Overview of Human Wildlife Conflict in Cameroon

Poto: Etoga Gilles WWF Campo, 2011

By
Antoine Justin Eyebe
Guy Patrice Dkamela
Dominique Endamana

POVERTY AND CONSERVATION
LEARNING GROUP DISCUSSION
PAPER NO 05
February 2012
Contents

EXECUTIVE SUMMARY ................................................................................................. 3

1. Introduction ............................................................................................................. 4

2. Evidence of HWC in Cameroon ........................................................................... 4

3. Typology of HWC ................................................................................................ 7
   3.1 Crop destruction ............................................................................................... 7
   3.2 Attacks on domestic animals .......................................................................... 10
   3.3 Human death, injuries and damage to property ............................................ 11

4. The Policy and Institutional Framework for Human-Wildlife Conflict Management at the State level in Cameroon ................................................................. 11
   4.1 Statutory instruments and institutions for HWC management ...................... 12
      4.1.1 Protection of persons and property against animals .............................. 12
      4.1.2 Compensation for crops damaged by wildlife ..................................... 13
   4.2 Institutions involved in the management of HWC ......................................... 14

5. Effectiveness of the official management of HWC ............................................. 17
   5.1 Political and ad hoc management of HWC ..................................................... 17
   5.2 Weaknesses of existing legal and regulatory framework .............................. 18
   5.3 Bureaucracy, institutional lethargy and inefficiency .................................... 18
   5.4 Lack of political will to design a clear and articulated policy on HWC .......... 20

6. Community-based HWC management ............................................................... 20
   6.1 Communities’ representations ..................................................................... 20
   6.2 Communities’ strategies and practices of HWC management ...................... 21

7. Obstacles and opportunities in the management of HWC ................................. 22
   7.1 Obstacles in managing HWC ...................................................................... 22
   7.2 Opportunities ................................................................................................. 23

8. Conclusions ........................................................................................................... 23
EXECUTIVE SUMMARY

This paper presents an overview of human wildlife conflict (HWC) in Cameroon. The paper shows that these conflicts are widespread in both the savannah and the forest zones of Cameroon. Due to a very weak legal framework and poor institutional interactions, communities have taken protection of crops and livestock into their own hands. The tools used by communities are not sustainable and need to be complemented by effective policy, including enhancing the legal framework and putting in place appropriate land use planning approaches. Failure to do this will increase HWC, especially at the boundaries of protected areas, where communities do not receive sufficient conservation incentives from ecotourism or other interventions. Infrastructure development could increased the competition for limited land resources and thus escalate the situation. To solve these problems related to HWC, authorities have to reflect on various prevention, mitigation and compensation mechanisms. The current revision of the forestry code is a good opportunity to address these crucial issues.
1. Introduction

Cameroon has an extensive network of protected areas in which there is a rich animal biodiversity. These protected areas are located in multi-stakeholder and multi-functional spaces, generating conflicts between stakeholders, and also between humans and wildlife. According to IUCN (2005) human wildlife conflict (HWC) is a situation that occurs when the basic needs of wildlife interfere with those of humans, generating negative consequences for both communities and animals. This definition is similar to that of Parker et al., (2007). HWC is a significant issue in Cameroon with effects on animal species and communities living around protected areas and beyond. Crops destruction by wildlife has important implications in terms of food security, safety and well being of local communities. HWC also affects the perceptions local communities have of conservation in protected areas and therefore the long term survival prospects of wildlife in these areas. To date, HWC has not been studied in any depth in Cameroon. This study is intended to provide an overview of the scale of the problem in Cameroon and to propose solutions to reduce these conflicts. The paper is a follow up of a two-day national workshop which took place in October 2011 bringing about twenty experts from several protected areas, Ministries staff having interest on the topic, local and international nongovernmental organizations (NGOs) specialists. The workshop was facilitated by the Cameroon Forest Governance Learning Group (FGLG). The first part of this paper presents the evidence of HWC in Cameroon. Part two expands on HWC management, while the last part proposes recommendations capable of reducing HWC in Cameroon.

2. Evidence of HWC in Cameroon

Cameroon has a network of protected areas where HWC often occurs, however the analysis here is not exclusive to conservation areas, as it is proven that HWC also occurs outside of protected areas. It is even anticipated that conflicts will increase in unprotected areas over the next decade due to the expansion of industrial plantations. An example of this is the conflict associated with the Campo Ma’an National Park. This is located on a large landscape (264,064 ha) dominated by two main types of relief: the north covered by mountains and few plains and the south-covered by hills and small valleys. This is a site rich in biodiversity including endangered animal species such as elephants, buffalos and great apes. As shown in figure 1 in the national park of Campo Ma’an, animals shifted their migration corridors from the northern to the southern part of the park as a consequence of commercial palm oil and rubber plantations expansion.
However, this has resulted in increased human-wildlife conflict in the south. For example, in July 2010 a village banana plantation was destroyed by elephants at Akak. As a consequence, communities were furious with the protected area manager who is considered as the “owner of wildlife”. They attempted to kill some of the destructive elephants, but could only manage to wound one seriously. Consequently, they filed a complaint in the competent court against the park’s conservator (government). In response to this complaint, investigations were conducted, notably by the Ministry of Agriculture and Rural Development and the Ministry of Forestry and Wildlife, whose teams went to the field to assess the damage in farmers’ fields. Notwithstanding, the complaint deposited in court is still pending. Note, however, that there is a potential danger for the population surrounding this area as the wounded animal remains a potential threat to the entire community.

Figure 1 Distribution of human elephant conflicts in Campo Ma’an protected area (MINFOF, 2011)
In Cameroon’s savanna zone, HWC is regularly recorded in and around protected areas and especially in the towns of Moulvoudaye, and Yoldéo Mindif Region in the Far North region. Species implicated are large mammals particularly elephants that destroy millet fields, farmers’ granaries, and sometimes even boats. Hippos also have been known to attack boats. The scale of the problem is significant. In October 2006, in the town of Ouro Massara, Touboro District in the North Region, elephants destroyed 65 per cent of the maize, groundnuts, cowpea and cotton crop area. During the same period, several hectares of crops were devastated by elephants in the localities of Mboukang in the Mayo-Danay, Gagadjé, Doyang, Dir, Medeo, and Curo-Bembel Guéléo sub-divisions of Mayo-Kani division in the Far North region. Conflicts are more pronounced at the peripheries of protected areas or along migration routes of elephants. HWC occurs both in the dry and rainy seasons, but intensifies when there is water scarcity. Figure 2 illustrates the extent of land damage from elephants in different regions of Cameroon.

Figure 2 Area destroyed by elephants in five region of Cameroon in 2006 (Data from Tiebou 2008)

In addition to elephants there is also recorded evidence of HWC associated with carnivores predating villagers livestock (particularly lions). In Waza national park, for example, where human-lion conflicts regularly occurred in six villages provoking the killing of lions. Consequently the lion population in the park declined from around 50-60 to 14-21 individuals. Similarly in forest areas, major conflicts occur between elephants and
communities, but there is also evidence of HWC involving great apes and minor herbivores such as porcupines or hedgehog.

In many cases, HWC arises as a result of enhanced wildlife numbers due to conservation interventions such as protected areas. However, the species involved in the conflict incidents may not be the same as those that are the focus of conservation efforts. So, for example, while protected areas may be deemed politically important because they are home to populations of endangered species such as elephants and gorillas, conflicts may arise from other species – bushpigs, baboons etc – who are also beneficiaries of conservation efforts. Human wildlife conflict affects the perception that local communities have – and the support they are willing to provide – for conservation. Therefore those concerned with conservation of great apes, for example, need to be just as concerned about conflict arising from other species that share ape habitat as they are about direct ape-human conflict.

3. Typology of HWC

Recorded incidents of HWC highlight three forms as the most recurrent in all ecological zones, these are: crop destruction, killing of domestic animals and human death and injuries. The driving factors as well as the wildlife species involved are diverse and different.

3.1 Crop destruction

Crop damage is one of the most prevalent forms of HWC in Cameroon and is particularly severe around protected areas. The primary causes are; the ineffective land-use planning policies -including protected area creation and management- coupled with the increase of inhabitants around these areas. As Weladji and Tchamba (2003) remarked, the creation of the Bénoué Park in the North of Cameroon imposed great restrictions on land use in an area where bush meat constitutes about 24 per cent of major protein intake, hence the people rely on poaching to secure their livelihoods. The park has significantly restricted small-scale agriculture, livestock rearing, fishing and gold mining to a transitional zone around its border. The same pattern can be observed in the Campo-Ma’an forest area in south Cameroon. In 1999, the government created a special forest management unit in a 771,668 hectare area that includes a national park, an agro-industrial area for rubber and palm oil plantations, a protection forest, logging concessions, and an agro-forestry zone where communities are authorized to carry out their agricultural, subsistence hunting, and community forestry activities. The community's portion of the land is approximately 203,677 hectares and it is used by 61,000 inhabitants of seven ethnic groups (Dkamela, 2007).

As a result of the density of population in this area, crop-raiding by elephants is often recorded. A study documented many episodes of community-elephants conflicts in 2004 in Campo-Ma’an and estimated that 5 villages concerned lost 28.4 ha of crops, which meant
US$ 6.644 in monetary value (Foguekem, 2005). Records from the forestry administration show that most of HWC in Cameroon involves elephants (tables 1 and 2). Though the literature highlights difficulties with regards to damage estimation, the impact on communities’ livelihood is important in terms of food security among other aspects. Furthermore, elephant-communities conflicts occur all over the year in Cameroon given the diversity of ecological landscapes and seasons (table 2).

**Table 1** Sample of crop raiding by elephants in Cameroon

<table>
<thead>
<tr>
<th>Protected area</th>
<th>Concerned villages</th>
<th>Crops damaged</th>
<th>Surface area estimates</th>
<th>Periods</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mengame Gorillas Sanctuary</td>
<td>Ebomane, Amuom, Mimbosso, Akam, Mengame, Nkolenyeng, Ngoudjeng</td>
<td>Avocados, bananas, cassava, cocoa, Okro</td>
<td>11,87 ha</td>
<td>January-July 2006</td>
</tr>
<tr>
<td>Bouba Ndjidé National park</td>
<td>Ouro</td>
<td>Maize, groundnuts, niébé, coton</td>
<td>154,1 ha</td>
<td>October 2006</td>
</tr>
<tr>
<td>Mbéré valley National park</td>
<td>Mbondo, Iyafounou Gbawar (Djohong sub-division)</td>
<td>Cassava and others</td>
<td>3 ha</td>
<td>December 2007</td>
</tr>
<tr>
<td>Waza National Park</td>
<td>Bogo sub-division : 19 villages</td>
<td>Maize, water melons, groundnuts, potatoes, cassava, millet fonio Sorgho, niébé, cotton</td>
<td>209,5 ha 17,5 ha</td>
<td>October 2007 November 2007</td>
</tr>
<tr>
<td>Boumba Bek</td>
<td>Landjoué PK 27, PK 18 et PK 23</td>
<td>Bananas, Cassava</td>
<td>0,4 ha</td>
<td>December 2005</td>
</tr>
</tbody>
</table>

Source: Joseph Tiebou, DFAP, MINFOF
<table>
<thead>
<tr>
<th>Protected areas</th>
<th>Concerned villages</th>
<th>Period</th>
<th>Region</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mengame Goriller Sanctuary</strong></td>
<td>Ebomane, Amuom, Mebosso, Akam, Mengame, Nkolenyeng, Ngoudjeng</td>
<td>All seasons</td>
<td>South</td>
</tr>
<tr>
<td><strong>Campo Ma’an National Park</strong></td>
<td>Akak, Nkoelon, Ebianemeyon, Messama, Mvimi</td>
<td>All year round</td>
<td>South</td>
</tr>
<tr>
<td><strong>Dja Wildlife reserve</strong></td>
<td>Mekim, Bissombo, Akomdong, Ndjibot, Alat Makay, Djomenedjo, Mbii</td>
<td>At the beginning of dry season</td>
<td>South</td>
</tr>
<tr>
<td></td>
<td></td>
<td>in the heart of rainy season (towards February)</td>
<td></td>
</tr>
<tr>
<td><strong>Bouba Ndjida National Park</strong></td>
<td>Villages of Touboro, Rey Bouba and Tchollieré sub-divisions (Madingring District)</td>
<td>March, August-November Dry and rainy seasons</td>
<td>North</td>
</tr>
<tr>
<td></td>
<td></td>
<td>saison sèche - saison de pluie</td>
<td></td>
</tr>
<tr>
<td><strong>Mbéré Valley National Park</strong></td>
<td>Mbondo, Iyafounou Gbawar (Djohong sub-division)</td>
<td>December</td>
<td>Adamawa</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Dry season</td>
<td></td>
</tr>
<tr>
<td><strong>Waza National Park : northern part</strong></td>
<td>Goulfey, Fadjé, Afadé, Kalakafra, Waza, Zigué, Khalkoussam, Mara, Logone Birni</td>
<td>December-June</td>
<td>Far North</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Dry season</td>
<td></td>
</tr>
<tr>
<td><strong>Waza National Park : Sothern part</strong></td>
<td>Dargala District and Bogo sub-division: Folou, Midjivin, ko</td>
<td>June-December</td>
<td>Far North</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Rainy season</td>
<td></td>
</tr>
<tr>
<td><strong>Boumba Bek National park</strong></td>
<td>Landjoué PK 27, PK 18 et PK 23, Malé ancien, Ngatto ancien</td>
<td>December</td>
<td>East</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Dry season</td>
<td></td>
</tr>
<tr>
<td><strong>Lobéké National park</strong></td>
<td>Yenga, Koumela</td>
<td>Sporadic</td>
<td>East</td>
</tr>
<tr>
<td><strong>Nki National park</strong></td>
<td>Massif Ngoyla-Mintom: Ekondong village</td>
<td>Sporadic</td>
<td>East</td>
</tr>
<tr>
<td><strong>Korup National</strong></td>
<td>Southern part: Ikassa; Makeke</td>
<td>March (beginning of)</td>
<td>South</td>
</tr>
</tbody>
</table>
Though elephants are the main wildlife species involved in crop destruction in Cameroon overall, many other raiders are also known: rodents such as cane rat, (*Thryonomys* sp), birds, buffalos, baboons (*Papio anubis*), Warthog (*Phacochoerus aethiopicus*) and antelopes. A study revealed that species most responsible for crop destruction around the Bénoué National Park in the North of Cameroon are monkeys (44%), birds (44%) and then elephants (13%) (Endamana et al., 2006). We have already mentioned the poor land-use planning and population growth as the primary causes. But in reality, a diversity of conditions have to be considered in different local circumstances and sometimes function in synergy: availability, variability and type of food sources in the area, the level of human activity on a farm, and the type and maturation time of crops as compared to natural food sources (Lamarque et al, 2009). Another important cause is that migration corridors for mammals such as elephants are used for farming. Infrastructure development, such as dam construction is another factor. De Longh et al (2004) demonstrated how the construction of Maga dam in the area around Waza National Park (Far North region) and Lagdo dam (North region) in 1979 led to an increase of crop-raiding patterns by elephants in Kaele and the Lagdo/Rey Bouba districts. Elephants reallocated closer to agricultural land due to the combined factor of water scarcity and the landscape disturbance.

### 3.2 Attacks on domestic animals

Human-carnivore conflict figures among the HWC patterns in Cameroon. They are more frequent in the savannah and grasslands where pastoralism remains the main source of livelihood for many people. Lions and hyenas are among the species most cited by shepherds, but smaller carnivores such as civet are also responsible for attacks on livestock (Weladji and Tchamba, 2003). As the study by Bauer (2003), concludes, the data on livestock predation are not always very precise. However, using PRA techniques around the Waza National Park, they were able to record the declared annual loss of herds by shepherd (Table 3).
Table 3 Declared herd size and declared annual loss from depredation by large carnivores around Waza National Park

<table>
<thead>
<tr>
<th>Zone</th>
<th>Settlement</th>
<th>large stock herd</th>
<th>loss</th>
<th>%</th>
<th>small stock herd</th>
<th>loss</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Badaday</td>
<td>300</td>
<td>20</td>
<td>6.7</td>
<td>100</td>
<td>30</td>
<td>30</td>
</tr>
<tr>
<td>2</td>
<td>Amehi</td>
<td>680</td>
<td>5</td>
<td>0.7</td>
<td>450</td>
<td>75</td>
<td>16.7</td>
</tr>
<tr>
<td>3</td>
<td>Diegueue</td>
<td>80</td>
<td>0</td>
<td>0</td>
<td>300</td>
<td>30</td>
<td>10</td>
</tr>
<tr>
<td>2</td>
<td>Tchede</td>
<td>0</td>
<td>--</td>
<td>--</td>
<td>150</td>
<td>25</td>
<td>16.7</td>
</tr>
<tr>
<td>4</td>
<td>Mahe</td>
<td>40</td>
<td>2</td>
<td>5</td>
<td>326</td>
<td>80</td>
<td>18.5</td>
</tr>
<tr>
<td>3</td>
<td>Camp 1</td>
<td>400</td>
<td>--</td>
<td>--</td>
<td>50</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>3</td>
<td>Camp 2</td>
<td>400</td>
<td>1</td>
<td>4</td>
<td>50</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>3</td>
<td>Camp 3</td>
<td>1100</td>
<td>4</td>
<td>0.4</td>
<td>300</td>
<td>5</td>
<td>1.7</td>
</tr>
<tr>
<td>4</td>
<td>Zina</td>
<td>0</td>
<td>--</td>
<td>--</td>
<td>200</td>
<td>8</td>
<td>4</td>
</tr>
<tr>
<td>4</td>
<td>Camp 4</td>
<td>350</td>
<td>1</td>
<td>0.3</td>
<td>125</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>4</td>
<td>Sifna</td>
<td>150</td>
<td>0</td>
<td>0</td>
<td>200</td>
<td>3</td>
<td>1.5</td>
</tr>
<tr>
<td>4</td>
<td>Camp 5</td>
<td>700</td>
<td>0</td>
<td>0</td>
<td>350</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

N.b. Numbered camps are temporary nomadic settlements close to the settlement that precedes it in the table.

Source: Bauer, 2003

For the concerned small-scale herders, losses to wildlife have a significant impact on their livelihoods. The root causes of theses human-carnivore conflicts are almost the same as those of crop destruction mentioned above: increasing population pressure, loss of habitat, reduced numbers of prey populations, proximity of cattle and sheep to protected areas and interactions between communities and protected areas.

3.3 Human death, injuries and damage to property

Though not frequent as the two principal types of HWC (crop destruction and livestock predation), human death and injuries are sometimes recorded in Cameroon. Some of these cases are attributed to elephants. Tchamba (1995) revealed that one and four persons were killed by elephants in 1992 and 1993 respectively, in the Kaélé region. Some other cases are found in the literature or reported by the administration in charge of wildlife. Other wildlife species responsible for human deaths and injuries include buffalo, lions and hippopotamus. The other types of HWC registered in Cameroon include destruction of storage bins, destruction of assets such as water points where communities collect fresh water.

4. The Policy and Institutional Framework for Human-Wildlife Conflict Management at the State level in Cameroon

There is no clear national policy on HWC in Cameroon and no effective legal framework. This makes efficient management of HWC incidents very difficult. The administrative procedure to obtain authorization from competent authorities to kill destructive animals usually takes so long that, before the authorization document is issued, the problem has already escalated leaving affected populations with no alternative than killing the animal illegally. In some cases, the animal would have disappeared from the scene before the authorization is given.
The general approach to tackling HWC in Cameroon has been focused on prevention and mitigation rather than compensation. Where compensation has been used, it has not been applied in a coherent manner. Furthermore, problems related to HWC are not solely economic, and also include cultural or social damage which are hard to compensate.

4.1. Statutory instruments and institutions for HWC management

Legal and regulatory provisions governing HWC in Cameroon address the following two issues: protection of persons and property against animals and compensation for crops damaged by wildlife.

4.1.1 Protection of persons and property against animals

Two principal instruments constitute the basis for HWC in Cameroon. These are, Law No 94-01 of 20 January 1994 to lay down Forestry, Wildlife and Fisheries Regulation and its implementing instrument- Decree No 466-PM of 20 July 1995 to lay down the conditions for the implementation of Wildlife Regulations. Relevant provisions for the protection of persons and property against animals are related to at least six issues:

- Situations where animals constitute a danger or cause damage to persons and/or property. We can interpret Section 82 of the Law as the trigger of any preventive or reactive action either by concerned people (legitimate defense) or the wildlife administration. In cases identified as ‘danger’ or ‘damage’, the wildlife administration ‘may undertake to hunt [animals] pending an authorization of the minister in charge of wildlife’.

- Lawful defense. It is legal to kill a protected animal if this act is dictated by the urgent need to defend a person, livestock or crops, provided proof of lawful defense is given within 72 hours to the official in charge of the nearest wildlife service (see section 83 (1-2) of the Law and section 13 (1) of the Decree).

- Wounded animals. The Decree has two provisions for the cases where lawful defense leads to wounds. It instructs any person who has wounded an animal to ‘make every endeavor to finish it off’ (Section 13 (2). When this is not feasible, ‘a declaration must (...) be made to the nearest administrative authority who, in conjunction with the local official in charge of wildlife, shall take all necessary steps to finish off the animal’ (Section 13 (3)). The binding legal timeframe for this declaration is 24 hours.

- Organization of battues (killings). There are regulatory provisions for battues, i.e. hunting, chasing away or killing animals. The process leading to organization of battues by the administration in charge of wildlife can be summarized in three steps (see section 12 (1-4)):
1) A situation where animals have caused or are likely to cause damage to persons and/or property is identified and raised to local administration in charge of wildlife;

2) The local administration addresses a request for battue to his hierarchy, the regional official, who gives its authorization after carrying out an investigation. But the power of the regional official is limited to wildlife species from class B and C. For the class A animal species (totally protected), only the minister in charge of wildlife has the authority to deliver an authorization for battue.

3) Battues are undertaken by the service in charge of wildlife or done with the assistance of volunteer hunters holding valid licenses.

- The trophies resulting from lawful defense cases or battues. The Law also provides that ‘the trophies (…) shall be deposited in the service in charge of wildlife which shall sell same by public auction or by mutual agreement in the absence of bidder and pay the proceeds from such sale into the Treasury’. This is surely an incentive approach to avoiding the killing of animals for commercial purpose.

4.1.2 Compensation for crops damaged by wildlife

Authorities in charge of agriculture have always published measures to compensate for destruction of plants due to developmental projects such as infrastructures. This situation is termed ‘destruction for public purposes’. Two regulatory instruments aimed at handling compensation for destroyed trees and crops are currently in force. These are: Order No 58 of 13 August 1981 to amend the rate of compensation paid to owners of destroyed trees and food crops under cultivation and Decree No 2003/418/PM of 25 February 2003 to amend the rate of compensation to be paid to owners of destroyed cultivated trees and food crops under cultivation.

Though damages due to wildlife seem not consistent with ‘destruction for public purposes’, the same texts are used to address this situation. The two instruments provide for rates which apply to a diversity of annual crops (such as leguminous crops, banana, etc.) and perennial crops (such as fruit trees, cash crops, medicinal plants, etc.) as well. The process leading to decisions of compensation is described in the following section.

---

1 For the purpose of animal species protection, Cameroon wildlife law classified animals into three classes: the species of class A are totally protected and may on no occasion be killed except where they constitute ‘danger’, they damage property; class B are protected, but the law provides that ‘…they may be hunted, captured or killed subject to the grant of a hunting permit’; class C are partially protected and their capture or killing seems more flexible, but ‘…regulated by conditions laid down by order of the Minister in charge of wildlife’ (Law No 94-01 of 20 January 1994, Section 78 (1-4).
4.2. Institutions involved in the management of HWC

In order to understand the governmental approach to HWC management in Cameroon it is useful to get a picture of the multi-level institutional structure. There are four levels of representation for government ministries: the national level, the regional delegation, the divisional delegation and the sub-divisional delegation. The rationale in this system is that, concerns at local levels are either addressed by the closer officials or submitted through the hierarchy to the appropriate level of decision, either at the meso or macro level of the administration. As far as HWC are concerned, at least ten ministries could theoretically be called upon for their management (Table 4).

Table 4 Involvement of governmental institutions in the management of HWC in Cameroon

<table>
<thead>
<tr>
<th>Ministries</th>
<th>Actual role</th>
<th>Potential role</th>
</tr>
</thead>
</table>
| Ministry of forests and wildlife (MINFOF)          | -MINFOF has the authority to enforce the provisions relevant to situations where animals constitute a danger or cause damage to persons and/or property  
- MINFOF local staff are the first people called upon when there are cases of HWC  
- It is also part of the damages valuation commission |                |
| Ministry of territorial administration and decentralization (MINATD) | - MINADT leads and put in place the damages valuation commission  
- It also carries actions to keep peace within the communities affected |                |
| Ministry of agriculture and rural development (MINADER) | - MINADER puts in place rates for compensation for destroyed trees and crops  
- With its technical capacities it plays a key role in the assessment of damages to agriculture  
- MINADER plays the role of secretary in the damages |                |
| Ministry of livestock, fisheries and animal industries (MINEPIA) | - MINEPIA is sometimes member of the damages valuation commission  
- There is no provision regarding the valuation of livestock damaged and compensation rates | - MINEPIA is not really visible in the management of HWC, though damages to livestock is one of the key issues  
- MINEPIA is in charge of pasture management but a relevant clear policy is lacking. This policy could play a key role in the preventive actions through a better pasture planning.  
- It should also put in place a clear compensation policy for damage to livestock |
| --- | --- | --- |
| Ministry of environment and protection of nature (MINEP) | - MINEP is absent from the damages valuation commission | - HWC should figure among its criteria for environmental monitoring and management as well as in EIA document delivered by economic operators.  
- Some provisions of the Law No 96 of August 1996 relating to environmental management, if enforced, could really help address HWC. |
| Ministry of Justice and Keeper of the Seals (MINJUSTICE) | - MINJUSTICE is not part of the damages valuation commission, but some case of HWC such as illegal killing and sales of protected species are brought to courts. | |
| Ministry of Defense (MINDEF) – Secretary of state in charge gendarmerie | - A gendarme officer is part the damages valuation commission. Escalation in some HWC cases calls the need for maintenance of law and order. | |
| Ministry of Economic Planning and Regional Development (MINEPAT) | - There is no evidence of the presence of MINEPAT and MINDAF within the damages valuation commission | - The two ministries play important role in land-use planning and mainstreaming HWC in their duties could |
In reality, the cornerstone of governmental approach to HWC is the valuation commission. The composition of this commission seems to vary from one case to another, but the key ministries involved are those in charge of forest and wildlife (MINFOF), territorial administration and decentralization (MINATD), agriculture and rural development (MINADER) and sometimes the ministry of livestock, fisheries and animal industries (MINEPIA). MINATD is leading and coordinating this commission while MINADER plays the role of secretary. The valuation commission is an ad hoc body created under the initiative of MINATD to assess the damages due to animals and proceed with the compensation process. Since HWC occurs at local level, representation in the commission includes the subdivisional officer (MINADT), a representative from MINADER, a representative from MINFOF, a representative from MINEPIA – depending on the case –, a gendarme officer, a local mayor and some traditional authorities.

We were not able to identify a clear policy document explaining the process leading to compensation, but from the informants’ statements, the following is likely the decision-making process:

1) The valuation commission first carries out a field trip to assess the damages and issue a report.

2) The report is sent to MINFOF for in-depth analysis and actions. The expected action from MINFOF is the organization of a battue.

3) The last element of the process is the compensation for the crops and trees destroyed. But, this is the missing part of the puzzle since there is no example of such action. This gap will be analyzed below.

The other actors present in the field of HWC, are conservation NGOs such as WWF, IUCN and the National Programme for Participatory Development (PNDP). These actors support some of the MINFOF activities relevant to HWC. For example: following the depredation of livestock by carnivores in early 2000 around the Waza National Park, IUCN implemented some mitigation actions such as sensitization of herdsmen and support to the construction enclosures for livestock (2005-06). Leo Foundation later on funded data collection human-lion conflicts and monitoring of lions’ movements in their territories (2010-12).
5. Effectiveness of the official management of HWC

5.1 Political and ad hoc management of HWC

Experience from the field shows that the governmental approach to HWC might be better termed ‘political and ad hoc management’ rather than the implementation of a clear and sound policy. The reaction of the government to a case seems to be dictated by the magnitude of the impacts and the protest actions organized by the victims. Many examples of community strikes have been recorded in the history of HWC in Cameroon. In September 1993, local people blocked the highway between Garoua and Maroua (the two largest cities of northern Cameroon) for eight hours, to demonstrate against the lack of government assistance with the “elephant problem” (Tchamba, 1995). This protest action was the consequence of the destruction of plantations in close to 30 villages of the Mayo Kany division by a herd of elephants.

One can identify at least three types of responses from the government. The first is to sanction local officers in charge of wildlife, to identify and kill a token animal or “scapegoat” so as to assure the victims that the government is taking control of the situation. Following the event mentioned above, the provincial delegate in charge of wildlife was sacked by his hierarchy, though disbursement of funds to chase elephants away was not effective for that fiscal year. The second type of response is the organization of battues either to chase away animals and/or to kill some of them. In order to calm down the social tension, authorities shoot elephants and provide the meat as source of compensation to victims of the damages. Tchamba (1995) revealed that two and seven elephants were killed in Kaélé region in 1992 and 1993 respectively, and the meat was distributed to local communities. This pragmatic solution does not comply with the letter of the regulation on trophies resulting from lawful defense cases or battues (see above, 3.2.1).

The third type of action is a compensation of the victims, following a political decision. Some examples of food distribution have been recorded in the past decades. For the case mentioned above in Kaélé region, the government decided to distribute food to communities. The value of the food was estimated at US$ 1.8 million. In the context of Cameroon such initiatives often involved embezzlement and corruption. That is why communities always doubt and are suspicious about the implementation of government decisions. Compensation is always associated with political ‘instrumentalisation’, because the food distributed is presented as a ‘gift’ from the President of the Republic. In this regard, officers from MINATD play a key role in what is called ‘peace keeping’ at the level of communities. In extreme cases of destructions, they organize hearings with communities and traditional authorities and, when a decision on food distribution is taken, they take the floor to speak on behalf of the President during the distribution ceremony.

Therefore, the governmental approach to HWC is rather reactive than proactive. The official responses are triggered by only the spectacular cases which imply risks for disruption of social order. Since the majority of HWC cases spread over the country do not escalate to that level, voices from the grassroots people are not always heard. This explain why community-based strategy to address the issues are the dominant approach on the field (see below)
5.2 Weaknesses of existing legal and regulatory framework

The implementation of the legal and regulatory framework described above highlights two areas of weaknesses. The first is that enforcement of existing legal and regulatory provisions is very weak for many reasons (see the capacity and bureaucracy issues discussed below). The second is the legal and regulatory vacuum. There are issues for which provisions are either not clear or do not exist at all. We have identified the following:

- Lack of clear typology and definition of situations of danger and threat to persons and property and their implication in terms of type of intervention. The issue here is related to objective criteria to conclude that there is HWC and a need for an appropriate action. The key obstacles to compensation are that: 1) there is no clear pathway leading to decision to compensate HWC victims; 2) in the absence of clear typology and definition of situations of HWC, it is difficult to consider one case as ‘situation de catastrophe’ (catastrophic situation) and therefore trigger the compensation mechanism managed by MINATD. In fact, one of the duties of the department of civil protection under MINATD is to provide compensation to victims of ‘catastrophes’.

- Another gap is that the compensation scheme for crops and trees was not meant for damages due to wildlife, but for ‘destruction for public purposes’. Using this scheme to assess crops and trees destroyed by animals raises questions on appropriateness and equity. In fact, a fundamental difference is that destruction for public purpose is theoretically planned, discussed with the victims and implemented, whereas episodes of crop raiding are sudden with measurable psychological and livelihood impacts. The following provisions could help to correct the appropriateness and equity issues, but authorities seem not to use this possibility: “The rates shall apply only in case of destruction for public purposes. In all other cases of destruction, the valuation commission shall have the full powers of assessing and grant, in addition to the rates fixed herein above, a fixed amount, the actual suffered by the owner” (Order No 58 of 13 August 1981, Section 3).

- Though the rates for crops and trees are known, the valuation method used is still subject to criticism. In fact there seems to be a problem with standards. Sometimes, reports are based on the declarations of victims which are often above the real level of damages.

- Laws and regulations also failed to cover issues such as compensation for other types of damages different from crops and trees. These are: livestock, human death and injuries, destruction of storage bins, houses and fresh water points.

5.3 Bureaucracy, institutional lethargy and inefficiency

One of the key concerns for HWC management is administrative centralization. The very long chain of authorities involved in decision-making, makes it difficult to address conflicts
quickly. The following examples illustrate the timing in decision-making and action. In August 2010, a hippopotamus became a danger to Tourake village (East Cameroon), causing panic and insecurity to villagers. It killed seven goats and cows. The village chief reported to the local officer in charge of wildlife who came and witnessed the threats and damages. The local officer reported to divisional delegate in charge of wildlife. In his turn, the latter reported to the regional delegate who transmitted the file to the minister of forest and wildlife in the capital city Yaoundé, on December 3, 2010. The minister finally signed an authorization for a battue on February 10, 2011 - is seven months later after the complaints from the village chief.

Another area of controversy is the disbursement of funds to organize the administrative battue at the local level. Field staffs usually complain that, neither authorizations from the minister are given along with the necessary financial means, nor there is always a provision in the budget to cover such activities on the field. Therefore decision-making for governmental intervention to solve HWC are always characterized by lethargy and are most of the time inefficient. This has huge consequences in terms of aggravation of damages and revenge from communities. Many cases where communities have killed wildlife in retaliation have been reported.

The further issue is the very weak coordination and collaboration among the key ministries theoretically involved in HWC: MINFOF, MINADER, MINEPIA, MINATD and MINEP. The problem is the absence of a clear policy which clarifies the duties of each institution and outlines the decision-making process with clear a timeline to solve any case of HWC reported. One of the consequences of this is the tendency to shift responsibility from one to the other. MINFOF seems to carry the burden of HWC on the ground because it is perceived to be the ministry protecting animals against communities. A reasonable proportion of MINFOF staff has voiced their frustration because assessments of damages do not necessarily lead to compensation of the victims. Some have even complained that some reports of the damages valuation commission are sent to MINFOF instead of MINATD which is supposed to have the appropriate funds for compensation.

MINFOF has no standard procedures to put into effect when a case occurs, and no authority. This could explain its weaknesses. The following is an example. A couple of years ago, a chimpanzee got lost in a village of south-west Cameroon and severely injured a child. The villagers killed the animal and informed MINFOF authorities. The family took care of the child and brought the case to the minister one year later. An application for compensation was sent to the minister along with dramatic photographs of the child’s recovery process. The minister was moved and decided to compensate the family, but the problem was that there was no clear budget line for such cases. He gave an instruction to his finance department to pay an amount of 1,000,000 CFA (almost $US 2000) to the family. But, the finance officer didn’t execute the instruction because of the missing budget line. The family finally got the money thanks to an administrative sleight of hand. To understand this decision one has to bear in mind that MINFOF interacts with communities on a daily basis while carrying out its conservation duties. The minister’s decision was not legal, but it was pragmatic and contributed to improve MINFOF’s image and facilitate its conservation activities on the ground. But MINFOF cannot sort out all HWC cases through this approach.
5.4 Lack of political will to design a clear and articulated policy on HWC

One of our key conclusions on the official approach to HWC is that there is a lack of political will to design a clear and articulated policy in Cameroon. This conclusion is supported by the following arguments:

- The increasing pressure on natural resources and habitats of wildlife is leading to an increase in number and magnitude of HWC, but provisions for their management are still very limited.

- One of the constraints to MINOF’s actions is the limited logistics and funds available to implement HWC activities. There are no clear provisions to finance HWC activities through the special funds for the development and equipment for protected areas and conservation and protection of wildlife that exist. Field staffs in charge of the organization of battue complain that logistics are either insufficient or obsolete. As an illustration, the guns supposed to be used for battue are old and no longer functional.

- Human resource appears also very limited in terms of quality and quantity. Field staffs complain not to have the appropriate training and experience to conduct battues. Apparently the law-makers were sensitized on this weakness and provided for the assistance of volunteer hunters holding valid licenses (Decree No 95-466-PM of 20 July 1995, section 12 (4)). But this provision sounds like an admission of failure since it does not encourage the government to train its staff. Also, it creates dependency upon foreign hunters who are not always available when and where they are needed.

- There is no operational information system on HWC. Such a system could help put in place a database which could inform policy and actions and also enable the creation of an alert system to trigger interventions in case of emergencies.

6. Community-based HWC management

6.1 Communities’ representations

In the absence of clearly articulated and efficient policy for the management of HWC, community-based approaches and practices dominate on the ground. Though there is a totemic dimension amongst communities’ representations of wildlife among many ethnic groups in Cameroon, religious beliefs do not always mean protection of wildlife species. There are two dominant perceptions of wild animals: meat and danger. This is important to understand local people attitudes in the wildlife-communities conflicts. A survey of 236 herders from 10 different villages along the borders of Waza National Park, revealed that 50 per cent had a negative perception of lions (Bauer, 2003b). Damages described above condition those negatives perceptions and influence the adoption of practices described below. Many farmers and shepherds still retain episodes of crops and livestock destruction
in their memories. The frequency of these episodes in the Far-north region explains why the relationship between people and wildlife is effectively competition which leads to intense hatred by local populations. In 2007, people from MINDIF in the same region faced many episodes of farm devastation by elephants and birds. In one case a farmer attempted to commit a suicide because all his family food reserve was destroyed (Cameroon Tribune, 02/10/2007). On the other hand, the absence of the government on the field of HWC management on daily basis leaves local people with the conviction that they should deal with the problem in their own ways.

6.2 Communities' strategies and practices of HWC management

With the diversity of cultures and ecosystems in Cameroon, many strategies to deal with conflicts can be identified among communities. The strategies and practices could be gathered under the following typology:

- **Religious beliefs and practices.** Religion plays an important role in the worldview of communities and therefore gives a meaning to human-animal conflicts. In the Kaélé region people used to pray collectively to request the assistance of God and consult witches for magical practices to move elephants far from their villages (Tchamba, 1995). Animals causing damage to crops and livestock are also perceived to be humans. This belief has at least two implications. The positive one is that people will use witchcraft to ‘fight’ the animals. Some plants and tree barks are buried in the farm with the belief that their power will chase wild animals and evil spirit from the farm (Endamana et al, 2006). The negative side of these beliefs is that they inhibit action in certain circumstances. In the story of the hippopotamus causing threats to people security and killing herds in Tourake village (near Betare Oya, East Cameroon), mentioned above local hunters were called upon by the wildlife administration to help kill the animal. But nobody got involved in the operation because they feared the revenge of the spirit.

- **Protective methods.** There are also indigenous strategies and practices aiming at protecting their farms. These are: digging holes around the farm, setting wire traps and fencing farms. These protective and preventive measures constitute an important workload for farmers. But, they are also an efficient provider of bush meat to farmers in forest areas of Cameroon. Trap setting with wire does not comply with traditional hunting methods recognized by the law in Cameroon, but it is a common practice among forest dwelling communities.

- **Chasing methods.** The rationale behind this type of practices is to chase animals away from farms or herds. There are diverse practices: making noise by beating drums or empty barrels, shooting traditional powder-guns; throwing stones and wooden sticks are at elephants; lighting wood stocks around the farm; guarding the farm and using flashlight; guarding the farm with barking dogs; using olfactory stimuli such a pepper-bomb (from Capsicum sp.) to chase elephants away (Bene Bene, 1997); and using scarecrows or building huts in the farm to pretend that people are present. Chasing animals is time consuming and sometimes risky. In the
Extreme-North of Cameroon, throwing stones or sticks at elephant has occasionally led to fatal accidents. In the same region, children spend so much time guarding fields that their attendance at school may be limited.

- **Land-use planning related strategies.** Two principal practices are identified under this type. The first is to abandon a farm when episodes of crop raiding are frequent. The second is to relocate the farm near the village or to a safer place. This is not always a possibility when land is scarce under increasing population pressure.

- **Hunting.** Hunting appears to be the most radical strategy which is common in some region. This consists in killing the offending animals and sharing the meat. Some villages even hire poachers to kill animals such as elephants or buffalos. Most of the time these practices are illegal since nobody takes the responsibility to inform the administration in charge of wildlife.

### 7. Obstacles and opportunities in the management of HWC

#### 7.1 Obstacles in managing HWC

Wild animals are considered as a gift of nature with a non-extinction potential in several regions of Cameroon, hence endangered species have been drastically killed for trophies and meat. Some protected areas have un-defined borders making it difficult to limit animals' activities. The current expansion of the protected area network to cover 30 per cent of the national territory is being pursued at the expense of more efficient use of the existing protected areas. To date, protected areas in Cameroon have generated limited benefits for local people. Ecotourism is not well developed in Cameroon and there are few other income-generating opportunities. Farmers have to invest considerable time to reduce HWC, with knock on effects on the ability of children to attend school, for example. Furthermore there is no coordinated strategy between villages. Consequently local people affected by HWC have developed a very negative perception of wild animals – often seeing them as evil spirits. The negative attitude towards wild animals has been aggravated by the lack of compensation for crop and livestock losses. Almost no sensitization or capacity building is put in place to create awareness in communities on how to handle HWC.

In recent years the expansion of agro-industries has significantly impacted on the habitat of wild animals, thus increasing the incidence of HWC. The seasonal movement of some big species is not clearly known and there is a big change over the years about this movement due to climate change. Wildlife movement data are urgently needed to predict and manage conflicts, but there has been very poor coordination between conservation NGOs to harmonize ecological monitoring. Despite the harmonization of policy with the Commission of Central Africa Forest (COMIFAC), there remains a bottleneck in terms of agreeing the protection status of different species. For example in 2009, elephants were reclassified as “partially protected” in Republic of Congo while they are still “integrally protected” in Cameroon.
Despite efforts to solve HWC on a case-by-case base, it remains a significant and unresolved issue - particularly for communities living around protected areas. HWC is clearly not integrated in the forestry code though managing it should be part of a larger conservation and development objective for protected area management and to some extend agricultural and livestock breeding sectors. It is essential to have accurate information about these conflicts in the main areas where they occur, a good understanding of the economic and social costs related to conflicts, traditional methods in use and attempt to improving their management.

7.2 Opportunities

In Cameroon it is fortunate that there is still land available for agriculture and other related activities. Effective land use planning could make a major contribution to managing HWC. The fact that communities have already their own tools to manage conflicts with wildlife animals is also an advantage; the State could build its strategy by integrating local knowledge into HWC policies. Several protected areas are transnational, making possible a regional coordination between States. The current revision of the forestry code is a good opportunity to consider most of these issues. The management of HWC helps to prevent livestock and humans from entering protected areas. These areas of enormous tourism potential are import to the state and contribute significantly to economic growth. If ecotourism becomes well developed, communities’ livelihood will improve, and a more positive attitude towards wildlife and protected areas will be developed. The state in its endeavor to combat poaching is actually receiving a lot of collaboration and support from rural communities and more importantly financial support from donors; this could eventually help to reducing HWC, notably if this financial support enables to put in place land use planning. Finally the creation of the Commission of Central African Forest (COMIFAC) will improve the harmonization of policy and actions between States, including those related to HWC.

8. Conclusions

Our analysis of HWC in Cameroon gives rise to a number of concluding points:

1. The location and level of HWC requires moving beyond a focus on national and transnational protected areas, to also consider community areas.

2. Clarity is needed as to which species inflict the most damage. Government agencies and NGOs tend to consider the top five (‘elephant, buffalo, hippopotamus, lion and apes) as the key culprits, while overlooking the damage caused by species such as locusts.

3. To date human wildlife conflict has generally viewed wildlife as the “criminal” and humans as the victims but it should also be noted that in many cases it humans that bring about the conflict.
4. Many commentators advocate prevention and mitigation of HWC rather than compensation. However, our experience shows that compensation is not just about an economic contribution but also helps to boost the morale of the victims.

5. Data availability is a big obstacle to more effective management of HWC and to reflect on best options.

6. Different HWC strategies are needed for different ecological contexts, type of activities in conflicting areas, etc. For instance, the forest areas in southern Cameroon have to consider mostly agricultural problems related to HWC while the northern part will consider both pastoralist and agro pastoralist activities.

7. Any prospective strategy on HWC has to consider the chain of responsibilities, to understand major threats, and recognize communities’ strategy and practices.
References


Decree No 2003/418/PM of 25 February 2003 to amend the rate of compensation to be paid to owners of destroyed cultivated trees and food crops under cultivation.

Decree No 466-PM of 20 July 1995 to lay down the conditions for the implementation of Wildlife Regulations.


Law No 94-01 of 20 January 1994 to lay down Forestry, Wildlife and Fisheries Regulation.

Law No 96 of August 1996 relating to environmental management.

Order No 58 of 13 August 1981 to amend the rate of compensation paid to owners of destroyed trees and food crops under cultivation.


Acknowledgements

The authors would like to thank all participants who contributed during the national workshop on HWC, especially Martin Tchamba from Dschang University, Giles Etoga from WWF, Proper Seme and Saleh Adam from MINFOF. A thank you also goes to the Forest Governance Learning Group (FGLG) members, for their continuous inputs under this work. Finally, a special thanks goes to IIED for its technical and financial support.