A. Christy Williams, pers. comm.).

### Discussion

With the need for greater enumeration of HEC incidents in Nepal, and simultaneously a call for more local participation in development projects, and the inclusion of those who are most affected by HEC (Nelson *et al.* 2003) this paper draws on Osborn and Parker (2003) suggestions for a new approach to Problem Animal Control (PAC) that focuses on what communities are able and willing to do for themselves by having them take responsibility for problems such as crop pests. Whilst these suggestions are being applied (still) to tangible mitigation methods, they could be applied to locals in the collection of primary data on HEC incidents.

By doing away with the need for trained enumerators, and instead providing a User Community (UC), Community Forest User Group (CFUG), or Village Development Community (VDC) with the means of recording incidents of HEC - such as with standardised spreadsheets like the Elephant Damage Report Forms - it would become possible to unite both participation and conflict enumeration by having farmers participate towards the enumeration of HEC. Such a method would be subject to the inherent biases not present with impartial enumerators, but could however provide valuable information on the frequency and distribution of incidents, with relatively minimal input.

Data collection could see completed spreadsheets being delivered to a single centralised office, or a series of satellite offices. Alternatively the adoption of 'technological leapfrogging' may be used by having individuals trained in inputting data onto palmtop computers with information being transmitted by wireless connection to

a central computer, addressing the logistical challenge of remote locations.

Including local people in the collection of primary data could encourage willingness for locals to get involved in long-term processes like land use planning and economic development, also suggested by Nelson *et al.* 2003. By encouraging farmers to take greater responsibility for the problems of HEC, we would see a move towards decentralisation, with HEC as an issue of Community-Based Natural Resources Management (CBNRM) or Common Pool Resources (CPR) through initiating ecotourism.

Decentralisation and participatory development have emerged as an important instrument of environmental and development policy in the last two decades. Where common pool resources (CPR) and community based natural resources are concerned, the goal of decentralization policies has often been to increase participation of rural households in decision making and benefits related to environmental resources (Agrawal & Gupta 2005), something that needs be done in addressing HEC.

However, factors that help explain local participation in decentralised schemes need to be examined. Many rural communities, especially in Nepal's Terai and more generally in South East Asia, are highly differentiated and stratified (Agrawal & Gupta 2005). In such circumstances, the question of differential participation becomes especially important because the benefits of decentralisation policies are seen to improve with greater participation. Presumably, those households that participate more in efforts to devolve control over resources are also the ones that gain greater benefits from resources. Conversely, non-participating households benefit less from decentralisation because they are unable to exercise their voice (Agrawal & Gupta 2005). In CBNRM schemes for tackling HEC this could see mitigation measures being taken away from lower caste communities and applied where conflict is perhaps less severe.

Policies that aim to empower communities and alter the status quo vis-à-vis power structure

within the community are likely to meet resistance from local elite's, as they resist any form of structural change. Where approaches reinforce or build upon local networks of power and authority, less resistance from the elite is likely (Parker 2004). It is important that research and ICDP facilitators recognise local level conflict and power inequities.

## Conclusion

Limited time and money is often spent on technologies aimed at tackling the challenges of HEC, with little research going into trying to map where and when incidences occur. By acknowledging the need for local involvement (Figs. 1 & 2) in moving towards alleviating HEC - with focus on what communities are able and willing to do for themselves – ideas of shifting the responsibility for crop protection to farmers and self reliant participatory development and conflict alleviation – that isn't completely reliant on outside funding – is at least theoretically, an approach that is more sound than any single technical solution (Osborn & Parker 2003).

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**Figure 2.** Elephant proof trench in Laksmipur.

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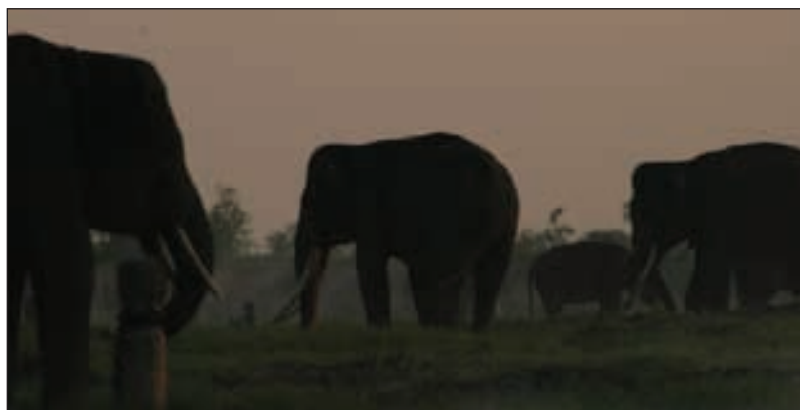
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Way Kambas elephant camp, Lampung province, Sumatra  
Photo by Wahdi Azmi