- CASE STUDY -
'VERTICALLY INTEGRATED' HUMAN-ELEPHANT CONFLICT MANAGEMENT SYSTEM IN TANZANIA: BACKGROUND AND NEXT STEPS

- Extracted in part from a final report to WWF International -

Richard Hoare
P O Box 707 Arusha, Tanzania.
E mail: richard@messerlifoundation.org

1. SUMMARY OF INSTITUTIONAL ARRANGEMENTS FOR WILDLIFE CONSERVATION IN TANZANIA

Wildlife conservation in Tanzania is often associated with complex institutional arrangements. As a background, it is important to understand the players and their roles, and in turn the impacts which they may have on current and possible future alterations to any wildlife management actions in Tanzania. In light of this, below is a short synopsis of the players and their roles.

1.1. Central government agencies

MNRT Ministry of Natural Resources and Tourism, Government of Tanzania.

TANAPA Tanzania National Parks, MNRT

- *responsible for management of all national parks: a high revenue-earning parastatal with considerable independence in financial and personnel management. Headquarters: Arusha.*

WD Wildlife Division, MNRT

- *responsible for management of all wildlife outside national parks: viz. game reserves [protected areas], game controlled areas [unprotected] and open areas [unprotected]: a high revenue-earning department of central government. Headquarters: Dar es Salaam.*

NCAA Ngorongoro Conservation Area Authority

- *responsible for management of the Ngorongoro Conservation Area (NCA) - a multi-use area with Maasai people, livestock and wildlife: a high revenue-earning authority, nominally under MNRT but with considerable independence in financial and personnel management. Headquarters: Ngorongoro.*

TAWIRI Tanzania Wildlife Research Institute, MNRT

- *responsible for all wildlife research activities: institutionally independent but a low revenue-earning government organization. Headquarters: Arusha.*

There is a single wildlife research organization (TAWIRI) which advises the three wildlife management organizations (TANAPA, WD and NCAA). TANAPA earns revenue from various charges imposed on photographic tourists and associated tourist facilities. WD earns revenue from consumptive wildlife use – safari hunting – by charging fees to private companies (safari

operators and their clients) leasing and using land concessions in game reserves and game controlled areas. NCAA charges for photographic tourism similarly to TANAPA. Contributions from the three management organizations are supposed to subsidize TAWIRI, which in addition receives limited revenue from the treasury. TAWIRI itself only earns limited revenue by charging fees to foreign-based wildlife researchers undertaking fieldwork in Tanzania.

1.2. Local level government agencies

On a descending spatial scale, civil administration in Tanzania is divided into regions (14), districts, wards and villages, all with their associated officials. District councils in areas that are wildlife-rich normally have a 'District Game Officer' (DGO), an official tasked with local wildlife management affairs.

The WD has senior field managers in each game reserve or each complex of contiguous reserves called 'project managers'. Under the project manager's control are a field force of staff including rangers and scouts. In addition, WD has armed anti-poaching units called Kikosi Dhidi Ujangili (KDU) stationed in some regions, which function as mobile anti-poaching brigades over several neighbouring districts.

1.3. Other terms

CBNRM An acronym for "Community Based Natural Resource Management", a program implemented in many African countries.

WCA Wildlife Conservation Act. Act No. 12 of 1974. (N.B: to be revised in 2007).

WMA Wildlife Management Areas

- *Designated areas of village land that have obtained or are in the process of gaining central government approval for wildlife management functions.*

WPT Wildlife Policy of Tanzania.

- *Produced in 1998, the policy includes: CBNRM principles, establishment and management of WMAs, and species conservation initiatives.*

1.4. Non-government agencies

AfESG African Elephant Specialist Group (IUCN/SSC)

- *A group of technical experts focusing on the conservation and management of African elephants. The broad aim of the AfESG is to promote the long-term conservation of Africa's elephants and, where possible, the recovery of their population to viable levels.*
  Website: www.iucn.org/afesg/

EPDT Elephant Pepper Development Trust

- *An NGO working in seven African countries running training courses in community-based wildlife conflict management for African wildlife managers.*
  Website: www.elephantpepper.org

TNRF Tanzania Natural Resources Forum

- *A civic society organization concerned with political issues in natural resource management.*
  Website: www.wcst-arusha.tnrf.org

WCS Wildlife Conservation Society, New York, USA

- *International conservation NGO.*
  Website: www.wcs.org

2. EXISTING WILDLIFE POLICY FRAMEWORK IN TANZANIA

Tanzania's current Wildlife Conservation Act dates from 1974, although revised in 2004. As a result of a general election in December 2005, many changes among members of parliament and the civil service occurred and subsequent debate of the WCA will result in a new bill scheduled for 2007.

The issue of 'problem animals' and their management and control is dealt with in the Act as: problem wild animals are divided into small 'non dangerous' vermin, controlled by villagers, sometimes with assistance from the agricultural authorities, and larger potentially dangerous species which the WD is obligated to control. DGOs, although employed by district councils, should liaise with and assist the WD field personnel.

3. EXISTING PROBLEM ANIMAL CONTROL PRACTICES

3.1. Official activities

TANAPA has no obligation to assist with problem wildlife as its management responsibility effectively ceases at the national park boundary. In theory, the WD is responsible for all 'problem animal control' (PAC) in any area of human settlement.

This notion of the state authorities being entirely responsible for PAC is engrained in the attitudes of local communities and their officials living around wildlife areas managed by the state. The historical development of this situation stems from a long history of colonial and post-colonial governments who assumed sole ownership of wildlife. In colonial times, government 'Game Departments' originally began life as PAC (mainly elephant) agencies.

In practice, because many local people are not aware of the complex distinction between the wildlife management agencies in Tanzania, TANAPA often receives PAC complaints, especially where the wildlife-human interface is only a national park boundary and there are no adjacent game reserves e.g. Katavi National Park. In the latter case, the TANAPA officials work collaboratively with the communities through the community conservation and 'outreach' programme to address these issues.

WD officials have the authority to decide how to manage problem animals. In practice, this often means destruction of a culprit animal, if and when one can be found. In the case of elephants,

adherence to this is very subjective and often, as has been the case in so many countries in Africa, any elephant found in the vicinity of the prior incident(s) is assumed to be the problem animal.

As an example, in December 2005 a supposed problem elephant was killed following the death of a man by an elephant in west Kilimanjaro. The circumstances combined to illustrate a worst case scenario where reaction to a problem elephant incident involved absolutely no objective assessment or action from wildlife officials. The incident involved an intoxicated tribesman approaching a cattle watering trough after dark and stumbling into an elephant drinking, which unfortunately killed him. The incident coincided with a public holiday weekend, shortly after the general election, and WD officials were anxious to take rapid action, both to appease the community in the new political climate and so that they could return quickly to their base. One of the impacts of this action was the lack of consultation, including with a widely known and well respected Tanzanian researcher who had been working in the area for six years and recently started a large research project on this elephant population. The WD officers took action by attacking four elephants of the opposite sex to the single culprit animal, some of which died much later from wounds inflicted by their rifles.

Another recent disturbing development has been the 'knee-jerk' political reaction to problem elephant complaints. A number of senior politicians have visited various affected districts, accompanied by officials from both national wildlife management authorities. They addressed community meetings where extensive promises were made regarding rapid solutions to 'human-elephant conflict' (HEC). Unfortunately, very few of the senior politicians addressing these meetings have had any exposure to new thinking in Africa on HEC e.g. AfESG Decision Support System (DSS) or EPDT documentation. Additionally, only certain affected districts were visited while others, with equally concerning HEC problems, received no such attention. Subsequently, a probable result of this political pressure was the subsequent rise in the number of elephants shot on PAC in the same districts where the meetings occurred.

In the western Serengeti, four elephants were shot on PAC in the first year of an AfESG-model HEC recording scheme began in March 2005. In the first half of the second year, corresponding with the crop season, a further 14 elephants were destroyed on PAC. The Serengeti elephant population exists at low densities and is still recovering after heavy poaching for ivory in the 1980s. Most likely, if these 18 animals had been killed by poachers in the same 17 month period in a high profile wildlife area, it most likely would have been publicized and strong subsequent public concerns voiced.

3.2. Research and experimental activities

3.2.1. Eastern Selous

The original project on HEC recording started in 2003 covering large tracts of land across three districts. The first years results were published in 2005 in *Pachyderm* 38, and highlighted the value of AfESG-style data collection schemes. Since then, two more years of data have been gathered, providing a very useful picture of the situation that captures between-year variation of HEC incidents.

Mitigation trials with EPDT-style defence measures were started with farmers in 2004. Grease, as a medium for distributing chilli deterrent, proved expensive and was substituted with old engine oil. When the supply of chillies, used as an olfactory deterrent for elephant, was insufficient, tobacco dust obtained from a local cigarette factory proved as effective. As the project expanded, a workshop was organised in the most progressive district (Kilwa) to highlight the need for local institutions to take responsibility and exercise control over their problem animal issues (see section 5.4.2). This proved to be a significant development for two reasons. Firstly, it provided a model which other districts could adopt, and secondly, and most importantly, it brought to light the diverse CBNRM-related issues that are linked to problem animals and thus illustrated that the way forward for problem animal management, both locally and nationally, is within the scope and remit of CBNRM initiatives. Not surprisingly, this confirms within Tanzania what has been observed across many parts of Africa that are exploring and adapting CBNRM programmes – 'organized community groups' in different forms are willing to assume authority over their wildlife. A proviso to this is that the costs incurred from HEC need to be linked to the benefits.

3.2.2. Northern Tarangire

One of the key outputs of the original HEC study project in Tarangire (2002-2005) was a comparative assessment between elephant raiding activity in experimental plots employing EPDT-style farmer-based defences versus nearby control plots. Unfortunately for the study, limited crop raiding was recorded due to the continuous drought. However, the study was written up as a MSc degree by Mr Ole Meing'ataki at Sokoine University of Agriculture, Morogoro, while employed as an ecologist by TANAPA. Mr Meing'ataki was initially supervised by the author and subsequently by another AfESG member, Dr Charles Foley. The following thesis abstract highlights the HEC mitigation situation:

> *"The results show that crop and grain store destruction by elephants seems to concentrate mostly in the areas bordering the park and extend up to five kilometers away and those areas bordering Tarangire river valley. There were positive indications regarding the effectiveness of crop damage control measures introduced to the villagers during the study due to the noted decrease in the number of raiding events in the experimental plots, avoidance of these plots by the crop raiding elephants and the increase in number of the farmers who adopted the same measures for their crop fields. The study concludes that, the increase of human population around Tarangire National Park is likely to accelerate these conflicts in future, unless control measures are taken. The study recommend community based wildlife management approaches, participatory land use plans and provision direct benefits to local people from wildlife conservation. Lastly, community based measures against problem animal management already in use by the local people should be enhanced by TANAPA and other wildlife agencies."*

4. GENERAL POLITICAL ISSUES RELEVANT TO THE PRESENT SITUATION

During 2006 concerns began to surface regarding elephant conservation in Tanzania and informal meetings were held between individuals in the wildlife sector, including those from TNRF, WCS, TAWIRI, hunting safari operators, tourist guides and other interested parties. These gatherings

brought to light the professional advice of the AfESG and its members, thus highlighting that different areas of elephant conservation and management are interlinked. Therefore, elephant conservation and management cannot ultimately be seen or addressed in isolation from one another.

In 2006, reports appeared in the international press about seizures of illegal ivory in Asia, and as some were either directly or indirectly linked to Tanzania, these were seen as an embarrassment for the government. Additionally, concerns were expressed by a number of unrelated local sources e.g. hunting industry, researchers and government officials, about the discovery of elephant carcasses and associated levels of poaching, especially in the central regions of the country. Interestingly, the carcass figures quoted by one safari company were the same as the numbers of elephant killed on PAC by the authorities in the western Serengeti (see 3.1 above). However, far more significant than this was what the private sector operators are not reporting. They expressed vulnerability when reporting varying elephant poaching data compared to that of the authorities, as many of these remote areas are host to a suite of illegal activities exploiting natural resources. A particular problem is illegal logging with collusion from local officials involved in illegal timber exports. Private sector operators fear that publicizing, or even reporting, any illegal natural resource exploitation could lead to leases for their legal hunting concessions being withdrawn. There are many companies interested in these concessions and replacing one that is agitating officials with one that will not, is seen as a very real possibility.

At TAWIRI's 5th scientific conference held in December 2005 there were extensive presentations on human attitudes towards wildlife conservation, including specific Tanzanian HEC presentations. Importantly, interested parties came together during the conference to discuss human-wildlife conflict (HWC) issues in Tanzania. Although only informal, important issues were raised and minuted. Some of these issues have been incorporated into section 5.3.1 (see below)

Considerable confusion exists regarding the interconnection between various elephant 'issues' at all levels, ranging from local to international context. The media further perpetuates this through tales of individual suffering inflicted by HEC incidents rapidly, repeatedly and simplistically linked to the international ivory trade. No wonder the public is confused about elephant conservation.

Elephant-related conservation issues are inherently complex although synergistically generate great confusion because they cut across all micro and macro scales – local, national, regional and international. Furthermore, everyone has an opinion on elephant conservation issues. For example, a participant at the TAWIRI conference HWC discussion group remarked: "Governments don't see what biologists see. We need to make our information more accessible to them". A larger, practical and hugely significant illustration of overcoming this perpetual dichotomy between scientifically-evident necessity and political procrastination has been provided by a recent ground-breaking report that has turned the political tide on climate change across the world. The author Nicholas Stern, a UK-based economist, translated the dire urgency indicated by irrefutable scientific evidence on climate change into tangible economic predictions. In the words of the New Scientist magazine, Stern's success is that he "went for the political jugular".

Extensive records and literature reviews have reported that the destruction of thousands of supposedly-targeted problem animals over many decades in Africa in the 20th century had virtually no sustainable deterrent effect in mitigating the cost of problem wildlife on people and their property. Therefore, perpetuating today what is effectively a remnant of the 'colonial model' of wildlife management and thus an anachronism, is pointless. Emphasizing this point in the political arena may now be fruitful, quite simply because it might offer a perceived and face-saving 'shifting of the blame' as it were, from a shortcoming of long-independent African governments to an unfortunate inheritance from the former colonial administration. And so it might well attract political support for a radical change of tack in PAC policy that present politicians and officials can claim as their own idea.

The current damaging confusion on HEC and PAC can be turned around if a coherent approach is followed in which each elephant 'issue' (see section 5.3.1) has its own standing but is ultimately interconnected at the appropriate scale in the overall conservation of the species. Articulating this in an easily understandable form for politicians and their constituency is the challenge for our current project and its necessary, and diverse, sequels. Experts from the social, economic and biological fields of conservation need to collaborate as one. If they succeed in providing a 'political' HEC model for Africa, it will assist mitigation of all types of HWC.

As long ago as 1999, the AfESG commissioned a review of national policies on HEC in southern African countries – the countries with the earliest and most advanced national-level CBNRM programmes. In summary, it reported:

> *"To date most problem elephant management has been very ad hoc. However, there is a move towards decentralization of problem elephant management, especially where successful CBNRM programmes are in operation. In Zimbabwe & Namibia responsibility for natural resources has been delegated to the legal land occupant, meaning that private landowners and organized community groups can assume authority over their wildlife.*
>
> *Such devolution of authority can lead to longer-term solutions, such as:*
> - *Land zonation which can reduce overlap between agriculture and elephants*
> - *Generating revenue from elephant-related activities by creating incentives for elephant conservation among rural communities.*
>
> *What is Needed*
> - *Development of national policies for problem elephants*
> - *Research into alternative HEC management options*
> - *Implementation of CBC programmes which provide incentives for elephant conservation and offset costs*
> - *Devolution of authority for HEC management to communities living with elephants*
> - *Involvement of all stakeholders in the development of an elephant management strategy*
> - *Implementation of standard monitoring and data analysis."*

These needs have remained only partially acted upon but the noteworthy constant is that these principles apply to almost all African elephant range States and efforts to address them can be

started at any time. To put the above into action the AfESG and its associates, notably EPDT, have been simultaneously involved in a completely new approach to HEC in the last five to ten years. The aims are to largely 'decentralize' PAC and provide those affected, who are mainly in the subsistence farming sector, with the practical capacity to do much of it themselves.

This AFESG and EPDT approach is termed Community Based Conflict Mitigation (CBCM). It is a relatively recent approach empowering communities to address their own wildlife conflict issues, particularly those from elephants. The concept of CBCM was conceived through the realization that rural communities could not rely upon outside agencies to solve their conflict problems, but equally their own traditional methods of conflict mitigation were weak and vulnerable to habituation by elephants. Thus CBCM is a series of effective, low-cost HEC mitigation techniques that rural farmers can administer as and when they require. They have been tested extensively in Zimbabwe and Kenya and have been successfully implemented in a number of other countries, including Ghana, Mozambique, Zambia, Botswana and Namibia. A descriptive 'package' of CBCM is available but is best catalysed via rural development trainers who themselves have been specially instructed through an EPDT formal course (or similar).

5. RECOMMENDATIONS FOR THE WAY FORWARD IN TANZANIA

5.1. INVOLVEMENT of TRAFFIC

In the short term, bringing the problem of poaching and protection of a specially protected species to the attention of the authorities should best be done through an organization specifically designed for that purpose: TRAFFIC, CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora). Tanzania is a signatory to CITES and a TRAFFIC office, as well as a MIKE (Monitoring the Illegal Killing of Elephants) recording system, has been established in country. It is TRAFFIC's mandate to collect information on illegal natural resource exploitation and present it to authorities while not having to divulge all details of its data sources. Very few people involved in the wildlife sector are aware that a TRAFFIC office exists in Dar es Salaam.

5.2 APPOINTMENT of an HWC CO-ORDINATOR within TNRF

TANAPA, WD and TNRF were approached about developing a HWC section and/or hosting a dedicated officer in light of the growing importance of HWC. Current policy excludes TANAPA from such responsibility, as this is the responsibility of the WD. However, WD do not have any real coherent way of dealing with HWC nationally and because conditions vary so much across the country, HWC is effectively left it to the individual project managers stationed in their game reserves. Delegation is a powerful tool, however there appears to be an atmosphere of different areas operating independent of any consistent national-level guidance.

The TNRF have a working 'model' that could be replicated for HWC. This model includes the employment of a 'national co-ordinator' based within TNRF who specializes entirely in forestry conservation issues (the forestry division – a sister to the WD, has been notoriously ineffective to date in Tanzania). The 'national co-ordinator' person liaises with all concerned on the issue and

specifically develops strong contacts within government in order to lobby them to define their responsibilities and honour them. As this approach is showing success in forestry conservation, the employment of a 'national co-ordinator' for HWC issues could be valuable for the success of the HWC programme.

5.3 NATIONAL ELEPHANT MANAGEMENT PLAN

In the long term, growing concerns about elephant management would be best addressed by the government commissioning a national elephant conservation and management plan (NEMP). There are of course many precedents for this, as African elephant range States have in recent years increasingly come to believe that the complex and 'umbrella' nature of elephant conservation justifies a national plan for this single species. Those range States who have attempted this e.g. Ghana, Mozambique, Botswana, and Namibia, have made extensive use of technical input from the AfESG and its members.

Tanzania produced an elephant management policy (EMP) document in 2001 which sets the baseline for a NEMP, stating that it should be updated every three years. There is much room for improvement to this document through the introduction of new thinking such as the AfESG-endorsed technical support on HEC (see www.iucn.org/afesg). The following examples highlight some of the shortcomings in the existing EMP:

HEC section statement no 3.2.3.2: "…*controlling elephant populations to desired levels by trophy hunting"*

Section 2.1 (ii) "[National] *Offtake levels for trophy hunting was maintained at below 50 individuals per hunting season in accordance with CITES guidelines"*

Section 2.2: "…*although the elephant range has not been identified and mapped out, vivid indicators of HEC call for reduced elephant density in some ecosystems. The preferred upper limit of elephant numbers in Tanzania is 100 600."*

The complete absence of any modern HEC research input into the Tanzanian EMP document of 2001 leads to these declarations having little credibility e.g. that removing 50 elephants out of a population of 100 000 (0.05%) constitutes a national HEC mitigation strategy – taking place furthermore in an unknown national elephant range. This illustrates confusion caused by misunderstanding links between elephant-related issues.

Below is an outline of the key components that should form the skeleton of a Tanzanian NEMP, including specific sections and issues pertaining to HEC that should ideally be included. A consistent theme is that devolution of power in wildlife management from central to local government should be pursued, both in terms of benefits and costs. This requires the support of the premier piece of wildlife legislation in the country – the new Wildlife Conservation Act – scheduled to come before parliament in 2007.

5.3.1 SUGGESTED COMPONENTS of a National Elephant Management Plan

All elephant management functions should be integrated into one plan and include:

- National census programme for elephant
- Distribution of elephants and definition of their internal and trans-boundary range
- Protection of elephants and strategy against poaching
- Definition of policy on ivory retention and its use or trade
- ***Measures to assess and mitigate HEC***
- Topics and priorities for elephant research

5.3.1 (a) IMPORTANT POLITICAL CONSIDERATIONS within the National Elephant Management Plan involving HEC

Policy makers need the following in order to sanction new thinking on ways to mitigate PAC:

- Presentation of elephant damage recorded from field sites as economic data
- Evaluation of centralized vs localized PAC methods to combat problem elephants
- Ranking of pest species in agricultural land use systems
- Placing HWC in a socio-economic context among subsistence farming communities
- The willingness of districts to take on their own PAC strategies

5.3.1 (b) IMPORTANT COMMUNITY ISSUES within the National Elephant Management Plan, involving HEC at the conflict zone level

The following issues should be addressed within the community component of HEC mitigation as part of an initiative to develop district or village HEC/HWC management plans:

- Ensure widespread understanding that the Tanzania Government pays NO compensation for any wildlife damage
- Accept partial responsibility for HEC – aim for a partnership with the wildlife authorities
- Explore improved self-defence techniques (CBCM) for individual farming households e.g. EPDT programme
- Motivate local officials and residents to address land use planning at village level
- Confront human immigration problems into rural farming communities and rural areas
- Explore more efficient alternatives for income generation in rural livelihoods
- Rank HWC in socio-economic context
- Landscape conservation initiatives: target the elephant range and natural water supply systems

5.3.1 (c) IMPORTANT RESEARCH TOPICS within the National Elephant Management Plan, involving HEC at the zone level

Research into HEC and its mitigation should specifically undertake the following steps in order to supply good quality information on which government can base a more devolved HWC mitigation strategy:

- Quantify farming areas ‘at risk’ in HEC zones, in order to calculate the proportion of farms in any conflict zone that are affected by elephant damage

- Calculate economic data from systematically recorded elephant damage
- Generate supporting distribution maps of HEC incident data, systematically recorded through the AfESG protocols, at scales suitable for land use planning exercises at village level
- Investigate 'early warning' systems against problem elephants
- Monitor and evaluate centralized vs localized PAC methods for elephants
- Produce simple 'power point type' illustrated presentations of the project areas and the HEC data for printing as booklets instead of written reports. Use these as teaching and publicity aids to present to local community leaders, government officials, etc
- Research the existence of 'habitual problem' individual elephants
- Compare damage levels between different agricultural pest species in a HWC zone

5.4 POLITICAL CONSIDERATIONS FOR IMPROVEMENTS TO THE WILDLIFE CONSERVATION ACT 1998 RELEVANT TO HEC

The WPT of 1998 laid the grounding for the principle that local natural resource ownership and utilization are both desirable and necessary to attain goals of long-term natural resource conservation. This welcome paradigm shift did not however seem to include any meaningful changes on policy on PAC in the country. PAC issues appear easily forgotten, ignored or inadequately dealt with by conservation officialdom and the approach to the now pressing issue of problem animal management finds itself languishing in deficient and outdated thinking.

Modern thinking on HEC mitigation, such as the scientifically and technically grounded AfESG initiatives and outputs in the period 1996-2006 have had virtually zero penetration into both field and policy level wildlife management in Tanzania.

Fortuitously in Tanzania the political climate at present may facilitate the necessary change to happen. There is a new government which is emphasizing administrative change and improved accountability in the civil service. Importantly, there now exists an 'umbrella' over all policies and laws, called "MKUKUTA", constituting the route by which all sectors move toward a common goal of poverty reduction. MKUKUTA highlights specific outputs on natural resource management which means that at higher levels there is policy being made while the flexible nature of MKUKUTA allows 'room to manoeuvre' on formulating such policy.

It is advisable that the AfESG be involved to initiate the necessary process by working through, and with, national institutions. The AfESG has obtained enthusiastic official endorsement from the highest level in the MNRT for its new approach to HEC mitigation efforts. Importantly, to continue developing the process, the following needs to be undertaken:

5.4.1 Improve community conservation policy and practice

From the DSS, literature and practical experience, the best long-term solutions to HEC lie embedded in the greater scope of CBNRM. The immediate need is therefore to accelerate greater devolution of power (from central government to local administration) for locally based

administrative institutions to undertake certain specified wildlife management functions. This is being done under the WMA programme but the practical progress of this is slow and probably mired in the legislative delay surrounding the election of a new government in 2005 and presenting the new Wildlife Conservation Act. Of the 16 planned WMAs only four have been fully authorized and revenue from these is still low. Most likely, any such initiative will wait for the debate on the new act in 2007.

5.4.2 Define PAC policies and specify methods whereby these can be carried out

In practice, the devolution of authority needs to simultaneously link both ***benefits AND costs*** of wildlife i.e. devolve more power to tackle aspects of HEC and other HWC issues at the same levels as benefit accrual. That should be undertaken at the present officially sanctioned WMA level or even below.

Some might argue that with the slow pace of devolution of wildlife authority to local levels in the WMA programme in Tanzania, the idea that districts or wards with very low administrative capacity can take on complex HWC issues is not feasible. Surprisingly though, one direct result of the previous WWF funded project that has continued in the current phase – the eastern Selous HEC project–suggests that a model may well exist for 'devolved PAC' to happen in rural districts of the county.

In Kilwa District, the project executant Mr Cyprian Malima decided that in the third year of HEC data collection and simple (EPDT-style) mitigation trials, the time was right to try to formalize a district-level approach to mitigating HWC. Mr Malima convened a workshop with carefully chosen local participants and produced a proceedings document (Malima and Mpanduji 2006).

A key question for the future is whether the initiative in Kilwa has potential to be replicated and adopted by other districts in Tanzania. It may be premature to expect other districts to suddenly embrace the idea of HWC workshops in (i) a national policy vacuum, and (ii) without the impetus of a local project similar to Mr Malima's in which there is (a) hard data to present on the problem, (b) where some simple HEC mitigation strategies have already been tested, and (c) where the trust of local communities and their leadership has been gained. However, as the combined activities of the current project are involved in a total of eight districts in Tanzania, there may well be potential. Conceptually, there is no reason to be pessimistic: if you read the wider poverty reduction proposals in the Kilwa HEC workshop proceedings, they are effectively a microcosm of the MKUKUTA strategy. This is proof that local people think similarly to how the government wants to tackle poverty.

It is probable that the WD would be keen to lighten its national burden of PAC by ceding such rights to WMAs and, quite possibly, to entire districts (as in the Kilwa example) that encompass WMAs. The WD would welcome such a reduction in its PAC duties, especially since this concept (devolving benefits and costs) is a cornerstone of policy in other African countries that practice CBNRM (see section 4). The WD would still have widespread and considerable PAC obligations outside WMAs.

The present scenario highlights that from now on the potential for administrative 'vertical integration' will not have to be forced – it can flow naturally. The only proviso is that the process is given innovative and proper guidance, heavily dependent on the personalities involved. The government must be prepared to give concessions while the communities affected by problem animals must be prepared to shoulder previously unborne responsibilities. In the formulation of the impending new Act, the roles assigned in PAC of WD with its KDUs, and District Councils with their DGOs and WMAs need to be made absolutely clear. With regards to elephants as a species, if legal provision exists for single species conservation plans in the Act, these will have a solid base in becoming policy.

6. SUMMARY OF PRESENT RECOMMENDED ACTIONS FOR TANZANIA

The following actions are the most relevant and urgent actions for Tanzania. They constitute a start towards a national HEC management strategy for Tanzania and highlight 'vertical integration' between all levels of administration as a necessary practical requirement for its success.

1. The relevant sections of government must be lobbied (through conservation NGOs and other fora) to develop an up to date national PAC policy in the new Wildlife Conservation Act. This HWC policy should allow, among other things: devolution of PAC functions in certain areas; separate problem species policies; and provision for future modification in a simple way. **TNRF and WWF should be the lead agencies, while involving a range of other interested parties.**

2. Funding must be found to create a long-term post that employs a suitably qualified Tanzanian as a 'national co-ordinator of HWC issues'. It is important to note that initially this is co-ordination in terms of lobbying, not yet implementation. Initially this person should be based at and work through TNRF as an organization specifically equipped for this work, but this can change as the position evolves. The 'national co-ordinator' will require familiarization of new and innovative HWC issues and approaches to mitigate it. **TAWIRI and WCS should work together to approach relevant donors to support this position. The IUCN AfESG should assist with the familiarization process.**

3. A project proposal to fund and execute a revamp of the elephant management strategy (2001) for Tanzania should be drawn up as soon as possible. This proposal shall cover all the topics in 5.3.1 and give details of co-operative participation from internal agencies and external consultants, plus describe the timeframe and outputs. The HEC section of this plan should follow the guidelines given in 5.3.1 (a), (b) and (c), and collectively it must serve as a model adaptable to the management of other problem wildlife species in the 'large and potentially dangerous' category for which the WD is currently responsible. **TAWIRI and WD should consult with WCS, WWF and the IUCN AfESG to initiate this process.**

4. The TRAFFIC national office has to find ways to inform the wildlife sector and the wider interested public about its mandate, activities and contacts so that it can be a more effective link between people involved in conservation in the field and the national government's agencies tasked with natural resource protection. **TRAFFIC and its sponsoring agencies should market the programme more effectively.**