



Section 4: FARMERS PERSPECTIVE



Woman removing beans from pods, Uganda C. Hill, Oxford Brookes University

Introduction

To understand exactly how particular types of human-wildlife conflict impact on people's lives we need to understand something of what that situation means to those individuals. Documented studies of wildlife crop raiding activities give some idea of the degree of loss farmers are likely to experience, but few studies have explored in detail exactly what this loss really means to farmers. Even where crop losses appear to be low, particularly for the community as a whole rather than the individual (Hill 2000; Moses, Appendix I; Naughton-Treves 1996; Nchanji, Appendix I), farmers can still express great concern about such losses, and may register many complaints to local wildlife authority personnel. Some of the studies in Appendix I quote damage levels that would be considered acceptable losses within highly mechanised farming systems, i.e. approximately 10-15%. However, when trying to understand why crop raiding by wildlife is considered to be such a vital issue by farmers it may, in some situations, be necessary to consider the losses experienced by individuals as well as the average losses experienced within different communities (See Hill, Appendix I, for further discussion).

Recording absolute levels of crop losses by individual farmers or communities will not necessarily adequately explain what those losses really mean to individual farmers. Where individual researchers have probed more deeply it has become apparent that the issue of crop raiding is sometimes conceived as part of a wider issue that people are concerned about, such as their loss of 'ownership' of wildlife to the State (Naughton-Treves 1999) and/or lack of control over resources or particular aspects of their lives (Hill, Appendix I). A further related issue is the fact that many communities appear to tolerate significant levels of crop damage by

domestic animals yet are very intolerant of smaller losses to wildlife (Hill 1998; Naughton-Treves 1996). Why should this be so? Naughton-Treves demonstrated that in some cases farmers around the Kibale Forest National Park, Uganda, actually experienced greater crop damage by domestic animals than they did from wildlife, yet the farmers' complaints focussed on wildlife activity (Naughton-Treves 1996). There are many reasons why this might be so, not least the fact that domestic animals are an important asset to local households. Domestic animals can be used for food but, more importantly, they act as a 'savings account'; people gain interest through the birth of young, and the accumulation of animals not only helps people pay for weddings, funerals and school fees, but it also provides a degree of security against seasonal shortfalls in agricultural productivity and other, unforeseen, eventualities. This example illustrates the point that to understand such issues, the whole question of crop raiding and crop losses needs to be considered within the appropriate social and cultural framework, as well as within an ecological and economic context.

There are often local mechanisms for obtaining compensation for crop loss by domestic animals. For example, in Uganda the Village Council impounds the offending animal and the owner required to pay compensation to the person who has suffered crop damage (the level of compensation being determined by the Council). If the animal's owner cannot, or will not, pay, then the animal is sold, compensation is paid to the claimant, and any remaining monies returned to the animal's owner. Interviewees from Nyabyeya Parish, Masindi District, Uganda, claim that the Government is not a good 'neighbour'. It 'owns' all wildlife (the Government is seen to own wildlife because it legislates as to what people can and cannot do in relation to wildlife) yet does not behave like a responsible owner, either by 'controlling' the actions of its wildlife (i.e. preventing wildlife from entering farming areas) or paying compensation for crop damage caused by that wildlife. Evidence here suggests that when farmers complain about wildlife causing damage to crops the issue is not just about the degree of damage they experience – they are also making a statement about the fact that they consider that by no longer having the legal right to hunt they have (i) lost access to a valuable resource (wild meat) and (ii) have lost the right to adopt a method of controlling crop raiding species that they consider effective (Hill, Appendix I).

There are various factors that may help identify areas where interventions should focus or which could help explain why crop raiding is such an emotive issue. For instance, whole communities may express great concern about the impact of wildlife on agriculture, yet only a few individuals within that community actually suffer regular or extensive damage to their

crops, i.e. people's perception of risk may not necessarily match the actual risk of crop losses to wildlife (Hill 2000). Additionally, there may be many serious complaints about particular species yet when the situation is investigated systematically it becomes apparent that those species do not necessarily cause the most damage (Naughton-Treves 1996). Understanding the context in which crop raiding is occurring may help to explain why people complain about particular species, even when those species may not be a major source of crop loss. For example, complaints often focus on elephants and other large bodied animals yet smaller, less dangerous species such as baboons and cane rats may well cause more damage (Hill 1997; Naughton-Treves 1996; Njchanji, Appendix I; Plumtre, Appendix I). While it is certainly important to understand the context in which rural people consider crop raiding to be a problem it is also crucial to remember that central to any intervention is the aim to improve livelihood security rather than just stopping crop raiding by wildlife (Osborn & Parker, Appendix I).

It is vital to understand the social context in which crop raiding is occurring, because crop raiding *per se* may not be the 'real' issue. Instead it may be used by people as a means of expressing their distress or dissatisfaction with a separate or related issue, e.g. the removal of access to particular resources, having to live alongside animals that are perceived as dangerous to people, such as elephants and buffaloes, or losing their autonomy in certain spheres of life (Hoare 1995 Hill, Appendix I; Plumtre, Appendix I).

By understanding the social context within which these complaints are made we gain a more comprehensive perspective on the issues at stake, facilitating the development of appropriate intervention strategies. Thus by understanding how people view a particular human-wildlife conflict issue one may be able to explain more fully why people act the way they do, thereby providing valuable insights into locally acceptable and effective control strategies.

The types of questions to address

Social context

To understand the human dimension to crop raiding by wildlife it is essential to have a good working knowledge of the particular type of conflict within the local cultural, socio-demographic, political and economic context. Data on local land use strategies and tenure systems, gender roles, farming systems, and people's dependence on agriculture for subsistence will supply a social and economic context for understanding the impact of crop damage by wildlife.

Information about farmer's responses to wildlife that crop raid, their understanding of and compliance with wildlife laws, and their expectations of any intervention programme are useful when trying to contextualize the importance of human-wildlife conflict issues for rural communities. Knowledge of how people view a particular issue can help explain why those issues can suddenly become conflict issues to be dealt with by outsiders, when previously they were regarded as part of the normal agricultural cycle, eliciting specific and appropriate responses from within the local community. Identifying whether local people are using their apparent concern about crop raiding to express dissatisfaction with changing access to natural resources, government, or local political institutions, for instance, would be crucial for management intervention design (Hill, Appendix I; Naughton-Treves 1999).

The types of question that should be addressed in any study of the social context to crop raiding are summarised in Table 4.1. While this is not a definitive list of areas to be investigated it represents a set of key issues that participants at the workshop considered central to understanding the social context of crop raiding within rural African communities.

It is a mistake to assume that communities are homogenous entities. Not all members of a community have the same needs and concerns, thus information connected with gender issues such as division of labour, and responsibility for and ownership of crops, is vital for identifying which sections of a community should be consulted when developing appropriate intervention strategies. For example, knowledge of the local farming calendar yields useful information about potential labour bottlenecks, again an important issue when designing realistic intervention strategies.

Table 4.1: A summary of the types of information needed to investigate the social dimension to crop raiding and crop damage.

	Examples of possible areas for exploration
Social Context – background information about the affected communities	<ul style="list-style-type: none"> • Local land use strategies and population densities • Land tenure systems • People’s degree of dependence on agriculture for subsistence • Men and women’s responsibility for, access to, and control of various resources such as land, cash, and crops • Local beliefs and taboo systems as regards wildlife • Traditional institutions for controlling crop raiding • National law and government policy with respect to wildlife, land and conservation issues • Local knowledge of wildlife laws and conservation issues.
Farming practices – details of farming systems adopted locally (See Section 3. Measuring Crop Losses, pg. 18-20)	<ul style="list-style-type: none"> • Farming cycle i.e. planting and harvesting times • Types of crops grown • Uses of, and value of, different crops to households, i.e. which are for household consumption, ‘famine’ foods, cash crops etc. • Location of farms in relation to human habitation, Protected Area (PA) boundaries, etc.
Human-wildlife conflict – the facts (See Section 3. Measuring Crop Losses, and Section 5. Conflict Resolution)	<ul style="list-style-type: none"> • The natures of the conflict, i.e. crop losses, damage to property, threat to human life, etc. • Presence/absence of crop damage by wildlife and the species thought to be responsible for crop losses (domestic animals should also be included here) • The number of households affected locally • Local perceptions of the severity of damage • Details of any measures taken to protect crops against damage by wildlife and/or domestic animals • Who are the people who complain most about problems with wildlife locally (i.e. sex, age, ethnicity, class, location of farms in relation to PAs, forests, etc.)
Local people’s perceptions	<ul style="list-style-type: none"> • Do local people value wildlife resources and if so which ones and why? • Do local communities think they get any benefits from local wildlife? • What are the local views on how crop raiding by wildlife should be dealt with and why do they think this? • According to local communities who should be responsible for protecting crops/property/people against the activities of wildlife? • Do local communities consider conservation to be an important issue locally and if so, why?
Community/local expectations	<ul style="list-style-type: none"> • Local expectations of benefits from conservation of wildlife
Information to facilitate arriving at an acceptable solution	<ul style="list-style-type: none"> • Details of any risk sharing systems/strategies already in place that might be adapted to cope with the problems associated with crop raiding by wildlife? • What if any are the possibilities for alternative income generating sources appropriate to the area so that people can adopt an alternative subsistence strategy to agriculture

Local perceptions of damage

As well as having detailed information about the nature of the conflict, it is useful to have knowledge of local perceptions of the severity of damage, how and whether people use particular strategies to try to minimise the levels of crop damage occurring and who actually makes formal complaints about crop raiding by wildlife. Such information will help identify whether crop damage *per se* is the important issue or whether it is a proxy for another issue. In addition, this information will help to identify target groups for consultation in any intervention programme.

Understanding of the law

Depending on the purpose and focus of the investigation, it is advantageous to have information about local people's understanding of national wildlife laws. This, in conjunction with information about their expectations of local wildlife authority personnel and conservation agencies, can help explain why crop raiding is such an emotive issue, even for those members of a community who are at very little risk of losing their crops to wild animals. This is important particularly when thinking about possible intervention strategies – different types of intervention may be appropriate to different sectors of the affected community as a consequence of having different experiences of crop raiding, particularly where not all complainants necessarily experience frequent or extensive crop loss or damage.

For an intervention strategy to be successful it needs to be appropriate in its aims and the manner in which it is implemented. Thus it is essential that such strategies be developed in consultation with all stakeholders, hence the need to identify appropriate sections of a community or local population, timing of possible labour bottlenecks, people's expectations with respect to responsibility and outcomes, and the presence of traditional risk-sharing strategies.

Degree of detail needed and useful strategies for collecting data

The level of detail needed will depend on a number of factors including (i) the purpose of the study, i.e. whether the research is planned to be a forerunner to the implementation of an intervention programme, (ii) the time-scale within which the researchers have to operate, and (iii) the budget. Given that most crop raiding research is intended to inform planning for future interventions, the emphasis is likely to be on producing adequate and appropriate information within the minimum amount of time possible, prior to developing and testing intervention strategies. Thus, researchers and managers need to prioritise with respect to the

types of data collected. However, evidence suggests (Hill 1998; Conover 1994) that to concentrate solely on an ecological or economic evaluation of the situation is not appropriate because the way people understand and perceive issues influences their responses to particular situations. Certainly, where there are time and budgetary constraints, it may be tempting to reduce or proposed research on the social dimension to crop raiding, or eradicate it completely from the project. However, omitting this aspect may compromise an intervention because a good understanding of the social context is likely to be vital to devising strategies that will be acceptable to the people they are being aimed at. To a certain extent the minimum information necessary to gain some understanding of the social context of a conflict situation will depend on the type, extent and duration of the conflict, the degree of dependence on agriculture amongst the local communities, and the degree of homogeneity amongst those people affected in terms of wealth, education, ethnicity, political power etc. However, where there are time, labour or financial constraints information on people's degree of dependence on agriculture, traditional institutions if any for controlling crop raiding, uses of and value of different crops to households, local perceptions of the severity of damage and which species are thought to be responsible, and some indication of the local view as to the most effective/acceptable strategies for dealing with crop raiding by wildlife are likely to provide a useful backdrop against which to analysis data on crop losses and species responsible.

Having determined the types of information and level of detail required, an important consideration is how to obtain that information. There was much discussion of this during the workshop and the following is a summary of the main points included in that discussion.

RRA/PRA² techniques offer a range of data collection tools that are likely to be highly appropriate and useful given time and funding constraints. (For a more detailed description and discussion of PRA techniques (see Adams and Megaw 1997, Chambers 1992, Leurs 1996, and Mason and Danso 1995). Alternative strategies such as questionnaire surveys may yield some basic background information relatively rapidly (providing they are administered by interviewers), but generally they are unable to provide adequate or accurate information relating to potentially sensitive topics such as people's perceptions of their risk of suffering crop damage by wildlife. The types of data collection strategies that could be used to gather information about the social aspects of crop raiding by wildlife are summarised in Table 4.2.

² Rapid Rural Appraisal and Participatory Rural Appraisal

Table 4.2; Summary of useful data collection techniques and strategies

Appropriate data collection strategies
<ul style="list-style-type: none"> • Secondary sources of information – reports etc. • Appropriate RRA/PRA techniques – mapping and transect walks, ranking or scoring matrices, historical matrices, time lines, daily schedules and seasonal calendars, institutional analysis and linkage diagrams. • Participant observation • Semi-structured interviews with random individuals and key informants (specific identified individuals) • Discussions with focus groups (with specific common interests) and mixed groups (formed at random) <p><i>Ad hoc</i> reports from villagers & verification by project staff – incidence and degree of damage to crops, animal spp. responsible, etc.</p>

There are many advantages to using PRA techniques. Where time and/or funding permits a more detailed study of the social aspects of crop raiding, PRA techniques are a useful set of tools for getting a quick insight into areas worthy of more detailed investigation, using perhaps participant observation or semi-structured interviews over a more extensive time period.

They are particularly well designed to facilitate researchers gaining an ‘insider perspective’ on specific issues, and they also provide a good way of starting to build up a rapport between the researchers/project personnel and local residents.

The degree of rapport between researchers and the community is dependent, at least in part, on the length of time the researchers are within a community and the type of interaction that ensues between members of the local community and project personnel. Obviously a good relationship between project personnel and a community is important when trying to collect information of a sensitive nature such as people’s understanding of the crop raiding situation, and their expectations as to whose responsibility it is to deal with wildlife that crop raid. Many of the techniques used in PRA have been designed with this in mind, i.e. to facilitate an ethos of trust and sharing between the parties involved.

Overall, these techniques are very useful for exploring particular issues relating to local communities, the way they access and value local natural resources, how they prioritise particular decisions with respect to livelihood, household economic security, access to and distribution of resources, and how they perceive particular conflict issues. However, there are constraints to their usefulness and it is important that investigators be aware of the limitations of their use. For example, PRA techniques are now very familiar to many rural and urban groups in the developing world because these methods have been used very frequently as forerunners to health care, agriculture and marketing development projects. Understandably therefore people have the expectation that the use of these methods signifies the onset of a related development project. Thus, by using such a set of research tools researchers may, inadvertently, set up inappropriate expectations amongst members of the local community. Another drawback to using just PRA techniques is that while they are very useful for determining how local people perceive an issue/problem, they are not designed to gather independent/objective information such as the frequency of crop raiding events, and the proportion of crops damaged. A further point for consideration is that it is inappropriate to use PRA techniques more than once to investigate a particular issue with any group of people.

For questions relating to people's understanding of conservation it is important to use interviewers who are not automatically identified as being part of a particular conservation programme/project. And where one uses structured or semi-structured interviews, or perhaps on occasions questionnaires, it is very important that people's responses are checked for accuracy, either by including some contradictory questions or repeating the same question in several different formats within the interview session. This triangulation, or crosschecking, is important for verifying information and should always be included when carrying out social research of this nature. There are a number of different ways of doing this:

- (i) use a range of methods to explore the same issue,
- (ii) use similar methods with a range of different groups, or
- (iii) when using PRA techniques, use a number of facilitators from different disciplinary backgrounds.

Summary

- 1) It is important to consider the social costs of crop damage to farming households as well as the economic costs and ecological or biological aspects.
- 2) The level of detail re data collection needs careful consideration. It will be affected by factors such as the purpose of the data collection, as well as time, human resources, and budgetary constraints
- 3) It is important to identify issues pertinent to a conflict situation prior to devising or implementing intervention.