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Abbreviations

WMA

CBCO Community Based Conservation Officer CBO Community Based Organization DC **District Council** DG **Director General** GR Game Reserve **KNP** Katavi National Park **KRCD** Katavi-Rukwa Conservation and Development Programme Lessons Learnt LL Ministry of Natural Resources and Tourism **MNRT NCAA** National Conservation Area Authority NP National Park NR Natural Resource PA Protected Area RLGR Rukwa/Lukwati Game Reserves **TANAPA** Tanzania National Park Authority VC Village Council VG Village Government VHF Very High Frequency **VNRC** Village Natural Resource Committee WD Wildlife Division

Wildlife Management Area

Preface

The need to conserve natural resources has long since been acknowledged, by both national governments and international organizations. For Tanzania, Julius Nyerere's "Arusha Declaration" of 1961 provides a case in point, as does the 1980 "World Conservation Strategy" (IUCN, UNEP, WWF) in a global perspective. Nature conservation, however, is neither an abstract ethical responsibility, nor does it constitute a policy goal in and of itself. Rather, it is a means to an end – sustainable development. The adoption of "Agenda 21", one of the pivotal outcomes of the 1992 United Nations Conference on Environment and Development (UNCED, Rio de Janeiro), firmly established this notion. Since then, political commitment and the global understanding of threats, opportunities and actual response strategies have been promoted through countless resolutions, intergovernmental negotiations, and publications.

Nature conservation receives its basic, practical justification from the observation that the world's natural riches are being depleted and squandered away at an alarming rate. However, ecosystem patterns, the speed & scale of destruction as well as the underlying causes vary widely, and hence call for a targeted response.

Tropical and sub-tropical developing countries have long since been in the focus of nature conservation strategies, both in regard to their natural resources' global significance and vulnerability. Time and again, poverty, weak governance, lacking management capacities, greed and corruption have been cited as underlying causes of the rapid decline. As natural resources continue to disappear, so do the concerned countries options to reverse the downward trend. Destruction of natural resources and poverty appear to be inseparably linked in a vicious circle. Experience shows that conservation *alone* – enforced by means of ever more sophisticated protective regimes – does not hold the answer to the problem. Not only is it technically impossible, but also financially untenable and socially unjust. If the conservation of terrestrial natural resources – such as forests and wildlife – is to be successful, the often miserable living conditions of people living next to them need to be improved.

In the wake of the 1992 Rio Conference, strategies which aimed for "enhanced conservation through sustainable use" gained more international recognition. Such strategies commonly embark from the biosphere reserve model, combining a strictly protected core-zone with concentric layers of zones with successively increasing intensities of management and use. In Africa, the "Campfire" programme in Zimbabwe and the "ADMADE" programme in Zambia spearheaded practical implementation of the concept. Namibian NGOs took the lead in promoting the establishment of jointly managed conservation areas on communal land. South Africa (RSA) provides another example for the restoration of access and use rights on land claimed by tribal communities, with accompanying benefit-sharing and participatory management arrangements even in the Krueger National Park.

Likewise, in Tanzania the "community-based conservation" approach (CBC) was conceived by the Wildlife Division (Ministry of Natural Resources and Tourism) with support from several donor agencies, and has since become a constituent part of the new Wildlife Policy (revised in 1998). Particularly noteworthy in this regard was the conceptual input of the "Selous Conservation Programme" (supported by German Development Cooperation). The Katavi-Rukwa Conservation and Development programme which is covered in the present publication continued in this direction from 1999 to 2006.

Experience shows that determined implementation of the CBC-approach can help to reduce the depletion of wildlife resources, and promote the recovery of endangered species. For this, the come-back of elephants throughout the 1990ies provides a vivid example, after reckless poaching in the seventies and eighties had brought population figures to a staggering all-time low. Experience likewise indicates that community based conservation programmes need to produce demonstrated, lasting success in poverty alleviation, education, more transparent and equitable governance etc. lest ownership and commitment of the rural population be lost. This calls for long-term assistance and continuous commitment irrespective of dynamically evolving international development-policy agendas, and behavioural changes can all too easily be set back and eroded by declining confidence and active participation. Rural communities whose hopes are frustrated are either drawn to urban agglomerations in search of a more prosperous future, or quick to revert to their past practices of resource exploitation in the face of poverty.

The recent withdrawal of about two-thirds of donors previously engaged in Tanzania's green sector entails risks which are not to be taken lightly. First signs of a return of commercial and subsistence poaching are already perceivable, and drawing media attention also in Germany: "... in Africa, poachers kill elephants in numbers not experienced during the past twenty years..." 1. What observers tend to ignore, however, is that in many cases ivory is not the main target, but meat.

Time will tell if the headway made by programmes such as KRCD can be sustained in the future. The present "lessons learnt" of the KRCD programme – successes as well as remaining challenges – are meant as a contribution to this end.

Dr. Hubert Krischke KRCD Chief Technical Advisor

¹ Der Spiegel (political weekly), 10/2007: "Hunters of the White Gold"

1 Introduction

The present compilation of "lessons learnt" endeavours to capture the essence of practical experience gained throughout the lifespan (1999 – 2006) of the Katavi-Rukwa Conservation and Development Programme (KRCD). In doing so, it addresses a wide, potentially indefinite audience: Stakeholders involved in wildlife management and conservation, stakeholders dealing with sustainable rural development, the scientific community, and the interested public-both within Tanzania, and beyond.

The ultimate goal of this publication is to provide insights and conclusions as an input for discussion, as well as with a view to the possible replication of the approach applied by KRCD (or parts thereof) in different contexts and settings. Readers are advised to remain mindful of the practical ramifications (and the obvious limitations!) of this goal:

- Lessons learnt as presented in the present paper are, of necessity, selective. They reflect what the team of authors have come to consider the essence of practical experience.
- For the same reason, lessons learnt are "subjective" in that they reflect the professional judgement and the focus of the compilation team. They should not be mistaken for an evaluation report, because they do not follow the procedures and protocol of a comprehensive, independent evaluation.
- Although based upon empirical evidence, lessons learnt do attempt neither to follow
 up on the development of programme implementation over time, nor do they present a
 "snap-shot" picture of the programme's status circa its conclusion date. Instead, they
 provide generalised conclusions and generic observations.
- To be of value to the intended audience, lessons learnt need to be brief and concise.

The present paper has been structured around the programme's four key-results as foreseen in the (updated) 2002 log-frame matrix, as together reflect the components of the programme's approach:

- Rukwa-Lukwati Game Reserves and Katavi National Park Management Capacities are further improved ("protected area management")
- Community Conservation Services are strengthened and functional Wildlife Management Areas (WMA) are established in the Community Areas ("WMA establishment and operation")
- 3. Infrastructure in protected areas is in place ("infrastructure development")
- 4. The cooperation model between Katavi National Park and Rukwa-Lukwati Game Reserves is fully adopted ("TANAPA-WD cooperation")

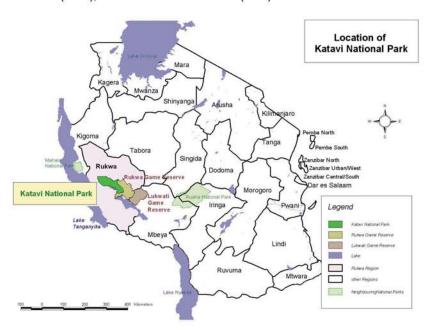
In the programme's intervention logic, the four results outlined above add up to the programme objective "The Tanzanian National Park Administration (TANAPA), the Wildlife Division (WD) and fringe communities manage natural resources within the Katavi-Rukwa-Lukwati Conservation Area in a sustainable manner".

In the following chapter 2, the background, framework conditions, history, and location of the KRCD programme shall be briefly introduced. The third chapter represents the core of the present paper, in that it (i) outlines basics of the respective approach, (ii) key-processes and activities, and (iii) lessons learnt for each of the above four key-results. The fourth chapter wraps up, and summarizes the authors' main observations and conclusions.

2 Introduction of the KRCD programme

2.1 Location and ecological setting

The KRCD programme area stretches across two of Tanzania's (south-)western border regions (Rukwa and Mbeya) close to Lake Tanganyika, and encompasses three protected areas of different status and administrative attachment: Katavi National Park (KNP), Rukwati Game Reserve (RGR), and Lukwa Game Reserve (LGR).



Tanzania's National Parks primarily serve conservation purposes, i.e. in-situ conservation of globally significant biodiversity resources (fauna & flora). Often they represent the core of wider ecosystems, which are protected through a variety of complementary categories of protected areas (e.g. Game Reserves) with lesser restrictions on entering and the use of natural resources.

Gazetted initially in 1974, KNP ranks Tanzania's third largest national park. Doubled in size in 1997, it now stretches across 4,500 square kilometres. Being attached to the wider area of the East African Rift Valley, the KNP area is marked by basically three topographical features: stretches of lightly forested hills, a steep escarpment, and vast floodplains limited thereby. Every rainy season, the floodplains adjacent to the Katuma River turn into marshlands and two principal seasonal lakes: Lake Rukwa and Lake Chada. Dry seasons see the seasonal lakes dry out and the Katuma River shrink to a shallow rivulet. This cycle determines the seasonal occurrence, migration and distribution of large populations of wildlife within the park. KNP supports very significant numbers of most every conceivable species of African big game - from elephant, to giraffe, buffalo, zebra, and numerous antelopes - as well as water-borne species such as hippos and crocodiles, and large concentrations of waterfowl. Directly adjacent to KNP are the two Game Reserves. RGR, measuring 4,400 square kilometres, was newly gazetted only in 1999. LGR, with an expanse of roughly 3,800 square kilometres, was formally added to the project area in 2003 - bringing the wildlife conservation area up to about 15,000 square kilometres (including the respective buffer zones). The two GR extend from the eastern escarpment to the hilly central plateau and include the northern part of the Lake Rukwa plains.

The conservation areas within KRCD's zone of operations do not exist in isolation, rather they form part of a network of (ecologically interdependent) conservation areas in western Tanzania, including Ruaha NP and Rungwa, Ugalla, Myowosi-Kigosi, and Usangu Game Reserves.





2.2 Framework conditions and challenges to conservation and development

Tanzania – more than twice the size of Germany, with roughly one-third of the population – ranks among the world's poorest countries, with an average annual per-capita income of 287 U.S. dollars. Agriculture accounts for about half of the GDP, and mining as well as tourism add to the distinctly rural character of the national economy. Even though the overall economic prospects are rather promising, poverty alleviation will remain a key-challenge for national development in the foreseeable future – as illustrated by the Human Development Index of 0.42 (rank 164 of 177). Poverty – especially in rural areas – remains a key-challenge, both for conservation and sustainable rural development. It must be borne in mind that as many as 20 percent of Tanzanians live in absolute poverty.

Conservation programmes – with or without donor-support – have a relatively long tradition in Tanzania, as has wildlife management and utilisation. Tourism - including hunting - has for long been a significant aspect of the utilisation of wildlife resources in Tanzania. Sector-political framework conditions of natural resource management have been significantly improved. Decentralisation, participatory approaches, and the national government's commitment to sustainable development contribute to a promising outlook for wildlife management and the forest sector. The 1998 Wildlife Policy sets out a framework for decentralised, participatory wildlife management by rural communities. The policy's principal instrument are Wildlife Management Areas (WMA), to be established through a process of (i) securing of land ownership (including boundary surveys, demarcation and the issuance of boundary certificates to rural communities), and (ii) participatory land-use planning. WMAs are to be subsequently entrusted to the care of rural communities with clearly defined institutional roles, mandates and responsibilities. The concept foresees local wildlife management for the benefit of the participating communities, subject to the competent authorities' guidance and supervision. To give effect to the Wildlife Policy, new sectoral legislation is being promoted which consists of (i) a Wildlife Bill - pending since 2004, and (ii) Wildlife Regulations, promulgated in 2003. The WMA concept originally emerged around 1990 from donorsupported interventions, such as the Selous Conservation Programme (SCP - supported by German Development Cooperation), the Serengeti Conservation Strategy (supported by NORAD), and an ODA-project in the Ruaha National Park. The WMA concept has since been disseminated and implemented on an experimental scale - including by the KRCD programme.

The Katavi-Rukwa-Lukwati Conservation Area straddles the border between Rukwa and Mbeya administrative regions. It is located mostly in the Districts of Mpanda and Chunya. From a socio-economic perspective on development, one of the area's principal features is its remoteness and lack of accessibility, which makes land travel from population centres such as Dar-es-Salaam or Arusha a challenge of several days. Another noteworthy aspect lies in the – as yet - comparatively low population density of about eight inhabitants per square kilometre. This, however, is likely to change, considering present annual growth rates of 5 to 6 percent. In consequence, population pressure and human demand, settlement and natural resource con-

sumption can be expected to grow significantly in the future. The situation is exacerbated by the still widespread application of shifting cultivation, official promotion of cash-crop production (e.g. tobacco), and domestic migration (mainly of cattle herders from the Tabora and Shinyanga areas).

Besides KNP, RGR and LGR, several forest reserves exist in the region – bringing the share of areas subject to some kind of conservation regime to about 60 percent of the Mpanda District territory (47,527 square kilometres). In the past villagers enjoyed virtually unlimited access to the – seemingly abundant - natural resources, on which they depend for their survival. Viewed from their angle, conservation above all means legally limited access to land as well as to natural resources – and, given the high population growth rates, incidents such as crop damage or dangerous encounters with wild animals are on the rise. Consequently, negative attitudes towards conservation have developed among the rural population.

2.3 History, goals and overall approach of the KRCD programme

The Katavi-Rukwa Conservation and Development Programme (KRCD) was launched in 1999, with support provided by German Development Cooperation. The programme pursued an integrated approach, with targeted interventions addressed to public sector agencies (Tanzanian National Parks – TANAPA, and the Wildlife Division - WD) as well as to local government bodies (District level) and rural village communities, respectively.

The programme's purpose was to promote sustainable natural resource management in the Katavi-Rukwa-Lukwati conservation complex, to be effected jointly by TANAPA, WD, and participating rural communities. This goal called for striking a balance between wildlife conservation and its sustainable use - primarily by means of awareness creation and capacity building, effective law enforcement and monitoring the status of the natural resources to be managed, and institutional / infrastructure support to the agencies and stakeholders involved. This basic intervention strategy translates into four results, to be dwelt on in further detail in the subsequent chapter:

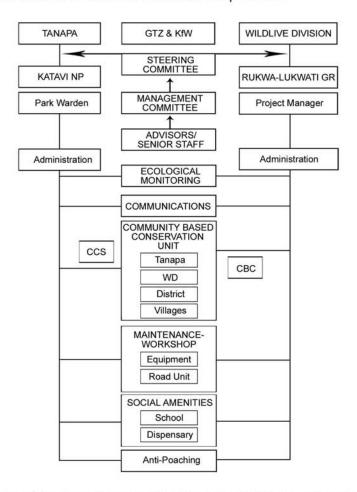
- Rukwa-Lukwati Game Reserves and Katavi National Park Management Capacities are further improved ("protected area management")
- Community Conservation Services are strengthened and functional Wildlife Management Areas (WMA) are established in the Community Areas ("WMA establishment and operation")
- 3. Infrastructure in protected areas is in place ("infrastructure development")
- The cooperation model between Katavi National Park and Rukwa-Lukwati Game Reserves is fully adopted ("TANAPA-WD cooperation").

KRCD's integrated and comprehensive approach translated into an implementation framework no less comprehensive and multi-faceted. The partners in programme implementation involved:

- The Wildlife Division (Rukwa/Lukwati Game Reserves) of the Ministry of Natural Resources and Tourism (MNRT)
- The Tanzania National Parks Authority TANAPA at Katavi National Park, likewise
 under the auspices of MNRT (although as compared to WD restructured as a parastatal body, which affords a higher degree of financial independence and flexibility in
 management)
- District Councils of Mpanda and Chunya, under the Prime Minister's Office Regional Administration and Local Governments
- KfW (German Bank for Reconstruction and Development) handling Financial Cooperation (FC) inputs provided by the German side
- German Technical Cooperation (GTZ) handling Technical Cooperation (TC) inputs provided by the German side (including overall programme management and administration)
- German consulting companies ECO Consulting Group and the Cooperative of Development Policy Consultants (AGEG), subcontracted for technical assistance during the programme's second phase of implementation.



The organisational chart below outlines the institutional set-up of KRCD.



The remote location of the programme area might give rise to the impression that KRCD aimed only for localised impacts. This, however, would be false: The above chart indicates that programme administration and management reached up to the national management level of both TANAPA and WD, and the programme's maintaining a second permanent office in Dar-es-Salaam ensured institutionalised working-relations as well as a quick flow of information vis-à-vis TANAPA, WD, and the MNRT.

It ought to be kept in mind that KRCD was in fact committed to implementing the essence of the 1998 Wildlife Policy in practice. The principal notion underlying its approach (and that of the Policy) is to make wildlife conservation work for sustainable (rural) development in a wider sense – its primary implementation mechanism being the voluntary, active involvement of the rural population by means of sustainable use.

Transparent and equitable benefit sharing is perceived as instrumental to this end, as is self-help promotion and the targeted strengthening of self-administration and self-governance by village communities. For this purpose, KRCD supported the TANAPA Outreach Programme as a flanking measure in the KNP buffer zone.

Likewise important are effective as well as efficient management and administration provided by TANAPA and WD. Given the juxtaposition of a national park and two game reserves in the programme area, KRCD aimed to promote the co-administration of the Katavi-Rukwa-Lukwati conservation complex by TANAPA and WD under a common mandate, grounded in the eco-system approach.

It should further be noted that even though the Wildlife Policy was adopted prior to the inception of KRCD, the legal framework for sustainable wildlife management is just emerging, and no conclusion has as yet been reached in regard to the 2004 Wildlife Bill. First practical experience with the 2003 Wildlife Regulations suggests that various stakeholders find the regulatory framework rather complex and challenging. Considering that regulations typically follow any statutory enactment, and that executive bodies ordinarily issue regulations only within the boundaries defined by a specific statutory empowerment, it can be expected that the Wildlife Regulations, too, will undergo revision in the foreseeable future. The implementation framework encountered by KRCD may thus be considered subject to continuous and highly dynamic change. Consequently, the experience gathered and communicated by KRCD will likely have a lasting impact on the reform of the natural resources sector, way beyond the local or regional level.



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3.1 Protected Area Management

Background Information

Integrity of the protected areas within the Katavi-Rukwa-Lukwati area and the maintenance of ecosystems and wildlife resources are threatened by various factors, e.g. encroachment, overexploitation, poaching (whether for subsistence, or for monetary profit), wildfires etc. Some of these factors may be regarded as management deficiencies, while others constitute manifestations of criminal intent. If TANAPA, WD and local communities are to manage natural resources sustainably in the programme area - each within their respective roles, mandates and spheres of responsibility and pursuant to the Wildlife Policy, the Wildlife Regulations and the forthcoming Wildlife Act - effective administration and law enforcement are primary prerequisites, as is a sound basis of data to inform planning, and management decisions. Prior to the inception of KRCD the management capacity of the local branches of both TANAPA and WD was considered inadequate, mainly due to a lack of sufficiently qualified staff, infrastructure, material resources and equipment, and baseline information about the status and development of the natural resource base. Also, the boundaries of the protected areas were unclear and disputed, leading to land-use conflicts among the concerned stakeholders and a low level of acceptance and awareness for the preservation and sustainable use of wildlife on the rural population's part.

Responding to the perceived need for enhanced management capacity, KRCD's first result reads "Rukwa-Lukwati Game Reserves and KNP Management capacities are further improved".

Processes and Activities

The abovementioned result was to be attained through several sets of activities, which can be broadly classified as

- Staffing support human resource development primarily by means of training, hiring of additional personnel
- IKM support and planning establishment of GIS-based ecological monitoring, setting up of an MIS, mapping, (general) management planning
- Technical support supporting anti-poaching operations, applied research, promotion
 of income-generating activities (notably eco-tourism, hunting, and other sustainable
 natural resource use)
- Provision of material supplies and equipment procurement of equipment required for running an MIS (e.g. GPS, GIS, maps), as well as gear necessary for patrolling and enforcement, and ecological monitoring (e.g. a VHF communication system, vehicles etc.).

On the first count, KRCD provided training to KNP rangers as well as to game scouts in the employ of WD, both on technical matters related to wildlife management and planning, and law enforcement, as well as on socio-economic and rural development related matters such as, for example, PRA, participatory management, and self-help approaches to community development. KRCD further promoted the hiring of additional staff, in line with the effective Civil Service Department regulations. Continuous implementation of the contextually broad and ambitious training programme over a period of eight years measurably improved the management capacity of the addressees, with topics ranging from patrol duties and the use & maintenance of technical equipment, to cooperation with private stakeholders, to administrative procedures regarding the cooperation with international donor organisations. As a direct consequence, the motivation and commitment of field-level staff have been markedly improved.

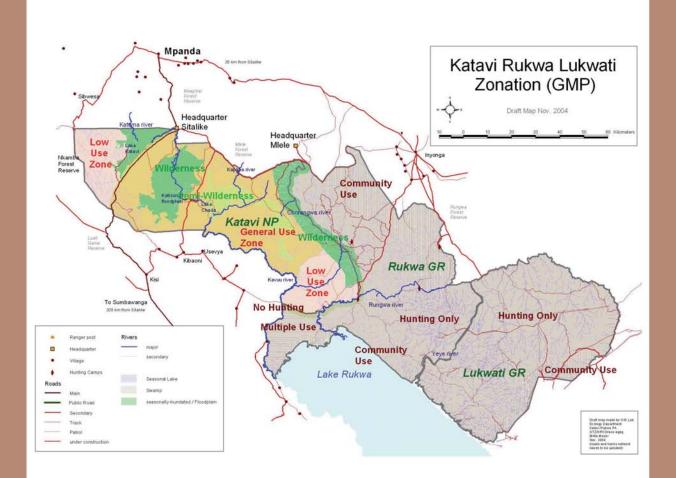
In the second category of support, KRCD focused on the establishment of ecological monitoring (EMP) as a routine exercise with both TANAPA and WD, mainly by way of providing a methods' manual, demonstrating and disseminating monitoring routines and procedures that can be applied during regular foot-patrols, and promoting the use of ecological monitoring as a decision-making tool², including the determination of hunting quota. Building upon the experience thus gained, KRCD spearheaded the preparation of a General Management Plan (GMP) for the entire Katavi-Rukwa-Lukwati conservation complex. Management planning was conducted as a participatory, multi-stakeholder exercise with a view to soliciting the concerned parties' approval and commitment. Preparing a GMP above all involves deliberate land-use decisions to accommodate various – potentially conflicting – types and intensities of natural resource use. To this end a zoning exercise was conducted, resulting both in the verbal definition of different zones along with the principal rights and mandates, and the attribution of uses to different parts of the Katavi-Rukwa-Lukwati conservation complex (resulting in the delineation of zones in a map).

Observations from the management planning process point to a certain difference in the respective perceptions and the administrative procedures of the Wildlife Division (WD) and the parastatal Tanzanian National Parks Agency (TANAPA). TANAPA was quick to endorse the GMP in respect of Katavi National Park. Unfortunately, practical implementation has so far been insufficient. WD so far declined to officially endorse the GMP for the Rukwa-Lukwati GR, which it considers to be a "working document" only. In consequence, the plan has not become binding on any of the parties involved, and agreed user-rights in respect of the Rukwa GR remain legally insecure.

² 16 rangers, game scouts, officers and wardens were trained in the analysis of field data, GIS and database operations. Training and support of filed data collection was conducted as on-the-job-training. International expertise was brought in on distance sampling, ground counts, play backs, nest counts, vegetation plots.

Within this overall context, the delineation and demarcation of the protected areas was promoted (by means of boundary surveys, installation of boundary markers, and contributions to the settlement of disputes over protected area boundaries). This is particularly important, considering that by virtue of the revised land law, un-demarcated and/or un-documented areas may be challenged, and protection regimes may become difficult to enforce. Prolonged legal insecurity might thus compromise the integrity and effectiveness of the protected area system. For instance, boundary surveys supported by KRCD resulted in the discovery of a substantial overlap of Rukwa and Lukwati GR, to the effect that Lukwati – according to the inaccurate boundary description – would have occupied about one-third of the Rukwa GR territory.

Katavi NP		Rukwa/Lukwati GR		
Zone Type	Rationale	Zone Type	Rationale	
Wilderness	Wilderness zones are established to keep parts of the area free of any permanent human disturbance.			
Semi-Wil- derness	These zones are to afford increased protections to the grasslands associated with the Lake Chada drainage. In addition the Ilyandi sand ridge was recognised as being a unique part of the park which required special protection.	Multiple Use	This zone was established to allow periodic use of part of the hunting area in the Rukwa GR by photographic tourists.	
Low Use	These zones will allow the NP to retain areas that keep their "wilderness character".	Community Use	These zones allow local people to collect natural products within the GR. The inland areas are mainly to allow bee-keeping activities to take place. The areas adjacent to Lake Rukwa will allow the fishermen to continue with their fishing activities but in a more controlled way.	
General Use	Most tourist use will occur in these areas and they are expected to carry a relatively heavy load, especially in the dry season.	Tourist Hunting	This zone covers the entire GR (apart from the wilderness area). It is the income generation zone for the area.	
Public Use and Stock Routes	These zones will rationalise the current situation and allow access via the existing main road and stock route to continue but with increased restrictions.			



Dissemination and up-scaling of outputs beyond the programme area was a distinct goal of KRCD-support. To this end, a national workshop on ecological monitoring was organised and facilitated by KRCD, which aimed to draft an "Ecological Monitoring Methods Manual" based upon both the "Technical Ecological Monitoring Manual for Katavi-Rukwa" (provided by KRCD), and results from the workshop's various working groups.

Activities of the third category centred on increasing the effectiveness of patrols by TANAPA and WD staff in the protected areas. Patrolling on foot as well as by car is a principal means for law enforcement, and a principal source of information about the proliferation, movements and behaviour of wildlife populations within the protected areas. Technical assistance by KRCD included conceptual as well as procedural inputs aimed at improving operational routines and procedures observed by the involved personnel. One of the aims of KRCD was to integrate observation and monitoring as far as possible into regular patrolling, so as to generate management information beyond mere administrative control and law enforcement.

Likewise, KRCD commissioned numerous studies on issues related to wildlife ecology³, wild-life management⁴, socio-economic issues and community development⁵ and coordinated international as well as national short-term experts in their preparation. The respective results informed KRCD programme management and were also made available to various interested stakeholders and partner organisations. KRCD support was vital specifically for the drafting of a "Sustainable Tourism Strategy for KNP and the Western Region of Tanzania" as a crucial basis for the future development of a primary source of income in the region.

Activities of the fourth type mainly aimed to give effect to the aforementioned three types of activity. The intended enhancement of management capacities (primarily those of TANAPA and WD) did not only hinge upon human resource development, capacity-building and training – however important and indispensable these activities may be. Practical implementation of new approaches, methods and procedures – e.g. ecological monitoring – requires adequate equipment and material supplies, as does effective control and law enforcement. By supplying communication facilities, equipment for data-collection and data-processing, and means of transport, KRCD contributed to the creation of implementation-friendly working conditions, and thus – indirectly – supported motivation and commitment on the part of TANAPA and WD personnel.

Lessons Learnt

→ Establishment of EMP was a marked success and a ground-breaking achievement in Tanzania. It responded to an openly communicated and manifest demand. Prior to KRCD implementation, EMP was practiced neither by TANAPA, nor by WD. Inventory-based information about ecosystem dynamics as a prerequisite for sustainable management planning and management decisions (e.g. quota setting) was effectively lacking. KRCD addressed the establishment of EMP in a holistic manner, including human resource development, conceptualisation of methods and procedures, and provision of material resources required for practical implementation. It has become a regular part of KRCD implementation routines.

KRCD was successful in demonstrating that hitherto applied approaches – e.g. aerial game counts – systematically underestimate population size and habitat use patterns specifically of those species, as live in woodlands and forests. KRCD likewise demonstrated that EMP can be integrated into ordinary patrolling duties, and that EMP – as practiced by KRCD – can be

³ e.g. studies on the populations of lions, hyenas

⁴ e.g. studies regarding wildlife surveying by means of ground counts, studies on the carrying capacity of different types of habitats, studies regarding the development of habitat quality of different types of vegetation

⁵ e.g. studies on sustainable beekeeping and fishing operations, and eco-tourism

conducted in an economically efficient and cost-effective manner (even more so, as long as the accessibility of protected areas and the mobility of TANAPA/WD patrols is improved through infrastructure development and material supplies). A distinct advantage of the EMP approach promoted by KRCD is that necessary data-collection can be easily integrated into regular everyday activities.

→ Effective dissemination and up-scaling of EMP was hindered by unfavourable institutional framework conditions.

KRCD partners and stakeholders acknowledged the practical usefulness and the procedural advantages of EMP. TANAPA in particular welcomed the approach, and expressed its commitment to make EMP a standard practice for all Tanzanian national parks. Establishment of a GIS was initiated, and each national park administration by now employs at least one qualified wildlife ecologist. On the other hand, WD was noticeably reluctant to adopt EMP as a regular practice and suggested instead that the Tanzania Wildlife Research Institute (TAWIRI) should conduct EMP uniformly for all Game Reserves. Difficulties both within WD and vis-à-vis the MNRT, as well as deteriorating working relations between TANAPA and WD overshadowed and hampered EMP dissemination to some extent (for further detail, refer to sections 3.2.2 and 3.4).

Despite the project's capacity building, the training levels - particularly of field-level staff - remain crucial bottlenecks for the effective dissemination and practical implementation of EMP beyond the KRCD programme area. Professional skills and management capacity are lowest at the field-implementation level. On the other hand, senior staff at higher levels sometimes is less prepared to adapt to newly introduced procedures, especially if these require advanced levels of computer-literacy. The general shortage of sufficiently qualified personnel at all levels is further exacerbated by a high fluctuation of staff, by insufficiently detailed job-descriptions, and by inadequate consideration of qualification criteria in staffing decisions. Further standardization and simplification of procedures, reporting formats etc. is advised.

→ EMP offers significant added value beyond wildlife or protected area management. Dissemination and up-scaling of EMP cannot be effected single-handedly by a donor-supported programme such as KRCD. Aside from the need to further promote official recognition and adoption of the concept by both TANAPA and WD, other potential users of EMP need to be identified and addressed. EMP has an obvious potential to provide valuable information about the status and, when done on a regular basis, about trends of development in an eco-system – way beyond its obvious usefulness as a decision-making tool in wildlife management. Speaking about potential users (or, if they utilise only parts of the information provided by

somebody else, beneficiaries) of EMP, government agencies involved in land-use / spatial planning and decision making, forest sector services, national focal points of CITES or UN-CBD, the scientific community and even the private sector (e.g. tourism operators interested in knowing about the seasonal concentration of certain species, vulnerability of certain habitats etc.) come to mind. Provision of EMP data gathered by TANAPA / WD to third parties could even provide a source of income for both agencies (e.g. provision of GIS-based sets of data, maps etc. as a public service function).

→ Management planning as pursued by KRCD can be easily upset by unfavourable framework conditions, and is hard to achieve in the face of lacking institutional commitment and ownership. Another major achievement of KRCD (besides EMP establishment) was the preparation of a General Management Plan (GMP) for the Katavi-Rukwa-Lukwati conservation complex, to be implemented jointly by TANAPA and WD as part of their comanagement arrangement. GMP preparation was done in a participatory manner, involving multiple concerned stakeholders. However, to become fully effective, the GMP needs to be officially endorsed by TANAPA for KNP, and by WD for the Rukwa and Lukwati GR.

So far, only TANAPA signed the GMP, while the endorsement by WD is still pending. The ensuing delay cannot be attributed solely to technical difficulties on the part of WD, though. Leadership changes inside WD, as occurred during the KRCD implementation period, resulted in less efficient communication, coordination and cooperation between TANAPA and WD, and there are indications to the effect that WD's overall commitment to co-administration of the Katavi-Rukwa-Lukwati conservation complex as well as to community-based wildlife management in the Rukwa/Lukwati GR may have declined (for, among others, economic reasons).

Problems of this kind were difficult to address for KRCD, for lack of continuous coordination with and attachment to MNRT – despite the fact that two German advisors were
permanently attached to the ministry. KRCD itself lacked a component dealing specifically
with the improvement of the political, legal/regulatory and institutional framework for wildlife management in Tanzania, and thus had itself no direct access to MNRT. Here, a lesson
learnt is that, firstly, deliberate efforts for mediation and conflict-resolution and
policy/legal/institutional advice on the national level are required, and should be considered
when designing similar interventions. KRCD's undisputed technical excellence was not sufficiently backed up with policy support to create conducive framework conditions. Secondly,
individual development cooperation projects are in a comparatively weak position to demand
fulfilment of political commitments by the relevant agencies of the partner government. Difficulties of the observed kind would require high-level political and diplomatic support, to ensure adequate fulfilment of basic commitments agreed between the donor and the recipient
country.

→ Individual aspects of the integrated KRCD approach may have been too ambitious, considering the available time and resources. Given the facts that (i) KRCD measures were highly susceptible to adverse framework conditions - see previous paragraph, (ii) interventions to promote sustainable natural resource management typically demand comparatively long timeframes, and (iii) KRCD implementation suffered from various external delays and administrative difficulties, the multifaceted approach may have overtaxed the programme's implementation capacity. Likewise, long-term personnel resources were limited, and could be supplemented with short-term expertise only to a limited extent. For this, the promotion of sustainable tourism provides a vivid example. An international short-term experts' mission with the aim of drafting a "Sustainable Tourism Strategy for KNP and the Western Region of Tanzania" took place in autumn 2005, and its results became available only by March 2006. No measurable impact could thus be expected by the time of the programme's scheduled expiry. Similar observations apply to the promotion of community-based self-help measures. Any extension of the KRCD implementation period was, however, unfeasible - owing to withdrawal of German Development Cooperation (among several other major donors) from the natural resources sector. Without continuous support, the odds of successful implementation of the conceptually ambitious "sustainable tourism" strategy are slim.

3.2 WMA establishment and operation

Establishment and operation of Wildlife Management Areas (WMA) is the cornerstone of KRCD's second result ("community conservation services are strengthened and functional WMAs are established in the community areas"). Aiming for community-based protection and sustainable management of wildlife resources, the KRCD approach does not stop, however, at the formal establishment of WMAs, in accordance with the principles of the Wildlife Policy and the effective Wildlife Regulations. Successful community-based natural resource management (CBNRM) primarily depends upon three determining factors:

- · Conducive policies and legal-administrative framework conditions
- Adequate organisational arrangements and sufficient management capacity, skills and material resources on level of individual communities
- · A strong sense of ownership, and voluntary involvement of communities.

KRCD addressed specifically the second and third of the above determinants, by way of three means of project-support: (i) support to community-based self-help measures, (ii) support to the establishment and operation of WMAs, (iii) support to the definition of user-rights, and transparent benefit-sharing modalities.

3.2.1 Support to community-based self-help measures

Background

Self-help measures supported by KRCD were not narrowly focused on wildlife management as the programme's focal concern, rather, they aimed to improve (i) living conditions in the participating communities, (ii) management capacity, organisational modalities, and the overall transparency of community self-governance, and (iii) levels of acceptance and ownership vis-à-vis KRCD.

It must be noted that community-based conservation (CBC) largely depends on the community members' willingness to engage in management activities, to assist with law enforcement, and to abstain from destructive and/or illegal activities. On the other hand, the declaration and establishment of protected areas and public regimes for the protection and management of natural resources inevitably restricts hitherto unrestricted access and demand-driven exploitation patterns. Inevitably, this puts a strain on the rural communities' acceptance towards protection regimes and natural resources governance in general, and may have an adverse effect on their willingness to cooperate – particularly in the fight against illegal resource use such as poaching. The problem is further exacerbated, if substantial segments of the rural populace are poor and depend on natural resources for their subsistence – as is certainly the case in Tanzania.

Therefore, community self-help projects in the villages adjacent to the protected areas aimed at:

- Preparing the villagers for future village development projects financed by the in come from WMAs.
- Raising the confidence of villagers in implementing their development initiatives.
- Improving the social welfare of people in the area as a contribution to both the development of individual villages, and to the implementation of the National Poverty Reduction Strategy.

Processes and Activities

The approach used may be characterised as participatory in that all important stakeholders i.e. Villagers, the Mpanda District Council and KRCD participated during the needs assessment, planning, and actual implementation of the selected self-help projects. The roles and responsibilities of all stakeholders during the implementation were also clarified.

Implementation of self-help measures involved other "driving forces" besides KRCD, and followed a clear-cut distinction of roles and mandates. KRCD was to provide material support. The Mpanda District Council, in turn, was to exercise supervision and monitoring, and to provide technical advice and transport. Village governments, in their capacity of heads of the rural communities, were to organise labour and to supply locally obtained construction materials. TANAPA and several safari-operators initiated similar support projects on their own account (mostly by means of providing financial support), albeit without exercising direct control over the use of funds.

All self-help interventions had to measure up to the "3S" standard: self-determination, subsidiarity, and sustainability.

A socio-economic baseline study was prepared up-front, as a means of determining the communities' concrete demand (needs-assessment), prioritising measures, and identifying the communities' respective strengths and weaknesses in terms of management capacity and organisational matters. It also confirmed that rural communities were indeed reluctant to support wildlife protection and to respect the integrity of the protected areas. Communities were nevertheless found to be aware of the benefits accruing from the use of natural resources.

However, they held that those benefits were enjoyed mainly by third parties living distant from the protected areas, while they were left to suffer destruction to their farms and crops by game aninmals. The communities perceived that the money generated through protected area management was spent for infrastructure development in distant towns and cities, while they had inadequate access to basic social services like schools, health-care, clean water, and roads. The capacity of the District Council (DC) to support the community infrastructure development in these villages was also found to be rather low.

The results of this exercise were handed over to the Village Government (VG) which oversees all village development processes. Therefore, the VG assumed responsibility for the final decision with respect to the type of a self-help project that would need to be implemented in the village at that particular moment. Such decisions were nevertheless validated in the course of mandatory village assembly meetings where the entire village community was obliged to attend and participate. The eventual decision together with the request for support were prepared by the VG and submitted to KRCD. KRCD forwarded all types of selected self-help projects to the District Engineer who prepared the bill of quantities. Then the modality for implementation was agreed and signed by all stakeholders.

On the village-level, implementation rested with the village government's standing committees, typically the Social Welfare Committee and/or the Village Natural Resource Committee

(VNRC). Contracting for implementation was done by these committees without the involvement of, or facilitation by KRCD. The roles of the villagers in the implementation process were clarified by the Community Based Conservation Officer (CBCO) during the meetings with the VGs in order to be in line with participatory approach.

Community-based Conservation Officers and the DNRO jointly followed up on the progress and implementation of self-help measures in the participating villages. Furthermore, the District Engineer and the District Community Development Officer representing the District Council were also to participate in the follow up.

Lessons Learnt

- → Self-help measures would have benefited from more constant monitoring and a more direct involvement of KRCD personnel. Monitoring by the District Council proved insufficient, and the CBCO was unable to provide continuous monitoring, due to the dispersed location of the participating villages. When KRCD observed that the implementation of self-help projects was significantly delayed, the programme responded by organizing a participatory assessment to determine the underlying causes. Findings pointed to poor project management by the VG due to inadequate managerial skills, internal conflicts among the VC members, and a general lacking transparency resulting in a loss of confidence. Projects and programmes supporting community-based self-help approaches even as flanking measures nevertheless need to exercise adequate direct supervision, and provide capacity building support.
- → A strong and committed village leadership is a crucial factor of success for the implementation of communal activities. The capacity of the VG to manage the implementation process for the self-help projects was over estimated. It is therefore important to conduct a careful institutional analysis prior to the planning and implementation of community development measures. Technical advisory support, moderation and mediation throughout project planning and implementation is positively required, as is support for cost-calculations, monitoring, and reporting. Even in projects or programmes with a different sectoral/technical focus, expertise in participatory rural development should be provided continuously preferably by specially qualified staff with a background in socio-economics and/or community development.
- → Continuity in village/community leadership and transparency need to be promoted, in order to ensure the community members' confidence, ownership and their willingness to cooperate. Frequent changes in the village/community leadership added significantly to the observed delays and unsystematic implementation. KRCD responded by promoting the appointment of interim committees on the community level which assumed overall responsibility for project implementation. Interim committees were appointed from among the community members in the course of village assemblies, and did not include members of the established village councils (VC).

3.2.2 Establishment and Operation of Wildlife Management Areas Background

Prior to the establishment of Game Reserves, terrestrial natural resources were managed mainly within Forest Reserves and Game Controlled Areas - the latter offering no protective status, though. Instead, Game Controlled Areas were categorised as either Tourist Hunting Blocks, or as Hunting Blocks open to licensed Resident Hunters.

The current Wildlife Policy requires for Game Controlled Areas to be successively transformed into Wildlife Management Areas (WMA). The main difference lies in the active involvement of village communities who for this purpose must hold tenure rights over the area in question (documented in a "certificate of boundaries, pursuant to the new land law). As yet, most villages are situated in "open areas", which means that despite their being registered, they do not enjoy formal tenure over their village territories. Consequently, their legal status is low, and domestic migrants as well as private investors frequently encroach upon their area. The WMA concept is a means to implement the Community Based Conservation (CBC) approach in Tanzania, as reflected in the new Tanzanian Land Law. WMA establishment elevates rural communities to the status of legally recognized stewards of the resource base, and entitles them to revenues accruing from sustainable wildlife management.

Unlike the previous Game Controlled Areas, WMAs represent conservation areas, to be managed by a Community-based Organization (specifically founded for that purpose). They are to be supervised and controlled by the Wildlife Division, in collaboration with District Councils and other wildlife sector institutions such as TANAPA, National Conservation Area Authority (NCAA) and Tanzania Wildlife Research Institute (TAWIRI). In addition to their conservation role, WMAs will run as business entities parallel to other production systems in the village land, as will be determined by the village land use plans.





Establishment of a WMA - a stepwise process

- Village are territories and the proposed WMA territory are mapped, demarcated, and the
 outer boundaries established. Boundary disputes are documented and resolved. A "certificate of boundaries" is issued, whereby village communities become title-holders in
 respect of their village territory.
- Villagers are sensitized on the importance and cost benefits of conserving wildlife resources, their rights and benefits. They are also informed about the procedures for designating an area to be a WMA.
- 3. The village council recommends to the village assembly, an area fit to be designated as a WMA.
- 4. Villagers through the village assembly form a CBO to manage a WMA.
- Village land-use planning and subsequent WMA management planning are conducted, and the respective plans submitted for official endorsement.
- The CBO applies to the Director of Wildlife with the aim of (i) being recognized as an "authorized association" and (ii) being formally authorized to manage a WMA.
- The Director of Wildlife gathers information on CBO applying to become an authorized area and approves or rejects the proposed WMA.
- 8. The Director of Wildlife forwards the application with recommendations to the Minister.
- The Minister declares a designated WMA, issues a certificate of authorization and publishes the authorized area in the gazette.





It should be noted that the WMA concept is by no means novel, nor did it originate from within the KRCD project. The concept was shaped in the early 1990ies, prior to the formulation of the 1998 Wildlife Policy, and has since been pursued on an experimental scale. Right from the outset, it has been directed on the national level. Following the coming into force of the Wildlife Policy in 1998, a regulatory framework had to be created to govern the policy's practical implementation. This was accomplished by a set of provisional Guidelines which, however, took about four years to enact. The revision of the 1978 Wildlife Act, intended to give effect to the new Wildlife Policy and provide a legal basis for its implementation, is still pending to date. For lack of a conclusive settlement, the Guidelines' testing-phase was extended only recently, and further changes and adaptations of the legal framework can be expected in the near future.

In their present state, the Guidelines display a number of drawbacks in terms of the legal security they provide for community-based wildlife management:

- Participating communities are denied the right to outsource management responsibilities at their own discretion specifically, they are not allowed to contract Safari-operators and outfitters directly;
- Equitable and transparent revenue-sharing rules and procedures are still lacking. All
 fees and charges accruing from wildlife management are first to be disbursed into the
 general budget, whence the district governments receive a 10 percent share. WD, on
 the other hand, claims approximately one-fourth of the total revenue. A Tanzania
 Wildlife Protection Fund has been established mainly to maintain the District Natural
 Resources Offices (DNRO), and to effect payments to the rural communities on whose
 lands wildlife revenues accrue:
- Rural communities lack rights of appeal and legal redress against decisions taken by the Wildlife Division;
- · Local governments do not control the operation of WMAs directly.

As yet, 16 pilot-WMAs across Tanzania have been set up. Of these, only four have so far been officially acknowledged and have thus become fully operational. A first pilot-WMA was launched in 1990 in the Gonabis area, adjacent to the widely known Selous Game Reserve. Initially, 19 village communities participated in the establishment of the WMA. After 16 years of preparatory work, the official acknowledgement of the WMA is still pending, and a marked increase in snare-poaching and local land-use conflicts suggests that the rural population is growing impatient and disillusioned with the approach.

Processes and Activities

For the above reasons, KRCD's interventions throughout the project's first phase could not rely on an effective legal framework, and work to promote the WMA concept in earnest was hence delayed for several years (until 2003). To bridge this time-span, the project initially concentrated on preparatory measures, such as training of 166 village scouts and village leaders, village-based self-help measures and awareness creation, and dissemination of information.

With the coming into force of the Wildlife Guidelines in 2002, KRCD was at last in a position to actively support the establishment of CBOs, demarcation of village territories in accordance with the new Land Law, and village land-use planning as a prerequisite for the eventual establishment of WMAs in the project area. In doing so, KRCD became the first donor-supported project to actively address implementation of the Land Law. By the end of 2006, demarcation of village boundaries had been supported in 32 villages, and 22 land-use plans had been finalised (ten of which had been officially endorsed by the end of 2006).

In sync with the drafting of the general management plan (GMP – see below), the use of ecologically sensitive lakeshore areas on Lake Rukwa by fishermen from nearby villages as well as the location and operation of non-permanent fishing-camps was negotiated and agreed upon with mediation support from KRCD. Likewise, amicable settlements of bee-keeping rights inside Rukwa GR claimed by forest-dependent communities were negotiated. Legal security and the overall predictability of access and use rights have been markedly improved. KRCD further assisted with the development of an enabling institutional framework on both the village, and district levels. To this end, Village Natural Resource Committees (VNRC) as well as the DNRO received capacity building support, and KRCD facilitated the promulgation of village by-laws for wildlife management.

Management planning and zoning in respect of the proposed WMAs was initiated and supported by KRCD, and first management plans became available towards the end of 2006. The management planning exercise was overshadowed, however, by the Director of Wildlife's reluctance to officially endorse the GMP for Rukwa-Lukwati. Two CBOs (Ubende and Mpimbwe, comprising 5 and 10 villages, respectively) are now in a position to apply for registration as "authorized associations". Considering the slow progress of WMA establishment across Tanzania, it remains doubtful, though, whether the proposed WMAs will soon become fully operational.

Provisional activities included patrols and hunting, subject to harvesting quota specified in the respective management plans. With regard to patrols, the Secretary and the Chairpersons for the VNRCs organize the patrols and fix the dates for the same. The costs for the patrol (i.e food for the village game scouts and their allowances) are met by the VNRCs. The sources of funds for the committee include fines given by people who are caught using the natural resources illegally according to the village's by-laws; and also from selling venison to the villagers. The number of game scouts in each patrol depends on the availability of funds. As result it has become difficult to organize a joint patrol that would involve game scouts from all the villages that are involved in the WMA which is in the process of its establishment. On the hunting business, the Director of Wildlife allocates hunting quotas to the villages after receiving a proposal from the VNRCs. But the villagers depend on KRCD support to utilize their quota, due to the mentioned inadequate material resources and the lack of management capacity.

Lessons Learnt

- → The project successfully advanced implementation of the WMA concept specifically on the local/field level. In summary, KRCD excelled in training and capacity-building, and management planning with state-of-the-art approaches. This positive assessment is mainly backed by the marked decline in subsistence poaching in the project area since 2002, and the raised levels of awareness, management capacity, knowledge and enhanced institutional framework conditions on both village, and district levels. Besides, lingering land-use conflicts and disputes about access- and use-rights within the project area have been successfully defused. Positive impacts on the local levels were less affected by either the delayed development of a consistent legal and regulatory framework, or WD's demonstrated reluctance to formally acknowledge planning documents and thus create legal security for the subsequent establishment and operation of WMAs. Due to the direct benefits which people have started to realize from both the provisional implementation of the WMAs and self-help measures, their levels of acceptance and ownership of protected areas within their area of residence have been markedly improved. Rural communities within the KRCD project area have in fact turned partners in the protection of natural resources against illegal use. The main question now is how the process of establishing the WMAs will be finalized after the project's expiry. It appears that no institution (WD, District Councils, TANAPA and NCAA) is as yet prepared to take over such a responsibility. Any failure to finalize the process of establishing the WMAs including the capacity building for the villagers to manage those areas effectively may have detrimental effects on PA management, and may erode the willingness to cooperate on the village communities' part.
- → Lacking progress on the national level points to structural deficits and problems beyond the reach and control of KRCD. It must be noted that the WMA concept and approach predate the KRCD project, and that the progress of WMA establishment across Tanzania since 1990 is admittedly slow. The unusual sequence of policy formulation, promulgation of regulatory instruments, and legal review (still pending) raise some doubts about the overall direction of Wildlife Sector Reform in general, and the ownership and commitment of MNRT/WD to the Community-Based Conservation (CBC) in particular. Given the provisional approval of management plans by WD as "working documents" for KRCD operations, project activities were in fact less hampered, than one might expect. However, without an official approval of the management plans, WMAs cannot become fully operational, and lingering legal insecurity creates a precarious situation for the continuity and sustainability of the project's impacts. Such structural problems would have called for continuous policy advice on the national level and a more direct linkage to the decision makers inside MNRT and WD.

The remoteness of the project area and the long distance from Dar-es-Salaam may have contributed to the problem. The progress of sector reform was further overshadowed by staffing disputes between MNRT and WD, as well as deeply entrenched interests of commercial tour-operators and safari-outfitters. By comparison, TANAPA was noticeably quicker to endorse and implement management plans in respect of the Katavi NP.

- → The observed structural deficits call for targeted reforms of the institutional framework, and a more participatory and decentralised approach to WMA establishment and operation. The district governments' roles and mandate in the establishment and operation of WMAs should further be strengthened, as should the status of rural communities. This includes the establishment and adoption of transparent and credible benefit-sharing mechanisms. In Tanzania, the local government reform programme is still ongoing under the leadership of the Prime Minister's Office Regional Administration and Local Governments. Emerging political, legal-administrative and institutional framework conditions for local governance and rural development in general will have an impact also on wildlife management, indicating the need for broader, more integrated and cross-sectoral approaches to the development of the wildlife sector.
- → Further external support in terms of funding, facilities and capacity building may be required to make the system operate. Unlike TANAPA, WD remains subject to annual budgetary planning and allocations. This creates a strong motivation to spend available funds by the end of each financial year (end of June), while new budgetary allocations may take some months to become available (October/November) - temporary financial bottlenecks being the inevitable consequence. Even though TANAPA still receives budgetary allocations, these are, however, managed more flexibly than the funds allocated to WD. Staffing requirements may have been overstretched to some extent, resulting in understaffing and a lack of human resources during the KRCD implementation period. Frequent changes in the village/community leadership exacerbated the observed difficulties. However, the fact that the VNRCs have started to generate some income from the WMAs is a good entry point in supporting them to establish a WMAs' management funds. Establishment of the WMAs in accordance with the Guidelines requires a lot of time and capital investment in terms of transport, production of maps (boundary demarcation, land use plans), organization and conduction of stakeholders meetings (overnight allowances and transport), and capacity building (trainings for the game scouts, VNRC and CBO members). Those expenses could not be met by the villagers without external support.

3.3 Infrastructure

Background

Aside from its outstanding natural wealth and ecological significance, the Katavi-Rukwa-Lukwati Conservation Area is primarily characterised by its remoteness in Tanzania's south-western border region, approximately 1.500 km from Dar-es-Salaam, the nation's de-facto capital (officially, Tanzania's capital city is Dodoma, located in central Tanzania). Prior to the KRCD project, a major bottleneck for conservation and management was the general lack of infrastructure in the widest possible sense – from access roads and an internal road network, to freshwater supplies, energy and communications, and office facilities and accommodation. Following the decision to relocate the local TANAPA and WD branch offices to a common headquarter in the immediate vicinity of Katavi National Park, the need for infrastructure became even more pressing. In a similar perspective, if the Katavi-Rukwa-Lukwati conservation area is to reach its full potential in terms of (community-based) hunting-tourism and eco-tourism, accessibility by road and from the air as well as basic amenities such as reliable freshwater supplies and energy must be considered crucial prerequisites.

Infrastructure development in the KRCD project area was conceptually based on a 1995 needs-assessment. In 1998, German financial cooperation (FC) allocated funding under a cooperation agreement with German technical cooperation (TC), in respect of which an implementation strategy, along with the technical components required, was formulated in 1999. Pursuant to an agreement with the Tanzanian government, German TC advised MNRT on FC procedures and the utilisation of funds. Furthermore, the German CTA administrated funds allocated by German FC at the Tanzanian partners' request.

Processes and Activities

KRCD activities addressed virtually all aspects related to infrastructure development: road construction and establishment of an airstrip, construction of office and housing facilities for use by WD and TANAPA staff (the new headquarter in Mlele), power generation and water supplies, and communication. Above all, KRCD staff facilitated tendering and contract management to a large extent, in support of the MNRT.

German FC placed the funds committed at the disposal of MNRT, which in turn selected – by way of a call for tenders – J.P. Gauff, a German company of consulting engineers, for the planning, contracting and implementation of construction works. Pursuant to the cooperation agreement, KRCD staff assisted with the administration of funds at the request of MNRT. Lacking management capacity on the Tanzanian partners' part as well as their lacking familiarity with German FC procedural requirements necessitated continuous advisory support by KRCD.

Implementation of construction works was overshadowed – and, consequently, significantly delayed – by recurrent problems arising from (i) a shortage of qualified personnel seconded by WD and TANAPA, (ii) the remoteness and poor accessibility of the project area, which meant that e.g. broken down machinery could not be replaced at short notice, (iii) unfavourable weather conditions during the rainy season, (iv) planning errors and exaggerated cost-calculations, and (v) a fixed, pre-determined FC budget which did not allow for ex-post adaptations during implementation.

In consequence, the new WD/TANAPA headquarters in MIele were officially handed over to the Tanzanian partners by the end of 2005 (instead of in 2002/2003). Road construction commenced in 2005 instead of 2003, and the preparation of all-weather patrol roads inside the Katavi-Rukwa-Lukwati Conservation Area was initiated only in 2006. Construction of the airstrip had reached an advanced stage towards the end of KRCD's implementation period. Among other issues, the failure of the MNRT to enforce liability claims against contractors in default added to the problem, since much needed funds were thereby lost. Aside from the delays caused, this meant that the intended scope of infrastructure development activities had to be narrowed down. Most significantly, the dam on the Iloba River could not be built, thus denying access to a reliable water source and hydro-power generation. These two factors together may prove the most serious of the problems encountered, because the new WD/TANAPA headquarter is effectively cut off from running water supplies when the Iloba River falls dry during the dry season, and has to rely on a diesel generator for its power supply. The high running costs involved and the need to regularly re-supply the headquarters with gasoline necessitate a strict rationing of electrical power to a few hours each day. This not only affects the comfort of staff and their kin residing permanently in Mlele, but also limits the operation of office equipment.

The Mlele-Sitalike road which connects the new headquarter to both the old headquarter at Sitalike and to the main road between Sumbawanga and Mpanda has been successfully completed. It is an all-weather road usable throughout the year. The old headquarter is intended to be turned into a tourist centre for KNP, which provides an added value to the new road. Likewise, a road connecting Mlele with Inyonga was expected to be fully usable by the end of 2006. Construction of the road between Mlele and Uruwira had not commenced by November 2006, and will probably not be constructed past the project's expiry. So far, five internal roads for patrolling the KNP have been completed, whereby rangers gain year-round access to those parts of the park which had hitherto been inaccessible even during the dry season.

A VHF radio communication system was established with KRCD support, including three main stations (at Malambo, Sitalike and Ikuu), two vehicles equipped with VHF radios, and 10 hand-held radio sets for use by foot patrols in the conservation area. This interlocking system greatly facilitates communication particularly during patrols, and contributes to the effectiveness and efficiency of anti-poaching activities. It also reduces the need for travel between WD/TANAPA stations, and thus helps to cut the running costs of vehicles.

Aside from radio communication, KRCD also supported the installation of an internet connection at both the old and the new headquarters, which greatly simplified data exchange between KNP, RLGR and TANAPA/WD. Information and knowledge management (e.g. accessibility of studies and reports, fact finding etc.) has been vastly improved, as have been decision making and operational planning. Further infrastructure development by KRCD included procurement of office equipment, PC workstations (hard- & software; e.g. GIS applications required for EMP and the establishment of an MIS). Procurement of solar-power equipment provided a valuable stop-gap measure, after it became clear that plans for the construction of a hydropower installation would not come to fruition.

In summary, KRCD achieved most of its infrastructure-related outputs. Some vital components, however, were left unfinished, mainly due to the administrative problems encountered. Some of the observed difficulties may, however, arise from underlying, structural causes regarding the working relationship between WD and TANAPA (see the following section 3.4).

Lessons Learnt

→ Large-scale infrastructure development requires clear definition of roles, mandates and responsibilities as well as continuous coordination. supervision and enforcement of contractual obligations from the national level. Aside from circumstantial set-backs caused by weather conditions and broken down machinery and equipment, the observed problems point towards a structural lack of management capacity at the MNRT, WD and TANAPA top-levels. In particular, MNRT, WD and TANAPA staff lacked the necessary familiarity with the operational principles and procedural requirements of German FC. Additionally, failure to enforce contract penalties on contractors resulted in the loss of much needed funds. Such problems can be addressed and rectified during implementation only to a limited extent. On the other hand, they underline the importance of rigorous institutional analysis during project identification, preparation and planning, as well as targeted measures during the early "orientation phase" following a project's inception.

- → Remoteness of the project area as well as its distance from Dar-es-Salaam adds to the complexity of fund administration and contract management, and necessitates special safeguards. Contracting, procurement and supervision were handled and directed centrally, from the national level. Frequent power outages both in Dar-es-Salaam and at the project's location slowed down communication among the involved stakeholders and added to the "reaction-time" in case of unforeseen events (such as the urgent need to replace broken down machinery). Under such circumstances, regular inspection visits by staff of bodies involved in coordination on the national level might be advisable, as well as the establishment of a permanent steering committee/board structure involving all key-participants under the auspices of the ministry in charge.
- → Infrastructure development and procurement command significant time and human resources. As per the funding agreement between German FC and MNRT, German TC personnel was to assist with the administration of FC funds, and to support MNRT in the selection and management of contracts in respect thereof. This task occupied roughly half of the CTA's working time during the first two years of implementation, and remained an arduous and time-consuming task thereafter. The employment of additional (administrative) staff, particularly on the national level, and targeted capacity-building support to a partner country's executing agency (at least during a project's early stages) might be helpful to ease some of the problems associated with the administration of FC components in similar circumstances.
- → More flexible fund administration might have enabled more timely responses to priority needs. Some vital issues e.g. the Iloba Dam needed for power generation and as a reliable water supply could not be addressed, while others stalled for various reasons. Considering the crucial need for water and electricity as preconditions for the new headquarters' sustained operation, it might have been advisable prioritise these aspects or, at least, to shift, and re-allocate funds from road-construction. This, however, presupposes enhanced coordination and contract management, and the timely pursuit of liability claims against contractors in default, lest the financial leeway be lost.
- → Maintenance and the payment of running costs are vital factors of success for infrastructure development, particularly in regard to the sustainability of interventions. The
 question remains how the new headquarter and other investments will be maintained, and running costs covered (especially fuel for power generation), considering that currently the office
 facilities are under-utilized (owing to the fact that so far TANAPA declined to relocate to
 Mlele on schedule see following section 3.4). The sustaining forces for the maintenance of
 the new HQ and other investments need to be discussed and agreed upon by all concerned
 parties; e.g. the establishment of a common fund for maintenance and payment of running
 costs for common facilities for KNP/RLGR.

3.4 Cooperation model between TANAPA and WD resp. KNP and RLGR Background Information

Prior to the inception of the KRCD project TANAPA and the WD operated independently, and maintained their own separate infrastructure, equipment and personnel. With the establishment of Rukwa GR in 1995, WD's need for permanent office facilities became pressing. As a transient solution, WD staff occupied a basic camp near Sitalike, the location of TANAPA's park administration for KNP. Plans for a model-cooperation between WD and TANAPA were subsequently devised, with a view to enhancing the overall efficiency of protected area management.

The main purpose of the cooperation model between the two institutions is

- Increased cost-effectiveness & efficiency of conservation, and if possible a manifest reduction of costs,
- > synergy effects for example in anti-poaching, ecological monitoring and strengthen of communities adjacent to the PA.

The cooperation model was meant to give effect to the ecosystem-approach, underlying the KRCD project. This includes, of course, cost considerations in the sense that instead of separate cost-assessments for WD and TANAPA, the Katavi-Rukwa Conservation Area was to be considered as a whole.



KATAVI-RUKWA-LUKWATI ECOSYSTEM JOINT MANAGEMENT OBJECTIVES

ADMINISTRATION OBJECTIVES

- 1. Ensure that staffing levels, expertise and motivation are adequate
- 2. Provide appropriate infrastructure and equipment for effective management of the area
- 3. Improve communications at all levels
- 4. Sufficient financial support ensured

CONSERVATION OBJECTIVES

- Protect the natural resources from illegal use
- 2. Ensure that legal use of natural resources is sustainable
- 3. Develop and implement a CCS conservation awareness and buffer zone programme
- 4. Demarcate boundaries clearly
- 5. Develop and implement an appropriate fire management plan
- 6. Enhance monitoring and research
- 7. Reduce transmission of diseases between wildlife and livestock

VISITOR AND LOCAL COMMUNITY USE OBJECTIVES

- 1. Ensure that use of the area by visitors is appropriate
- Enable local people to benefit from the areas' natural resources by allowing controlled and regulated access
- 3. Identify and describe important natural and cultural sites
- 4. Regulate and control of use of stock routes and other traffic in the area

As this is the first time that there has been this type of cooperation between the two institutions there are a number of issues that needed to be addressed. For example, TANAPA and the Wildlife Division have different fixed pay scales and this could be a source of conflict when cooperating on joint tasks. Also TANAPA and the WD have different staffing structures and the WD has recently undergone a staff cutback for financial reasons, making it difficult for them to field a full compliment of staff in the area. In addition, in any joint management project, ownership of assets can be a potential problem when it comes to priority use. Construction of joint headquarters closer to the Katavi-Rukwa-Lukwati Conservation Area with better access for conservation and management purposes thus became a prerequisite for the envisioned co-management scheme. A suitable location was eventually identified on the Mlele escarpment, close to the boundaries of both KNP and the Rukwa/Lukwati GR. A reten-

tion scheme for GR management has been established, whereby WD reinvests 50 % of wild-life revenues accruing from Rukwa & Lukwati GR directly for management purposes in the two GR, as well as for various joint activities.

Processes and Activities

KRCD support to the development of a viable co-management arrangement between TANAPA and WD materialised primarily through (1) infrastructure development – notably construction of the new headquarter; see previous section, and (2) conceptual advice / capacity-building support during implementation.

Key areas of cooperation in running the Mlele Headquarters include (i) health & tsetse fly control, (ii) education, (iii) building maintenance, water and sanitation, (iv) power supply and radio communication, (v) social amenities, e.g. welfare, shopping facilities, transport, (vi) security. Effective operations have been affected significantly by TANAPA's reluctance to relocate to the new headquarter – as yet, only ten rangers, two drivers, one veterinary and one outreach officer have been shifted to Mlele. A revised plan for the co-management agreement now foresees that TANAPA will use the office facilities in Mlele as a subsidiary branch ("zonal headquarter"), while their head-office is to remain in Sitalike.

Conceptual advice and capacity-building support in particular aimed for the establishment of several common administrative units to give effect to the envisioned joint management. Among these are (i) a road maintenance/construction unit, (ii) an ecology unit, and (iii) a CBC unit. The former two units were to be run by TANAPA, under a cost-sharing arrangement with WD. Likewise, operational expenses for the use of an airplane were to be borne jointly by TANAPA and WD. The concept for the CBC unit foresaw joint implementation by staff seconded from WD, and staff of the DNRO. After initial steps to launch the unit, meetings gradually became less frequent because DNRO staff was unable to partake in the proposed activities. Towards the close of the KRCD project, TANAPA had effectively withdrawn from the unit. On the other hand, land use planning in Mpimbwe was successfully concluded towards the end of 2006, as were the establishment of a second CBO and the management planning exercises for the proposed two WMAs. Following TANAPAs withdrawal, DNRO staff took over most of the implementation, with the active support of the (district) wildlife officer. KRCD sought to compensate for the lack of TANAPA support by increased deployment of short-term experts.

It must be noted that, from the perspective of KRCD, cooperation between TANAPA and WD was an assumption, rather than an output to be achieved by the project directly.

Lessons Learnt

- → Experience from project implementation underlines the importance of institutional analysis during project identification and planning. Difficulties affecting practical cooperation between TANAPA and WD arose from a variety of factors, including (i) insufficient commitment to the co-management approach, (ii) staff fluctuation at the helm of TANAPA, (iii) institutional disputes involving MNRT and the Director of Wildlife, (iv) institutional antagonisms between TANAPA and WD, including the operation and maintenance of the new headquarter, etc. These factors must be considered structural problems against the backdrop of ongoing institutional reform in the sector which could not be addressed much less controlled by the KRCD project during implementation. Had these structural weaknesses been detected during project identification, and appropriately reflected in the project design, KRCD might have been in a better position to support institutional reform processes.
- → The observed problems highlight the need for policy advice and institutional support as back-up measures on the national level. Considering its predominantly technical focus as well as its remote location, KRCD would have benefited from a more direct attachment to the MNRT. The project approach to some degree depended on (i) continuously high levels of ownership and (ii) behavioural changes on the part of the WD/TANAPA leadership, and (iii) successful institutional reform. Delays in the promulgation of an adequate legal basis (revision of the Wildlife Act), and the likewise belated enactment of regulations (solely on the basis of the new Wildlife Policy) speak for structural weaknesses of the policy, legal/regulatory and institutional frameworks. Likewise, extra-sectoral factors such as the ongoing reform of local governments and the implementation of a revised land law had a direct impact on the implementation of the KRCD project. KRCD might have benefited from a permanent policy/institutional advisory component, attached directly to the MNRT.
- → Enhanced donor coordination might have eased some of the problems observed, however, it is limited by the withdrawal of influential donors from the sector. Of the donors engaged in the "green sector", all but USAID and DANIDA had withdrawn their support by the end of 2006. This obviously affected the options of the Tanzania Development Partners Group a key-forum for donor coordination to influence sector reform.

4. Overall conclusions

- → Significant achievements. Summarizing the lessons learnt, KRCD contributed substantially to the intended improvement of wildlife management practices and procedures in the project area. KRCD strengthened the management capacity and skills of WD/TANAPA staff on the field level. Development and dissemination of the EMP concept provided a much needed tool for rational decision-making on a broad informational basis. The EMP in particular has a significant potential for dissemination beyond the Katavi-Rukwa-Lukwati Conservation Area. KRCD's conceptual inputs responded to a manifest demand of field level staff, and were thus met with broad acceptance by the stakeholders involved. Preconditions for co-management as well as for the successful involvement of local government agencies and rural communities have been explored and demonstrated in an exemplary manner, and preparatory measures for the establishment and operation of the WMA/community-based management approach have been successfully concluded. KRCD has come a long way in promoting practical implementation of Tanzania's new Wildlife Policy, the CBC concept, and the revised land
- → Sustainable impact the biggest remaining challenge. Despite the undeniable successes, several questions must remain open. Will stakeholders in the Katavi-Rukwa-Lukwati Conservation Area continue to utilise the project's outputs in the future? Will the intended WMAs become fully operational, and will they gain legal recognition? Will the stakeholders involved succeed in generating sufficient revenues, so as to (i) maintain GR management through the retention scheme, (ii) provide for the needs of district offices involved in wildlife management and (iii) win the lasting support of rural populations dependent on the use of natural resources? Will it be possible to adequately control illegal access to the protected areas, once the project has ceased to operate? Owing to frequent delays and administrative setbacks, neither the intended WD/TANAPA co-management arrangement, nor the envisaged sustainable tourism strategy have so far come to fruition. This situation clearly justifies continued external assistance - by means of development cooperation, NGO/civil society activities, and increased involvement of the private sector - to compensate for the repeated delays occurring during KRCD implementation, and to promote regional as well as national replication of the project's most successful interventions. However, the withdrawal of several major donor organisations from the green sector in Tanzania casts some doubt on the future continuation of the assistance initiated by KRCD.
- → A more realistic assessment and understanding of the limitations of technical assistance and individual project support. Inasmuch implementation of the KRCD project was hampered by delays and administrative/procedural set-backs, these appeared to be symptoms of underlying structural problems (both within and outside the green sector), rather than failures or inadequate provisions the project's management. Several factors of success management capacities of the institutions involved, commitment to the CBC approach (and to the WMA concept as a prerequisite for its practical achievement), commitment to the

WD/TANAPA co-management arrangement, adequate enforcement and swift implementation of construction contracts for infrastructure development were not fully achieved, and lacking to some extent – particularly on the national level. Some of these issues might have been addressed through targeted advisory support for the enhancement of policy, legal-administrative and institutional framework conditions on the national level (MNRT, WD, TANAPA). Likewise, coordinated action through donor-fora, and proactive networking between projects can help promote conducive conditions for change and institutional reform. On the other hand, ownership and commitment on the partner agencies' part can only be encouraged – but never fully controlled – by individual technical cooperation projects. Where commitment is lacking, it may become necessary to define exit-strategies and predetermined breaking points at an early stage of project planning. Again, this observation highlights the need for thorough institutional analyses in the course of project identification and appraisal missions.

