AFRICAN ELEPHANT SPECIALIST GROUP MEETING, MAY 27TH TO JUNE 1ST, 1994.

WORKING GROUP RECOMMENDATIONS

Two main working groups were convened during the meeting, which took the themes of the two plenary sessions: **(1) Human-elephant conflict** and **(2) Trade and illegal hunting.** Within each group, sub-groups were created to discuss specific aspects related to the theme. Each sub-group was guided through its discussions by a chairman and rapporteur.

(1) HUMAN-ELEPHANT CONFLICT

The overall goals of discussion group (1) were:

- **Describe and attempt to classify the types of conflict experienced throughout the continent's elephant range.**

- **Review any existing official policy with regard to conflict between humans and elephants in all the range states and put forward recommendations for policy revision and/or creation.**

- **Make specific recommendations for resolving the different types of conflict.**

Four sub-groups were created within discussion group (1). The main discussion points and recommendations of each sub-group are summarised below.

Sub-Group 1

The use of barrier and deterrent methods, such as fences, ditches, walls, traditional and experimental deterrents
This sub-group listed traditional, experimental and barrier methods currently being employed or tested against problem elephants, and described the advantages and disadvantages of each, as summarised in Table 1.

Table 1. Methods to deter problem elephants.

TRADITIONAL METHODS

Method	Advantages	Disadvantage :
Watchmen	Immediate effect; can be used in combination with other methods	Opportunity costs; elephants become habituated
Noise	*	Elephants become habituated
Fire	*	Elephants become habituated
Olfactory e.g engine oil, elephant hide, burnt chillies, human urine	Unknown	Unknown
Barriers e.g. thorn bomas, bark ropes, spikes	Easy to construct	Detrimental to environment, may wound elephants
Missiles e.g. spears, arrows	Deterrent effect; not usually fatal to elephants	May wound elephants; may cause aggression in elephants
Poisoning	Killing elephants can have public relations value	Illegal; detrimental to environment, renders meat useless

Table 1. (contd.)

EXPERIMENTAL METHODS EMPLOYED AGAINST PROBLEM ELEPHANTS

Method	Advantages	Disadvantages
Paintmarking	Provides identification mark on elephant which can be used for other purposes	Limited effect; dangerous procedure
Olfactory e.g. *Capsicum,* ? other gases	Has potential for wide application	Spray method: short range, upwind approach; remote-detonate method; still too expensive
Unpalatable Vegetation Barriers e.g. Opuntia cactus,(eucalyptus, chillies, tea, pyrethrum)	Unpalatable to elephant; plants with limited feral growth	Slow, uneven establishment of cactus; (other plants listed have no effect as a barrier)
Palatable Vegetation Barriers e.g. melons	Cheap	Very temporary effect
Sound e.g. audible alarm, infrasound calls	Long range; omni-directional effect	Elephants may habituate; limitations due to high technology required; expensive

EXISTING BARRIER METHODS AGAINST ELEPHANTS

Method	Advantages	Disadvantages
Stone Wall	Cheap to construct; little maintenance required	Limited effect; material not easily available
Ditch/Moat	Cheap maintenance; method is reversible	High cost of construction; disruption of natural drainage; soil erosion; elephants can refill ditch/moat; no road and river crossings
Conventional Fencing	Little maintenance required	High cost; method is not reversible; vegetation overgrowth may occur; potential for fire damage; not very effective
Electric Fencing	Rapid construction; the design can be easily changed; effective	Daily maintenance is required; high cost

Having listed the methods the sub-group made the following specific recommendations:

- Field trials on the effectiveness of *Capsicum-based* deterrents (which have shown promising initial results), should be pursued, prior to stimulating any commercial interest in the production of marketable preparations. Trials on the deterrent potential of broadcasting certain natural infrasound calls recorded from elephants should also be carried out. In this context, studies are needed to establish the potential for elephant habituation, the technological feasibility and cost limitations.

- *The* sub-group concluded that the most effective barrier is electric fencing, which has been proven to withstand high elephant challenge more often than not. It was recommended as the deterrent method of choice provided that abrupt separation of land-use is desirable, high capital cost can be met, and thorough daily maintenance can be achieved. However, it was recognised that little is known about the effectiveness of electric fencing as a deterrent to forest-dwelling elephants.

In relation to fencing the sub-group further noted that:

- Exclosures around agricultural targets deter elephants better than attempts to demarcate and enclose the elephant range.

- Smaller fencing projects work better than larger ones due to fewer maintenance difficulties and fewer common property management problems.

- Prior cost/benefit analysis of fencing projects should be undertaken but interpreted with caution, due to a large number of poorly-quantifiable factors.

- Ownership of a barrier and maintenance responsibilities must be clarified in advance of construction. Sufficient recurrent expenditure must be available for maintenance. Local or individual ownership is more desirable than state ownership.

The sub-group recommended that the following factors should be evaluated with the proposed use of fencing:

- The inducement for elephants to cross the barrier; the experience shown by elephants locally, in respecting or disarming barriers; whether disturbance shooting (non-fatal) or disturbance hunting (fatal)

would have to be employed strategically to reinforce new barriers. Shooting should not be employed to mask barrier maintenance deficiencies.

- The sub-group noted that the formulation of general guidelines on fencing is complicated by the high degree of site-specific circumstances. Furthermore, the issue of expanding the use of elephant barriers is to a large degree subject to broader national issues, particularly land tenure systems and ownership and use of wildlife resources.

Sub-Group 2

Involvement of local communitis, for example in revenue sharing programmes (park fees, trophy hunting, etc)

The sub-group listed ways in which local communities are already involved in human-elephant interactions throughout the range states and explored new approaches which could be incorporated into existing situations. In nearly all examples cited, it was agreed that greater local involvement in decision-making and participatory action is desirable, with a gradual shift in authority from central government to local level being highly appropriate. The group felt that problem animal control (PAC), whilst now widely practised, is inconclusively effective in terms of appeasement. The deterrent effect of control shooting remains dubious and needs more careful, critical examination, while for many deterrent methods, such as shooting and fencing, there is little local involvement. The sub-group felt that a distinction needs to be made between communities which are involved in wildlife management programmes within a communally occupied area, with or without an adjacent protected area, and those which are adjacent to protected area boundaries.

The following recommendations were made which are summarised in Figure 1.

- Participatory local level land-use planning, in relation to wildlife in general and elephants in particular, should be actively encouraged and pursued.

- Where necessary, appropriate training and transfer of skills in PAC, damage assessment and maintenance of barriers, should be undertaken.

- Local participation in wildlife management must be active rather than passive.

- Where financial benefits accrue from elephant management activities (e.g. PAC, safari hunting, tourism), these benefits should be returned at appropriate levels to the affected community.

- Resource management, including responsibility and accountability for elephant management, should evolve in a process-orientated manner commensurate with community development and capacity.

- Existing (or future) enabling legislation, to support and enhance the above, should be developed (or created).

- High-cost technological interventions must be critically tested and evaluated before being advocated. Where available, traditional knowledge in developing elephant management options and plans should be recognised and incorporated.

- Elephant management strategies which are sustainable and participatory within the local capacity should be promoted.
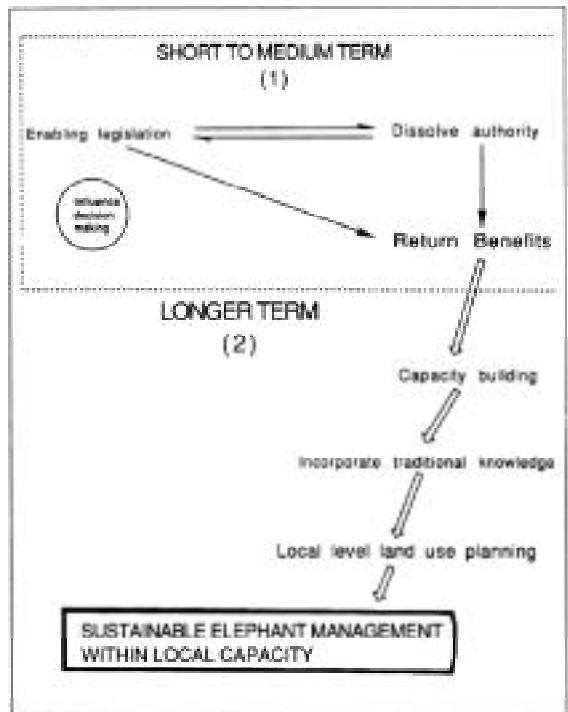
The above recommendations should be facilitated in a participatory manner within local communities.

Figure 1. Possible strategy for the implementation of a sustainable elephant management strategy at the local level.

Photo credit: Kadzo Kangwana

Involving the local community in wildlife management:

Sub-Group 3

Methods to deal with problem animals, such as killing of individuals, drives, culls, translocations, contraceptives

From the discussion. it quickly became apparent that there were clear differences in dealing with problem elephants among forest and savanna populations, partly due to differences in habitat as well as the vast array of cultures throughout the range states, meaning that methods of control which are acceptable to one country may be completely unacceptable to another. However, the wide experience of the members of the sub-group allowed a workable assessment of these topics which are summarised below, in Table 2.

Table 2. Summary of methods for controlling problem elephants.

1. KILLING INDIVIDUAL ELEPHANTS

Method	Advantages	Disadvantages
Traditional Methods (includes bows, arrows and spears)	Cheap; good deterrent effect; carried out by local people; immediate response; meat available to local people	Dangerous to people; risk of wounding elephants; increases aggression in elephants; there is less control on how many and why elephants are killed; people who have lost traditional skills have to be retrained
Shooting (i) By Game Department	Tighter control on how many and why elephants are killed; usually a more skilled operation; meat available to local people	Not an immediate response; wrong animal often shot; elephants do not learn from this process; dissatisfaction of people if service is not prompt
(ii) Sport hunting	Elephants have high economic value; benefits and meat available to locals; skilled operation; high level of control on number killed	Long time-lag after the offence; wrong elephant often shot; no learning process for elephants; temptation to shoot a trophy rather than the offender; no hunting allowed in some countries
(iii) Firearms in the hands of local people	Immediate response; high level of learning for elephants; meat available to locals	Open to abuse of firearms and poaching; unacceptable to most governments; little control on number killed; unskilled operation
(iv) Honorary wardens*	Quick response; high level of learning for elephants; meat available to locals; control lies with a responsible member of the community; high level of accountability and control	Expensive in terms of training and equipment; open to a certain level of abuse and corruption
Crossbow (new method)	More acceptable to most governments; more effective than traditional weapons; meat available to locals;	Expensive in terms of training and equipment; low deterrent level to elephants
Poison	The problem animals are killed	Due to the many environmental and health risks this method was unanimously rejected

2. DRIVES

(i) Aerial	Effective for a short while; elephants can be moved fairly long distances; high level of operational control	Very expensive; may not be effective in longterm; difficult or impossible in the forest
(ii) Beaters	Relatively cheap; more effective than aerial drives in forest	Dangerous to beaters; time-consuming; distances that elephants can be moved are limited;may not work in longterm

Table 2(contd.)

3. CULLS**

Method	Advantages	Disadvantages
General (i) From helicopters	Efficient and effective; less dangerous to people	Expensive, not an option in forests
(ii) By ground crews	Cheaper; could work in forest	Requires skilled marksmen; less effective
Specific (i) Culls	May induce other offenders to move; meat potentially available to locals; resource not totally lost	May not work in longterm
(ii) Elimination	Effective final solution	Ethical considerations; total loss of resource

4. TRANSLOCATION

	Elephants not killed; family units stay together; proven effective; more acceptable as a final solution	Expensive; high technology required; difficult or impossible in forest; loss of resource; possibility that elephants may return

5. CONTRACEPTION***

	Animals not killed	Not yet shown to be practical; may only work through long-term reduction in elephant population

* This method involves the identification and training of a prominent member of the local community who is then issued with a firearm. The sub-group felt that this method held great potential for most areas where human-elephant conflict occurs.

**It was felt that the term 'cull' was inadequate and so the topic was split into tow: 'culls", which refer to a reduction in numbers of elephants present and 'elimination by which all the animals in a particular population are killed Both these options can either be conducted by ground crews or from a helicopter, and each method has advantages and disadvantages.

***It was recognised that contraception is not a technique which can be applied to the immediate control of problem animals, but rather a long-term solution which might pre vent small populations from increasing to levels in excess of the carrying capacity of limited habitats.

Sub-Group 4

Methods of evaluating conflict and assessing damage to life and property
The sub-group first defined the reasons why the assessment of human-elephant conflict should be carried out. These were: to allow informed and balanced discussion of the policy issues at a national level; to allow national and local wildlife officials to respond appropriately to problems; to compare the costs of problems and their solutions; and to monitor the success of management actions.

The levels of required monitoring were listed *as:*

1. local level assessment to allow response to conflict situation;
2. national co-ordination of information collected at a local level;
3. specific detailed projects.

These three levels were further defined by the subgroup, as follows:

1. Local level evaluation

The sub-group prioritised the questions which need to be included in any conflict evaluation exercise. Three main questions were posed with several specific questions related to each, *as* follows:

1.1 How serious is the problem?
   - Is there a problem?
   - Where is it? Does it follow a gradient?
   - Is it getting worse?
   - How bad is the problem at national, local and individual levels?

1.2 What is the context?
   - Where is the area of conflict relative to protected areas or permanent elephant range? What is the availability of resources, e.g. food, water, minerals?
   - Is raiding, e.g. of crops, purposeful or incidental?
   - What other species of animals are involved?
   - What is the history of development of the problem, and what interactions and actions have been taken to counteract it?

1.3 Types of evaluation
   - What percentage of crops have been damaged?
   - What crops have been damaged?
   - When were they damaged?
   - What is the value of the crops in simple financial terms?
   - Full economic assessment.

2. National co-ordination of information collected at the local level and routine reporting.

The sub-group made the following recommendations:

• A relevant national agency needs to take responsibility for setting up a system of data collection and assigning the task to a specific person with allocation of sufficient resources.

• Reports on human and stock deaths should be

quantitative, but for most countries a qualitative system for reporting crop damage by geographical regions should be adopted.

• Problems with other wildlife species should be included in reports.

• There should be co-ordination with other relevant government departments.

• There should be feedback to the local level.

• Monitoring of protected areas by departmental and project teams should incorporate the broader ecosystem outside the protected area.

• A link should be established with data sets on human demography and social issues.

• There should be monitoring of management actions for adaptive management.

3. Detailed human-elephant conflict assessment for specific projects.

The sub-group recommended that:

• Assessment should be done before and aftermanagement action.

• Ecological impact assessment must be included.

• Consideration should be given to historical causes.

• Due attention should be given to political and non-financial considerations. Some of the most important issues may be difficult to quantify.

• Donors must recognise the technical difficulties of carrying out damage assessment which become more difficult if damage is widespread. A sampling strategy is needed, and if climatic conditions are variable, standard figures cannot be used.

The sub-group finalised their discussions by listing examples of ongoing evaluation activities in range states.

(2) TRADE AND ILLEGAL HUNTING

The overall goals of discussion group (2) were:

- Examine national, regional and international mechanisms which deal with illegal hunting and trade.

- Discuss appropriate strategies which might improve monitoring of illegal hunting and trade.

- Discuss future management of ivory stockpiles and trade in elephant products.

Two sub-groups were created within discussion group (2). The main conclusions and recommendations are summarised below.

Sub-Group 1

Trade in elephant products and ivory stockpiles
The sub-group made the following observations and recommendations:

Future policy on elephant products other than ivory

In general, the prevailing opinion was that trade in non-ivory products poses a lesser threat to African elephant populations than trade in ivory. However, any future trade in such products would require clear policy positions on domestic trade, change of inappropriate legislation as well as clarification and enforcement of existing legislation by national governments.

Monitoring of illegal trade

The sub-group concluded that more data on illegal trade are necessary, although these are recognisably difficult to obtain. It was also considered important to have up-to-date information on national legislation related to trade. The sub-group proposed the need to develop informant systems and to share information with the TRAFFIC network.

Ivory stockpiles

There is a general expectation that ivory stockpiles will, at some time in the future, realise economic value. It is also clear that stockpiles will continue to grow, which raises important questions about the security and storage of stockpiles. If trade is ever to resume, the first important step is to ensure adequate registration and marking of tusks. C1TES already has an established registration process, whereby countries are obliged to mark each tusk with an indelible pen with the date of acquisition, the ISO country code, a unique identifying number, and the weight of the tusk in kilograms. However, the sub-group proposed that additional information be recorded, where known, as: precise geographical location of where tusks were found; cause of elephant's death; how the ivory was acquired; date of elephant's death (as opposed to date of registration). This additional information can be marked on each tusk in the field, while the remaining information can be marked at the registration site. It is important to avoid duplication of codes when moving tusks from field sites to district or national stockpile locations.

Future management of stockpiles

Tusks degrade over time without adequate storage procedures. Correct storage should be the responsibility of the state. Ideally, tusks should be consolidated into one or two stock rooms where they can be secured and monitored. The sub-group noted that this is clearly difficult in countries where a domestic ivory trade exists and where a substantial amount of ivory is in the hands of private dealers. The sub-group suggested that an AfESG sub-committee be established to investigate the issue of stockpiles in more depth. The group further suggested that at future AfESG meetings, country status reports should include information on ivory stockpiles, infractions related to domestic or international ivory legislation, and changes in national legislation.

Sub-Group 2

Monitoting the illegal killing of elephants
The sub-group broadened the subject to include discussions on the monitoring of law-enforcement and illegal activities including illegal killing, because generally, patrols have to investigate all types of incidents.

The group noted the severe lack of data around the continent, both on elephant status and distribution, and on law-enforcement activities. Several reasons were listed why such data remain difficult to obtain: data are often not collected; or if they are, they are of poor quality or get lost. There are inadequate funds and manpower for data collection, and in many cases, there is corruption.

The sub-group proposed a layout for a report form, as shown in Table 3. Range states should use similar forms, standardised for analysis, and the sub-group stressed that proper patrol reports must be written each time. For aerial patrols, the sub-group suggested recording the hours of flying time, and the route taken. A key statistic to note is the number of **effective** patrol days.

The sub-group realised that forests and unprotected areas may not be possible to patrol, yet a measure of effort is still required. For example, the number of incidents reported per interviewing session could be noted. For this to work, one must establish trust with the local people, and probably set up an informer network. One might also need to know the local human demography and geography - to identify hunters per village for example.

Poachers should be interrogated to gather information on their profiles, activities, and the time to detection after entering an area. Data required from a poacher include: name, nationality, area, weapon and supplier, middleman for trophies, colleagues, duration in the park, past history, trophy prices, method of operation. Use of tape recorders is recommended and cross-checking is vital.

The sub-group recommended that only simple analysis of the data collected on patrol is required. Data should be extracted from the park level first, and certain results can be fed back to the scouts doing the patrols. The report forms can then be centralised at headquarters. Security of report forms is vital - both those stored in the park and those at headquarters. Data must belong to the state, and are under the responsibility of the relevant department. It should be at the department's discretion whether to expose/publicise data or not. Perhaps departments could be asked to co-operate with *bona fide* international organisations (e.g. AfESG, TRAFFIC), but these must be expected to respect any confidentiality and secrecy.

National approaches should include compilation/ analysis/feedback of the data action on any lack of equipment and/or manpower. At the regional level, information can be passed to investigation branches.

The sub-group suggested that the AfESG could produce a simplified manual, and could distribute any relevant information in the form of books, articles and relevant computer software. The AfESG could also stimulate range states at the department level.

Table 3. Suggested patrol report form.

Dates of Patrol: .... GeneralArea: ....

Names of patrol members:..

Camps/itinerary (route followed by localities): ....

Method of movement: ....

Times of events: ....

Results:

1. Offences:

   serious (armed poachers sighted, gunshots heard, poachers' camp, etc) minor (non-armed poachers seen, trespassers, tracker, fire, etc)

2. Carcasses: species/sex/age? location, cause of death, any ivory collected, how carcass found

3. Items recovered (guns, magazines, cartridges, snares, etc.)

4. Observations on live animals – priority/key species, nos./herds, any unusual spp.