



# **Nepalese Compensation Scheme - Chitwan National Park**

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# Nepalese Compensation Scheme – Chitwan National Park

*The following case study was put together using a framework designed to help gathering information on lessons learnt globally on the financial, institutional and structural components required to have sustained success in tackling Human Wildlife Conflict.*

## 1. GENERAL BACKGROUND

What is the name of the HWC scheme you are focussing upon?
Wildlife Damage Relief Scheme in Chitwan National Park (CNP).
Whose scheme is it e.g. NGO/ national government/ multiple agencies
Government
What is your [the author's] relationship with the scheme?
The author – Prabhu Budhathoki – is a former park warden of the Chitwan National Park. He was also Project Manager of the Park and People Project, a programme implemented by the Nepal government to reduce park people conflict in Chitwan and six other protected areas in the county.
What are its objectives/ are there defined objectives?
There are no clearly defined objectives. However, as per the preamble of the Wildlife Damage Relief Guidelines 2066 (2009) the main reasons for the introduction of the relief/compensation scheme is to reduce conflict between local communities and conservation agencies and to increase communities' support and ownership for conservation initiatives. The Wildlife Damage Relief Guidelines have provisions for compensation of loss of human life and livestock, damages to vegetables and fruit orchards and physical assets and treatment in case of injuries.
Where is it applied – country/region/site e.g. protected area
The scheme has been applied throughout the country. But this case study covers the activities in Chitwan National Park only.
How long has your scheme been in operation, and when did it start?
Since the mid 1990s an ad hoc park level compensation scheme for human casualties in Chitwan has been in operation. But a formal nationwide government compensation policy was introduced in 2009.
Is it still in operation?
The Chitwan compensation scheme is ongoing.
Is it species-specific? Or does it deal with multiple species?
The scheme has provision to compensate the damage caused by elephant, tiger, rhino, leopard and bear. However, in practice park authority has also been paying modest compensation for life and properties damaged by other animals.

## 2. TYPE OF INTERVENTIONS

Does your scheme, or the wider project it sits within, include one or more of the following <b>mitigation measures</b> ?	
<i>If so please tick the appropriate boxes and give a brief description of the interventions in question – see note<sup>1</sup> below.</i>	
Compensation [financial or non-financial] <input checked="" type="checkbox"/>	
Financial compensation for human injuries or loss of life, as well as livestock depredation and crop damage, around the Park.	
Insurance	
Performance/ incentive payments	
Additional benefits being provided to HWC affected communities [e.g. under CBNRM]	
The Park authority mobilises 50% of the total park revenues (tourism and other incomes) to various community development activities through its Buffer Zone Management Programme. Average annual expenditure of CNP in various BZ activities is more than US\$ 300 000 (US\$ 1 = Rs. 72). The BZ management programme gives priority and incentives to wildlife victims and their family members in the installation of biogas plant, park jobs, loan and skill enhancement training etc. There is also scholarship fund to support school level education of the wildlife victims' (death and seriously injured) children.	
How are the above benefits being linked to HWC resolution?	
<i>I.e. how are you making the link between community benefits and conservation, and are the beneficiaries being differentiated on the basis of the level of HWC they experience?</i>	
Buffer zone management policy has many provisions that directly and indirectly mobilise more resources to higher HW conflict areas and favour wildlife victims. Depending upon the population size and intensity of park impacts, the Buffer Zone Users Committee [BZUCs] have been divided into four categories (A-D) and BZ funds are disbursed accordingly with the highest budget to 'A' category communities. At present, the buffer zone of CNP is divided into 21 units (generally known as - BZUC) out of which 2, 11, 7 and 1 are A, B, C and D categories respectively.	

Does your scheme, or the wider project scenario it sits within, include any <b>preventative measures</b> ?	
<i>Please provide brief detail in the appropriate boxes:</i>	
Fencing	Fencing and trenches have been important activities of the BZ programme since its inception in mid 1990s. To date approx. 170 km electric fencing, and a similar length of barbed wire fencing and trenches, have been constructed in the periphery of Chitwan National Park.
Guarding	Wooden or bamboo platforms are traditional animal preventive

<sup>1</sup> If your scheme does not involve compensation, insurance or performance payments, and nor does it have any other financial mitigation component then please don't fill in the rest of the case-study pro-forma, just return it as it is.

	infrastructures to protect lives and crops from wild animals. So far, 24 wooden platforms ( <i>machans</i> ) have been erected in the various parts of the BZ areas where local farmers spend many sleepless nights during crop harvesting seasons. Villagers stay in the <i>machan</i> to chase away wild animals coming to farmlands and settlements using various means such as setting fires, making noise by hitting on tin, throwing stones on wild animals, exploding fire crackers, etc (Nakarmi, 2009).
Voluntary resettlement	In order to resolve human - wildlife conflict and to create more habitat for wildlife, recently one village having 1740 households was relocated to the area far from the park boundary.
Land-use strategies	Local people have been encouraged to cultivate crops that are less preferred by wild animal. The park has also been initiating community forestry programme in the buffer zone in order create alternative forestry resource base for local people and also to protect corridors and connectivity forests for the dispersal of wild animals.
Others	Through their BZ management programme, the park has been implementing various programmes such as community plantations, micro enterprise creation and installation of biogas plants to reduce people's dependence on park resources for their subsistence livelihood and thereby reduction of human-wildlife conflicts.

Does your scheme, or the wider project scenario it sits within, include any **reactive measures**? e.g. lethal removal

Yes, but only occasionally. For example, between 1979 and 2006, 16 tigers that had attacked people were removed from the conflict area. 11 were killed and rest were sent to national zoo in Kathmandu (Gurung, 2008).

Does your scheme, or the wider project scenario it sits within, contain any other elements that we have not listed above?

Translocation of problem animals to other parks. One of the main reasons of rhino translocation from Chitwan National Park to other protected areas was to reduce crop depredation and human wildlife conflict in Chitwan. Between 1984 - 2003, more than 90 rhinos were shifted to Bardia National Park (83), Suklaphanta Wildlife Reserve (4) of western Nepal and Dududwa National Park (4) of Northern India (DNPWC, 2006). As the number of rhinos has increased over time, rhino related human wildlife conflicts have been reported in Bardiya National Park.

### 3. RELATIVE IMPORTANCE

Please rank the elements of the HWC resolution scheme in approximate order of relative importance as far as you are concerned

The priority activities to reduce HWC are:

1. Fencing and other physical barriers
2. Watch towers
3. Compensation: first priority being given to human casualties (both death and injury) followed by livestock depredation, destruction of vegetables fruit orchards, loss of stored

- grain, and damage of houses.
4. Voluntary resettlement as a last option.

Describe the scheme, detailing how the various elements work together and any dependencies that there may be therein

*e.g. land-use planning ensuring that compensation payments are kept to a reasonable level*

The park office has been implementing both preventive and curative activities based on the 3 Rs (relief, reduce and resolve) strategies. The animal preventive infrastructures (APIs) such as trench, fencing and watch tower have been constructed to help reduce HW conflicts, whilst the alternative forest resource base has been developed in the buffer zone areas together with the promotion of alternative livelihood opportunities to help resolve conflicts in long run. Alternative land use and livelihood practices are not only necessary for human wellbeing but also equally vital for long-term survival of the important mega fauna. Studies elsewhere suggest that species most exposed to conflict with human beings are also likely to be more prone to extinction (Ogada et al 2003). This suggests that the conservation practices that take people into account usually benefit wildlife (Budhathoki and Nakarmi, 2011).

Does the order of importance you gave match the perceptions of the beneficiaries?

*I.e. are some elements given more significance than they really warrant e.g. dealing with large, dramatic HWC events versus regular, smaller events with higher total impact?*

The local peoples' preference would also more or less same as mentioned above.

1. Fencing and other physical barriers
2. Watch towers and animal scaring devices.
3. Compensation to victims.

Nonetheless local prefer a combination of all measures rather than a single isolated measure.

The current compensation scheme adopted by the park is one of the most generous and systematic in the developing world. The priority set by current compensation scheme [i.e. casualties followed by livestock, then crops] seems in consistent with the expectation of the local communities.

However, local people are not happy with the compensation amount now being offered or the procedures to access it (Amir Maharjan, Assistant Warden, Chitwan National Park, personal communication, July 2011). The compensation procedures are lengthy and cumbersome (Nakarmi, 2009). Local people argue that the compensation amount for human death (Rs150 000) is a gross under estimation of human life by the park authority and is not in consistent with other compensation policies of the government [which provides Rs500 000 to the family of a person unlawfully killed in road or in riot].

Moreover, wildlife victims favour other support mechanisms over monetary compensation, which is only fourth in their priority (Budhathoki and Nakarmi, 2011). They are in favor of long term and sustainable provisions over one-off relief handouts. Their preferences [in order of priority] are for the establishment of a long- term mechanism to support their dependants of victims and injured, the introduction of an insurance system, regular allowances to people who have lost their physical abilities; and job and skill training respectively (Budhathoki and Nakarmi, 2011).

#### 4. PROCESS

Whose idea was it to initiate this scheme, and why?

*i.e. what stimulated its inception e.g. was the statutory authority involved not taking sufficient action; were levels of HWC escalating, etc.*

Since the inception of Chitwan National Park, in 1979, human-wildlife conflicts have been regular phenomena and considered as a serious threat to park management.

A study suggested that at least 10% of the park's tiger population was poisoned in 1988-1999 (Martin 1992); whilst, over the last 30 years (1979 to 2009) 92 people (> 3 persons/yr) were killed by tiger alone. The park data also revealed that between 1997/98 – 2008/09 every month on average there were more than three incidents resulting in human casualties (death and injury).

In the mid 1990s, the government introduced a BZ management policy that authorised park authorities to spend 50% of the park income on local community development (Budhathoki, 2004). Although the BZ management programme was based on indirect and community compensation principles, due to seriousness of the problem, park authorities also used this funding opportunity to address HWC issues by paying modest compensation to its victims. However, the compensation scheme initiated by the park was limited to human casualties and livestock depredation cases. It wasn't enough to compensate the broader losses induced by the park animals. As a result, the buffer communities' attitudes towards wildlife remained largely negative despite an improvement with the park authority relationship after the implementation of BZ programme (Paudel et al 2007). A study suggests that personal affectedness is the key to shaping attitude towards wildlife (Gurung, 2006). Realising the limitation of the park level compensation scheme and the exiting BZ activities, the government formally introduced a revised compensation policy in 2009 with increased resources and clear guidelines. For example, in case of human death and serious injury the compensation amount was increased from Rs. 50 000 and Rs. 20 000 to Rs. 150 000 and Rs. 50 000 respectively.

What was the process of selection of the HWC interventions selected?

After the restoration of multiparty democratic system in 1990, the HWC issue also became seen as a political and human rights issues. The politically empowered communities compelled the park authority to devise some mechanism to compensate lives and properties damaged by the wildlife.

How were potential beneficiaries involved in the design of the scheme

As discussed before, some sorts of compensation schemes have existed in CNP since mid 1990s. However, the compensation policy was seriously pursued during the 24<sup>th</sup> Warden Seminar held in 2008 in Chitwan National Park. The community representatives from the buffer zone had also been invited in the discussion. Various aspects of HWC had been thoroughly discussed. Based on the recommendations of the seminar, the government enacted the Wildlife Damage Relief Guidelines – 2009. The introduction of this compensation policy by the government of Nepal can be considered as a significant outcome of many years of joint efforts of local communities, park staff, and NGOs and an important milestone in the conservation history of Nepal. The BZ programme has been instrumental in creating a network of community-based institutions in the BZ. The community-based organisations such as Buffer Zone User Committees (BZUCs) at the village level and Buffer Zone Management Committee (BZMC) at the park level have been effective platforms for park people dialogue (Budhathoki, 2005). Through these community forums, BZ communities have been successful in asserting their local needs and concerns and to some extent influencing compensation policies and practices.

Were or are there any important legal or institutional challenges that needed to be overcome to establish and implement the scheme, or was the existing system sufficiently supportive?

There exist both legal and institutional difficulties to implement the compensation scheme smoothly. There are two problems, firstly the processes are complex and bureaucratic and secondly it takes a long time to get compensation. Depending on the type of incident wildlife victims have to prepare at least six to nine types of documents to apply for compensation. Similarly, the application should pass through at least six layers of government bureaucracy. The system is so centralized that each case requires approval from the Ministry of Finance. Generally victims can receive compensation only after six months of the incident creating frustration and agony among them. Both park staff and wildlife victims are not happy with the existing compensation procedures.

How could any challenges you have mentioned be overcome

In the author's opinion the lengthy and complex compensation procedures can be improved by giving more authority to local park staff and BZ users committees. Similarly the need to send every application to the Ministry of Finance could be avoided by allocating a lump-sum budget for compensation in the annual budget of the park. Properly empowering and educating local buffer zone users, committees and park staff could facilitate more sympathetic assessment of claims and losses. In order to give quick relief to wildlife victims, there must be provision of some emergency fund in the disposal of local park staff or buffer zone users committees. With minimum cost, the park can also mobilise local NGOs to carry out most of the administrative procedures. Similarly, a community-based insurance scheme run through local cooperatives could be another viable option to improve the current process. However, so far the park authorities have not considered these options.

## 5. STRUCTURE AND COSTS OF THE SCHEME

What was the overall set-up cost for your scheme, and where did this money come from?

*Please list any major one-off items required for the initial establishment.*

The compensation scheme was started in 1998/99 with the establishment of a relief fund of NRs. 500,000 (approx. US\$ 6,900) for Chitwan National Park. The fund was accessed from the 50% of the park incomes allocated for the BZ management.

What are the annual costs of running your scheme?

Approx. Rs 4.5 million (US\$ 62,000) excluding administrative cost for running the scheme.

What were the main components of this cost? e.g. staff time, labour, etc

Since the park is managing the compensation scheme, the administrative costs have been covered by regular budget of the park is not included in the compensation budget.

What is the total payout from the scheme to-date?

*If possible also tell us how many incidents it has been used to mitigate/ how many pay-outs there have been*

Park data suggests approx. 2400 HWC cases (human casualties, livestock and crop depredation and property damage) were registered between 1999/00 to 2008/09 and Rs8.46 million (on average Rs 0.85 million per year) had been paid-out as compensation. However, since the introduction of new compensation policy in 2009, the annual budget requirement for compensation has increased to approx. Rs 4 million. The rise is mainly due to the inclusion of additional types of HWC cases such as loss of stored grain, vegetable garden etc. under the compensation scheme and an increase in individual compensation amounts. For example, the new policy has increased the compensation amount for human death by three times and injury by

2.5 times.

However, numbers of claims for compensation have been reduced over time. In 2009/10 only 116 cases of livestock depredations and 25 cases of human casualties were recorded in comparison to 260 and 45 respectively in 1999/00. Similarly, there was nearly a one fifth reduction in compensation claims between 2008/09 and 2009/2010. The decrease in claims indicates that by effectively pursuing preventive activities such as electric fencing the government could keep the compensation amount particularly of crop and property damage to a reasonable level.

Altogether 202 cases were reported in the fiscal year 2010/2011 in which 9, 26, 95, 31 and 41 were human death, human injury, livestock loss, destruction of houses and animal sheds; and fruit orchards/vegetable garden damage cases respectively. To pay all compensations up to July 2011 as per the new compensation guidelines, the park needs an additional Rs.6.9 million. However, the Ministry of Finance has been delaying releasing the funds for the compensation of livestock and crop depredations, losses of stored grain and house damages despite policy provisions.

How have you funded this

*E.g. local government revenues; central government funding stream; tourism levy; or donor finance?*

Three funding streams are currently available to pay wildlife induced losses:

1. CNP has been using the park level endowment fund as a buffer fund to pay certain portion of the compensation for immediate relief (Narendra Pradhan, former Chief Warden, personal communication, July 2011). The Park's endowment fund has recently been increased to Rs. 2 million with the contribution of WWF's supported Tarai Arc Landscape Project and National Trust for Nature Conservation (NTNC).
2. This is topped up by money from the central treasury, after the introduction of government compensation policy in July 2009, which replenishes the park endowment fund once the full compensation is received from the government [which takes at least six months to complete the process].
3. Finally the Buffer Zone Management Programme [generated from tourism revenue] still includes a compensation allocation that covers some of the issues not included in the current compensation policy such as scholarship to the children of wildlife victims (death and disabled), destruction of fish and fish ponds etc. have been covered from the budget of BZ management programme.

Are the sources of funding permanent or time limited?

*And if so how many years are costs currently assured for?*

Since the compensation scheme is now a part of the government's conservation policy, it is hoped that the relief fund from the government would be regularly available for the park. Even in the absence of central fund, Chitwan National Park can manage reasonable budget for compensation from its ongoing BZ management programme.

How is it decided who benefits from the scheme?

*E.g. eligibility criteria – such as minimum time of residence; geographic limits, etc.*

The priority of the compensation scheme has been largely based on two criteria: i) protection status of the wild animals and ii) severity of damage the animals cause. For example there is a provision of compensation to damages caused by the animals that are endangered and strictly protected by law. Other animals like deer species and wild boar are common and do not enjoy special protection [although they still can't be killed without permission], so the damage caused by

these animals is not included in the current compensation policy. However, as a common leopard can cause severe human and livestock casualties, the damage caused by this animal is included in the compensation policy despite its low protection status. Similarly, the scheme gives top priority to human casualty cases followed by livestock loss and crop damage. In this way the compensation policy has been trying to address both ecological as well as socio-economic concerns of the society.

Any person can claim for compensation for wildlife damage outside the park boundary. Additionally, wildlife victims are entitled to get compensation for their losses if the incident took place inside the park while travelling on the public rights-of-way or collecting forest products and doing other activities with official permission. A victim should make claim to the park office within the 35 days of the incident.

How did you work out what level of payment/compensation was appropriate, and is this amount subject to review [*if so when and how?*]

There are clear procedures, criteria and ceiling for the payment of compensation to wildlife victims (DNPWC, 2009). While deciding on payments, besides other documents, claim assessment committee under the coordination of park officer will also assess medical bills in case of human injury and market values in case of livestock and crop losses. The amount provisioned in the current compensation guidelines are as follows:

- In case of death, victim family will get Rs. 150 000 as compensation.
- In case of serious injury (loss of body parts, disability etc) a victim will get max. Rs 50 000
- In case of normal injury, a victim will get maximum Rs. 5 000.
- In case of livestock loss, a family will get max. Rs. 10 000
- In case of destruction of fruit orchards, a family will get max. Rs 5 000
- In case of destruction of stored grains, a family get max. Rs 5 000
- In case of destruction of building, a family will get max. Rs 4000

How are you dealing with any perverse incentives that you might have identified as arising from the scheme (*e.g. incentives to migrate to the area*) or any opportunities for/ instances of abuse?

At present there does not exist perverse incentives as such which induce or increase human wildlife conflicts in Chitwan National Park. However, there have been reports that local people have been becoming the victim of their own conservation efforts. The increasing trend of human casualties in buffer zone areas has been attributed to the success of community forestry in the buffer zones (Gurung 2008). In community forests, local communities strictly control livestock grazing and people are only allowed to collect fodder. With the protection measures in place, both plant and wild prey biomass have increased in community forests attracting wildlife like rhinos, tigers, leopards and elephants to live permanently or visit regularly. Study suggests that currently, tigers use the buffer zone forests more frequently than 2-3 decades ago (Gurung 2008). The occurrence of wild animals in community forests has increased the chances of human - wildlife encounters resulting in higher human casualties.

In fact from 1998 - 2008 human deaths from the tigers and elephants increased, the former by an average of 1.21 persons per year. This included one 5-month spell when there were 4 fatalities. Most of these deaths occurred in the areas where animal preventive measures were either not in place or were not properly maintained and in buffer zone community forests where people collect livestock fodder (Gurung, 2008).

The chances of fraudulent claims seem quite slim as the compensation claims have to go through the scrutiny of nine agencies from the time of incident to release of relief fund. Similarly, the compensation policy is based on the principle of partial payment of the losses, and provisions of fixed and maximum ceilings in the guidelines would not allow people to access excess funding. It is also important to note that in case of crop damage local people are satisfied with the 50-70%

compensation of their losses (Adhikari et al 2005).

How is the scheme administered; what are the different roles and responsibilities of the different groups involved?

*E.g. which is the lead organisation, and who is responsible for outreach/field implementation?*

The Chitwan National Park Office is the main agency to implement the compensation scheme. However, there are more than nine organisations involved. The institutions and their roles involved in the compensation scheme are as follows:

- i. Ministry of Finance – release of the compensation fund.
- ii. Ministry of Forests and Soil Conservation/Department of National Parks and Wildlife Conservation – coordination with Ministry of Finance to release compensation fund as requested by the park office.
- iii. Park Office – coordination and implementation of compensation scheme as a lead agency.
- iv. Local Police office – certification of incident particularly human casualties.
- v. Local government agencies such as Village Development Committee/Municipality – certification of incidents
- vi. Local hospital – certification of death, post-mortem report, medical report etc
- vii. Local Buffer Zone Users Committee – certification of incident and coordination with park office on the behalf of victims.
- viii. Local agriculture/veterinary offices - certification of livestock and crop losses
- ix. Regional Directorate of the Forests – monitoring and evaluation of the compensation scheme.

Do the institutions involved have sufficient capacity to run the scheme effectively?

There are both coordination and capacity problems. Particularly, the park does not have enough human resources, as well as properly trained staff, to handle HWC cases. Furthermore, coordination among the various agencies having diverse priorities has been a major problem for timely release of compensation to wildlife victims.

## 6. OUTCOMES

What are the main achievements of the scheme to-date; and what have the key challenges been?

### *Achievements*

The main achievement of the compensation scheme is the reduction in retaliatory killings and resentment of local people towards park. Although in the last two years (between July 2007 to June 2009) there were deaths of 3 elephants, 2 tigers and 30 rhinos, none of this mortality was reported from the retaliatory killings. The relationship between park staff and local people has been significantly improved in recent years and the violent conflicts that used to occur between local people and park staff in the past do not exist anymore (Budhathoki, 2003). A study suggests that if rhino damages are reasonably compensated, more rhinos can easily coexist in the Chitwan landscape (Adhikari et al 2005). Local people are not against wildlife and the park; they are only against the nuisance they cause to them. An assessment of human wildlife conflict by WWF-India (2007) revealed that if prompt actions are taken to reduce grievances of the local communities a retaliatory situation can be avoided.

It has been reported that crop damage from wildlife has been substantially reduced after the construction of electric fences along the park boundary forests. For example, nearly 90% and 47% of people living in the eastern part of the national park believe that crop damage and

livestock depredation respectively have been reduced by at least 30% after the construction of electric fence. (Sapakota 2009). This has helped reduce the human-wildlife interface, resulting in lower claims for the compensations of livestock and crop damages.

### *Challenges*

There are three key challenges to achieve desired results from the compensation scheme. It needs to be swift, sufficient and sustainable (3Ss), whereas the current compensation mechanism is very lengthy, complex and cumbersome.

However, wildlife victims only get compensation six months after the incident. The existing compensation amounts are not only inadequate in comparison to losses, and many damages inflicted by wild animals are also not incorporated in the current compensation scheme e.g. crop losses. And, finally, despite the Wildlife Relief Damage Guidelines - 2009 having clear provision to include damage to houses, livestock, fruit orchards and stored food grain, the government is not able to release the budget to compensate these losses [which calls into question the scheme's sustainability].

These claims generally account for more than 60% of the total compensation claimed (human casualties account for less than 40%). This has been causing dismay among local people and impacting on the park-people relationship. Human behavior regarding wildlife conservation is regulated by the impact of wildlife conservation on them and possible compensation for their losses (Islam et al 2010). In the absence of a quick and sustainable relief mechanism, the support of the local communities for wildlife conservation will be difficult to maintain.

Is the scheme achieving its objectives?

Generally yes but not fully. People appreciate the compensation policy of the park but do not fully approve it due to the cumbersome process, and inadequate compensation amount and coverage.

How are you measuring the impact of the scheme/ its effectiveness?

*I.e. what indicators do you use?*

So far, there is no systematic, regular monitoring and evaluation system for the impact of the compensation scheme in Chitwan. However, some researchers have tried to assess the effectiveness of the direct and indirect HWC mitigation measures through semi-structured questionnaire surveys and case studies cited herein (see Budhathoki, 2004; Nakarmi, 2009; Sapkota, 2009).

Is it cost-effective compared to other options that could have been selected?

*And, if there were other more cost-effective options available why didn't you opt for these?*

Since there is no impact study conducted, comparative data does not exist yet.

Do the benefits to the local population/ communities from the scheme compare to the costs they incur as a result of problem animals?

No. There is no coverage of crop damage and compensation amounts for the loss of big animals such as buffalo or milking cow is not more than 20-25% of the market price.

How do you assess this?

*e.g. via community perceptions or level of satisfaction; or, through assessment of [financial/ nonfinancial] costs and benefits; are you using opportunity costs, and are you including wider benefits from CBNRM schemes, etc.*

There is no systematic study data.

Are there affected communities or individuals that are not benefiting from the scheme and why?

Almost all cases of human casualties (death and injury) have been compensated. Compensation related to livestock losses etc are still being considered by the Ministry of Finance. In this respect, more than 80% (166 out of 202) of the wildlife damage cases registered by the local people in F/Y 2010/2011 are still not compensated.

What percentage of households affected by problem animals are currently benefiting from the scheme?

More than 80% of the households living in the periphery of the Chitwan National Park experience crop losses from wild animals and are not receiving any compensation. Similarly, a large number of people will be deprived of benefit from the current scheme if the government does not pay compensation for the loss of livestock, fruit orchards and stored grain. In the last fiscal year the Park office could pay compensation to only 40% of the total claims duly registered in the park office. In this context, not more than 20% of the total affected people are receiving benefits from the existing wildlife victim relief scheme.

What are the key lessons learnt so far

- Prompt and proper compensation of wildlife-induced damages will help reduce retaliatory as well as obligatory killings of important wildlife species like tiger and elephant. So a conservation strategy that values the life of people will enhance the ecosystem values of the park.
- Conservation activities based on community benefit principles can effectively improve the park-people relationship, but compensation to wildlife victims is necessary for the improvement of human-wildlife relationship.
- Compensation schemes can address only the symptoms and not the cause of the human-wildlife conflicts. A bundle of strategies based on the 3Rs approach (relief, reduce and resolve) should be adopted for human-wildlife coexistence in the human dominated landscape like Chitwan.

In hindsight has explicitly addressing HWC been the right approach to take, or would it have been better dealt with more circumspectly

*E.g. as part of a suite of other conservation issues, where expectations of success would have been lower?*

Limitation and difficulties of compensation schemes should be fully understood. Compensation can help minimise the impact of human-wildlife conflict and will remain an important conservation tool. However, as it cannot be an effective strategy in the long run. Scarce park resources should be used more on preventing HWC rather than on compensating the conflicts. Prevention of life and property losses by wildlife is always desirable from both social-economic and ecological perspectives.

## 7. THE FUTURE OF THE SCHEME

What factors might affect the life and future effectiveness of this scheme?

1. The future effectiveness of the compensation scheme largely depends on the quick and reasonable compensation and implementation of effective preventive measures to reduce HWCs.
2. A proper understanding of the scale, nature and trend of HWC is fundamental to devise

proper relief and mitigation measures. Different animals are responsible for different types of damages. Intensity of HWCs is also not same in all areas. The causes of human – wildlife encounters and animals responsible for casualties are also different to different areas. (see Budhathoki and Nakarmi, 2011). Similarly, current trend shows that more human casualties have been taking place in the BZ community forests than inside the park, and elephant and tiger induced problems are increasing.

3. Maintaining proper database systems and regular monitoring and evaluations is necessary to check misuse of compensation funds, and for policy improvement.
4. The existing process should be adequately decentralized at the park and BZUC level.
5. Education and awareness about the wildlife behaviors and habitat would also help reduce human – wildlife encounters and thereby reduce the stress on scarce compensation fund

Is this scheme adaptable to other species and contexts?

All important species are covered by the current policy. The Nepalese government has been adopting this scheme in the forest areas outside the protected area system.

What would be the main constraints to scaling this scheme up?

Inadequate budget and lengthy bureaucracy would be the main constrictions. As the economic values of the losses go up farmers would certainly demand higher compensation. Maintaining compensation within certain limits will be extremely difficult in long run whilst being vital for the schemes' continuity. Globally, there is general trend of stopping compensation schemes on the grounds of budget constraints.

How will the scheme be funded over the long term?

*E.g. could it be bought into any central government budget allocations; is there the potential to establish a Trust Fund; could Payment for Ecosystem Services come into play, etc.?*  
Chitwan has two good options to maintain regular flow of fund to compensation scheme. First; by earmarking a certain portion of the park income to compensate HWC cases [e.g.. 15%]. Second: by adding HWC management fee into the park entry ticket. Just one dollar per tourist would be enough for Chitwan National Park to run its compensation scheme properly, and if properly advocated, tourists would be very happy to pay this tiny amount.

How will/ could the scheme be managed over the long term?

*I.e. is there potential for it to be administered by local government, or devolved through local community structures?*

For a more timely and reasonable compensation, the process should be completely devolved to local level. Given the responsibilities and resources, in case of Chitwan National Park, BZUC can manage compensation schemes smoothly and cost effectively. Similarly, management of compensation through local multipurpose cooperatives established by BZ users groups and NGOs could also be equally viable.

For a timely and reasonable compensation, the process should be completely devolved to local level. Given the responsibilities and resources, in case of Chitwan National Park, BZUC could manage its compensation scheme effectively. Similarly, management of compensation through local multipurpose cooperatives established by BZ users groups and NGOs could also be equally viable.

Do you think your scheme will prove successful when so many others have been tried and failed in the past? [Please explain your response]

In most of the cases, compensation schemes have failed not due to lack of resources but due to

lack of recognition of the suffering of the poor farmers and wrong implementation policies. Policy makers and protected area managers generally fail to understand that helping local people helps wildlife conservation.

There are many reasons to be hopeful that compensation schemes will be continued in the Chitwan National Park.

Some of the reasons are:

- i) The park has a good source of income and there is also policy of recycling 50% of the park incomes to BZ management. This will give park authority to continue compensation scheme even if central government stops allocating compensation fund. Based on current policy provisions, approx. 15% of the Park proceeds would be sufficient to compensate wildlife-induced damages in Chitwan.
- ii) There are strong community-based buffer zone organizations that can manage compensation schemes effectively if they are given adequate resources and responsibilities with accountability.
- iii) The buffer management programme will allow park managers and communities to implement various HWC preventing activities, These activities will help reduce wildlife induced damages thereby help in keeping the compensation amount down at the minimum possible level. A study suggests that 63% of the human casualties can be reduced if people stop going into the forests to fetch fodder and herd livestock (Budhathoki and Nakarmi, 2011). Elsewhere it was suggested human wildlife encounters could be reduced by promoting poultry farming in the buffer zone instead of cattle (Johannesen, n/d). A two prong strategy - minimising human wildlife encounters and paying compensation promptly and adequately would therefore seem to be the best strategy to reduce the impact of HWC in conservation and ensure the sustainability of the scheme. The Chitwan National Park has all resources to continue such strategy and thus the compensation scheme could be sustainable. The case of Chitwan can be a useful example to other parks with high human wildlife interfaces.

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