

## **Community Based Wildlife Management in support of Transfrontier Conservation: the Selous-Niassa and Kawango Upper Zambezi challenges.**

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### **Abstract**

This paper assesses the Community Based Natural Resource Management (CBNRM) approaches of Tanzania and Namibia applied to the proposed Selous-Niassa Wildlife Corridor connecting the largest conservation areas of Mozambique and Tanzania, and the proposed Kavango/Upper Zambezi Transfrontier Conservation Area (KAZATFCA) covering the greater part of the Okavango River Basin. The latter forms part of an extended ecoregion that is linked to the Upper Zambezi River Basin shared by Angola, Namibia and Botswana and watersheds shared with Zambia and Zimbabwe (These five countries are member nations and originators of the proposed KAZATFCA). Community cooperation is considered critical to the successful establishment of wildlife corridors crossing the strategically located Caprivi Strip (Namibia) which borders the other four countries in the KAZATFCA and the Selous-Niassa Corridor. Both the Namibian and Tanzanian CBNRM approaches empower local communities to manage and utilize the renewable resources within CBNRM areas and in retaining revenues thus generated. Recognized direct and indirect communal benefits from Wildlife Management Areas in Tanzania are revenues generated from conditional wildlife use, titled communal land, spatial land use plans and designated conservation areas free of other uses. Key communal benefits related to Namibia's Conservancies are: revenues generated from wildlife allocations, full retention of revenues by Conservancies, high Government commitment to the cause and significant donor interest and support. The economic benefits from both CBNRM models compared appear overrated. It is not expected that revenues generated through allocated wildlife quotas by neither Tanzania's WMAs nor Namibia's Conservancies will ever be large enough to have a significant economic impact on the household level of respective CBNRM members.

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### **Introduction**

Over the last two decades there has been recognition world-wide that the successful conservation of natural resources and wildlife depends on the cooperation of the communities living with or around it. This is the basic driving force behind the Community Based Natural Resource Management Conservation (CBC) approach promoted in the two target areas that are subject to this paper: the Ecological Corridor connecting the Conservation Areas Selous in Tanzania and Niassa in Mozambique, and the ecological corridor(s) crossing the Caprivi Strip of Namibia providing a critical ecological link between Botswana and Angola, and Botswana, Zambia and Zimbabwe.

Tanzania has seen in the past the initiation of numerous CBC initiatives such as the Ruaha Ecosystem Wildlife Management Project, the Cullman Wildlife Project, Ngorongoro Conservation Area Strategy, Serengeti Regional Conservation Strategy, Tanzania National Parks Community Conservation Service, Selous Conservation Project and other more localised efforts (Baldus et al, 2003). The experience gained in the implementation of these initiatives in the wildlife sector have been combined and a national CBNRM policy adopted largely based on the Wildlife Management Area (WMA) approach as pioneered around the Selous Game Reserve. Although the largely outdated Wildlife Conservation Act of 1974 has not yet been amended to include this new approach CBNRM it has been given a legal foundation through the ‘Wildlife Conservation Regulations’ in 2002 (Wildlife Management Areas). The Regulations confirm the right of communities to conditionally manage and utilize wildlife and other renewable resources on communal land registered under the WMA legal framework. In January 2003 the Wildlife Management Area Regulations and the Guidelines for the Designation and Management of WMAs were endorsed by the Ministry of Natural Resources and Tourism of Tanzania. A new draft Wildlife Act entailing provisions for community involvement has been in the legislative process since 2005.

The WMA approach is based on a system of Land Use Plans formulated by the member communities. WMA status gives communities immediate recognition of communal land boundaries and rights to the management and use of specified game species. WMAs compliant with all legal requirements are officially gazetted. The WMA approach ensures that conservation is done in true collaboration with local communities.

In Namibia, determined lobbying by the Namibian NGO “Integrated Rural Development and Nature Conservation” (IRDNC) has led to one of the most progressive policy environments for Community Based Natural Resource Management in southern Africa culminating in the Namibian Government passing the Nature Conservation Amendment Act (Act 5 of 1996). The Act enables communal-area residents to form Conservancies and to realize direct social, ecological and economic benefits from wildlife and tourism in their areas (Murphy et al., 2004).

The Namibian Conservancy model is similar to the Tanzania approach.. Conservancies compliant with all legal requirements are gazetted just like the WMAs in Tanzania. Communities have conditional rights to controlled and limited resource use on Conservancy land. This includes an annually assessed hunting quota provided the Conservancy is in compliance with its obligations under the Conservancy Act with focus on proven conservation success.

Prompted by the community-friendly Nature Conservation Act of 1996, the Conservancy movement in Namibia has rapidly gained momentum enjoying growing popularity with rural communities. To date 31 communal area Conservancies have been registered with an additional 50 under development benefiting more than 30,000 people.

## **1. Location and Description of the Target Areas**

### **1.1. The Selous-Niassa Corridor (Tanzania-Mozambique)**

With an area of 154,000 km<sup>2</sup> the Selous – Niassa *miombo* woodland ecosystem of southern Tanzania and northern Mozambique forms part of one of the largest trans-boundary eco-regions in Africa. To the North it is bordered by the 48,000 km<sup>2</sup> Selous Game Reserve and to the South by the 42,400 km<sup>2</sup> Niassa Game Reserve. The northern boundary of the Niassa Game Reserve coincides with the Ruvuma River which forms the international boundary

between Tanzania and Mozambique. The two protected areas are linked by a corridor (Selous-Niassa Wildlife Corridor) of approximately 120 km in length and about 50 km in width.

The Selous-Niassa *miombo* woodland ecosystem is dominated by *Brachystegia* spp., *Julbernardia* spp. and *Isoberlinia* spp. It forms part of the Zambezi biome, the largest biome in Southern Africa, typifying the Great African Plateau - the region's original landscape prior to being bisected by the tectonic origin of the Rift Valleys (Zambezi, Luangwa).

The wide Ruvuma floodplain bordering the corridor to the south supports unique ecosystems characteristic of Tanzania's coastal lowlands. The floodplain vegetation is composed of 50 % *miombo Brachystegia* woodland, 40 % open savannah, 5 % wetlands, 3 % "inselberg" vegetation and 2 % riverine and montane forests (Hahn, 2004). The inselbergs are a striking geological feature in a generally "flat" landscape. The Ruvuma River and associated riverine habitats of very high biodiversity value have been described as one of southern Africa's least known and pristine major river systems (Norton, 2005), known to support significant populations of large mammals, especially elephants.

The elephant population of the Selous-Niassa range estimated to exceed 65,000 animals constitutes one of the largest elephant populations in Africa. Other significant populations of large mammal species include Roosevelt's sable antelope (17,000) and Nyasa wildebeest (120,000), both subspecies are endemic to the area; Lichtenstein's hartebeest, Cape buffalo, giraffe, Boehms zebra, eland, greater kudu, common waterbuck, bushbuck, impala, common reedbuck as well as lion, African wild dog, leopard and spotted hyaena Klein-Gross-Schreiben checken!!. Black rhinos are still found in both Selous and Niassa but numbers are low, especially in Niassa (Hahn, 2004). Genetic exchange between the Niassa and Selous ecosystems is known to take place across the proposed ecological corridor.

The Niassa Game Reserve in Mozambique covers an area of approximately 23,400 km<sup>2</sup>. It is surrounded by 4 hunting blocks ("Coutadas") on its western, southern and eastern sides, which cover a further 19, 000 km<sup>2</sup>. Together these areas provide protection to more than 42,000 km<sup>2</sup>.

The Selous – Niassa ecological corridor covers 6000 km<sup>2</sup> of sparsely settled *miombo* woodlands. The northern section of the corridor extends from the Selous Game Reserve southwards to the Songea-Tunduru trunk road. This section is protected through the "North East Undendeule Forest Reserve" and the new, village-based provisional Wildlife Management Areas Songea and Tunduru. The southern corridor section (4,000 km<sup>2</sup>) falls within the Namtumbo and Tunduru Districts of the Ruvuma Region extending southwards for about 70 km from the Songea-Tunduru Trunk Road to the Ruvuma River.

The northern corridor section has been subject to a conservation project implemented jointly by the Tanzanian Wildlife Department and the Selous Conservation Program under the Tanzanian CBNRM concept, an effort currently extended to the southern corridor section. Formalising and conserving the currently unprotected southern corridor section will allow permanent biological linkage between the two protected area systems in Tanzania and Mozambique. It is a priority issue for a number of reasons: (1) the importance of the corridor ecosystem for sustainable biodiversity conservation; (2) its importance in linking two major protected areas enabling both animal movements and gene flow between wildlife populations of global importance; (3) the improvement of local livelihoods by demonstrating wildlife as a viable form of land use; and (4) the contribution the corridor is expected to make to developing a national network of community managed WMAs (UNDP, 2003).

Complementary grants from the Global Environment Facility (GEF) and the German Government (KfW) have been secured to extend the network of WMAs across the southern part of the corridor to the Ruvuma River. Rapid Rural Assessment involving half of the 33 villages located within the corridor showed an exceptionally high level of support for the creation of the proposed WMAs in the southern corridor section (Schuerholz and Bossen, 2005).

The economy of the corridor communities is based on subsistence agriculture (95%). Staple crops grown are maize and cassava, cash crops predominantly tobacco, sesame, sunflower, rice, groundnuts, beans and occasionally red pepper. Livestock is mostly restricted to goats, sheep and chicken. Cattle are rare due to the presence of Tsetse in the region (Schuerholz and Bossen, 2005).

Dependency on natural resources by corridor dwellers is rated as “very high”. Natural products collected regularly include poles for house construction, grass for thatching, reeds, firewood, wild fruits, mushrooms, traditional medicines and (legally or illegally) fish and bush meat. Firewood is the main source of domestic energy for cooking for over 96 percent of all households in the two districts with no affordable energy alternatives in the foreseeable future (Smith, 2005).

Uncontrolled resource use and unplanned and un-regulated conversion of land for agricultural and ribbon strip development are the main threats to the biodiversity within the Selous-Niassa Corridor (UNDP/GEF, 2003, page 11), exacerbated by the high human population growth rate in the corridor area of 4,3 % (4,3%). Unless efforts are made to ensure the integrity of the corridor this development could convert much of the still biologically intact corridor to cultivation, losing a unique opportunity to link the two largest conservation areas of Tanzania and Mozambique.

## **1.2 The Kavango-Upper Zambezi Transfrontier Conservation Area (Namibia, Botswana, Angola, Zambia and Zimbabwe)**

The proposed Kavango-Zambezi Transfrontier Conservation Area (KAZATFCA) concept evolved from the earlier Okavango Upper Zambezi International Tourism Initiative (OUZIT) that was launched by Angola, Botswana, Namibia, Zambia and Zimbabwe with support of the Southern African Development Community (SADC) and the Development Bank of Southern Africa (DBSA) in 1993. The development process of OUZIT and its current status has been described in detail by Kohler et al. (2004) and Hanks (2006).

The former tourism based OUZIT initiative that appears to have failed because of its poorly defined scope and lack of ownership has been redefined by the Ministers responsible for Tourism, Wildlife and Protected Areas of the five partner countries and converted into the current KAZATFCA Program in 2003. The newly defined focus of the KAZATFCA is conservation as the primary form of land use with tourism as a valuable by-product. The overall goal of the KAZATFCA is an integrated land-use concept that will strengthen the regional economy and rural livelihoods, provide for sustainable transboundary biodiversity conservation, and promote good neighbourly relationships between the five participating nations (Schuerholz, 2006).

The partner countries have confirmed the establishment of the KAZATFCA by signing a formal Memorandum of Agreement in 2006. The final boundaries of the TFCA still have to be defined.

The proposed TFCA covers approximately 300 000 km<sup>2</sup> of very complex ecosystems ranging from some of Southern Africa's most significant wetlands to extensive and contiguous *miombo* and *mopane* woodlands described in detail by Hanks (2006) and UNEP (2005). The KAZATFCA encompasses the greater part of the Okavango River Basin, an integral part of an extended ecoregion connected to the Upper Zambezi River Basin shared by Angola, Namibia and Botswana. Hanks (2006) considers eight main areas within the TFCA of particular conservation interest: (i) Okavango Swamps; (ii) Kavango/Okavango river fringes; (iii) Makgadikgadi Pans and Nata River Delta; (iv) Zambezi riparian woodland (below Senanga); (v) Zambezi riparian woodland (between Kazungula and Victoria Falls); (vi) Victoria Falls and Batoka Gorge; (vii) Kazuma Pan and; (viii) Southern Hwange dunes and Nata mudflats.

The KAZATFCA supports the largest contiguous population of African elephants, mostly concentrated in the Okavango Delta of Botswana. More than 120,000 elephants were recorded in aerial surveys (2005-2006) from this region and over 50,000 elephants in north-western Zimbabwe and 16,000 in north-eastern Namibia (Chase, 2006)<sup>1</sup>. Chase estimates an annual growth rate of the Botswana elephant population of 5%.

Research supported by Conservation International and the Wildlife Department of Botswana has confirmed elephant movements between Botswana and Angola and Botswana and Zambia via "corridors" across the Caprivi Strip in Namibia. Growing elephant populations and increasing elephant traffic across the densely settled Caprivi Strip have resulted in a noticeable increase of human-elephant conflicts with significant adverse impacts on the predominantly rural communities of this area depending on subsistence agriculture. Crop damage by marauding elephants and other wildlife originating particularly from Botswana's Chobe National Park have become a permanent threat to the livelihood of front-line farmers in the Caprivi.

On the other hand elephants are recognized as critical source of income from consumptive and non-consumptive use with direct financial benefits to Conservancies in Namibia and wildlife trust communities in Botswana.

In view of current and future challenges posed by increasing elephant populations in the region and growing elephant movements across the Caprivi, Namibia has elaborated an elephant management plan which addresses both the challenges and opportunities. The plan signals Namibia's willingness to cooperate with the four neighbouring countries and the world community at large in developing joint policies which permit a stabilization of ecologically viable elephant populations in the KAZATFCA. This is expected to be accomplished partly through the accelerated establishment of community-based wildlife management areas which will protect game species in return for harvest quotas of specified game species to be allocated to the participating communities. It is hoped that the revenues to be generated by the Conservancies and equivalent models in the neighbouring countries through trophy hunting, together with development assistance expected from the international donor community in support of the conservation efforts, will counter-balance the current and increasing adverse impacts of wildlife on rural communities. It is evident that without full cooperation of the local communities living in the Caprivi centering on a "win-win" approach to wildlife management the ambitious goals of the KAZATFCA cannot be achieved (Hanks, 2006).

If successful the KAZATFCA would link some of Africa's most well known and most popular National Parks and provide protection to large parts of the TFCA that are still unaltered.

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<sup>1</sup> Personal communication

Land conversion for agriculture and uncontrolled settlements -most visible in the northern part of the TFCA where forests and woodlands have turned into shrublands or wooded grasslands- are recognized as serious threats to the region's ecological integrity. These problems are compounded by excessive elephant browsing, over-grazing by domestic livestock, falling water tables in wetlands, increasing droughts, and systematic fire suppression.

The elephant work in the KAZATFCA substantiates the need for harmonized management and policy guidelines of the five partner countries and the need to officially designate transfrontier ecological corridors that permit free movements of wildlife between established conservation areas. The Caprivi Strip of Namibia located strategically in the heart of the TFCA bordering all four other TFCA member states will play a pivotal role in the future development of the KAZATFCA.

## **2. Community-Based Wildlife Management Models applied to the target areas**

### **2.1 "Wildlife Management Areas" (WMA): The Tanzania Model**

Land tenure in Tanzania is governed by the Land Act, 1999 and the Village Land Act, 1999. In general all land in Tanzania is public and vested in the President who is the trustee of the land for and on behalf of the citizens of Tanzania. For the purposes of management all public land is divided into three general categories under the Land Act. These are: (a) General Land, (b) Village Land and (c) Reserved Land.

The establishment of a Wildlife Management Area in Tanzania requires participating villages to develop a Land Use Plan with areas designated for specific uses. In the event that land from more than one village is covered by a single WMA a Joint Village Land Use Plan (LUP) is developed. Demarcation of individual village boundaries as part of the Land Use Planning Process is required under the Tanzanian Village Land Policy. The actual land use planning process is conducted by the Village Assemblies of the corresponding villages with assistance from a multisectoral team of the District Offices. The village then forms a Community Based Organisation (CBO), officially registers it and submits an application for "Authorised Association Status" to the Director of the National Wildlife Division.

The entire land use planning process is estimated to take about 6 weeks per village provided timely processing by the Wildlife Department. Currently topographic maps of a 1:50 000 scale are used as a basis for mapping the LUP. In the actual land planning process villagers designate and quantify areas for the categories: (a) Wildlife Management (Conservation); (b) Village Forest; (c) Agriculture and Livestock Grazing; (d) Residential; (e) Reforestation; (f) and/or any other area-category the concerned village wishes to designate. Land Use Plans typically cover a period of up to 15 years. Land use allocations give due consideration to village expansion.

Once a CBO has been granted the status of "Authorised Association (AA)" it is allocated user rights to wildlife occurring within the WMA. The user rights can include a quota for "bush meat" (community consumption), trophy hunting, non-consumptive tourism and live animal capture to be re-sold for stocking purposes. Conditional resource utilisation requiring licenses from the responsible authorities include forest products, honey collection from wild bees and fish resources. Activities not permitted are mining, wildlife cropping and wildlife farming/ranching.

An AA may also enter into Investment Agreements or Joint Ventures with the private sector concerning natural resources within the WMA. The AA is accountable to the Village Council. It is responsible for the day-to-day management of the WMA.

Numerous institutions and organisations are involved in the establishment and management of WMAs. The most important institutions for the day - to - day management are the AA, the Wildlife Division via the respective District Game Officer and the District Natural Resource Advisory Body.

Once established and gazetted a WMA is managed jointly by the Village Government and the WMA Resource Committee who also appoint Village Game Scouts responsible for law enforcement, fire management, the hunting of game allocated as “village quota” and for the control of trophy hunting and tourism. The game meat is sold by the scouts to villagers against a fee at market value.. The so called “bush meat” -legally not accessible to rural communities outside of WMAs- is a highly valued commodity. The revenues generated from the sale of bush meat and trophy hunting are used to cover the expenses of community scouts and the WMA Resource Committee. Existing and future WMAs of the corridor are represented on the corresponding District Natural Resources Committees.

The land use plan in support of a WMA provides Village Councils with a powerful tool in combating illegal land occupation by squatters and prevents wildlife habitat fragmentation as a result from squatting and land conversion for agriculture.

## **2.2 “Conservancies”: The Namibia Model**

Similar to the Tanzania WMA model the Namibia CBNRM approach is based on wildlife and tourism, common to most other CBNRM models developed and applied in Africa. Center to both CBNRM approaches is how to effectively and sustainably manage common property resources including wildlife and forests for the benefit of the people who derive their livelihood from such areas.

In Namibia a precedence was set by new legislation in 1968 providing private landowners the right to commercially farm and use common property wildlife resources. A 1975 amendment to this law gave private landowners the exclusive right to retain all the proceeds from the sale of trophy hunting and live game specimens. Realizing that sustainable wildlife management can only be achieved through viable game populations in need of sufficiently large and contiguous habitat, freehold farmers in Namibia started to form “Conservancies”. The Conservancies are managed by a committee in accordance with the Conservancy constitution that regulates common interests in wildlife resources. The Conservancy Committee is composed of democratically elected Conservancy members, a powerful lobby of common interests on deeded lands.

Encouraged by Namibia’s legal framework and policies applied to Conservancies on freehold land, IRDNC successfully pioneered the idea to transfer this model to people living on State-owned land. This involves transfer of proprietorship over wildlife as a common resource to a group of people living on public land with interest in communal resource management.

Key partners of IRDNC are local traditional leaders and community members concerned about declining wildlife populations resulting from poaching and habitat destruction. Since its early involvement, the IRDNC assisted local communities in training and deploying community game scouts and linking communities with the tourism sector in order to generate revenues as an incentive for conservation of local wildlife.

The Conservancy approach involving rural communities on public land gained momentum when the “Namibia Association of Community Based Natural Resource Management Support Organizations” (NACSO) was established in 1996. NACSO is an association of twelve autonomous CBNRM service organizations providing quality services to communal area communities with interest in managing and utilizing their natural resources in an equitable and sustainable manner. NACSO is based on the rationale of forming synergies by pooling a wide range of expertise for the benefit of the country’s rural poor with interest in communal land and resource management.

The combined initiatives of NGOs and rural communities, supported by the private sector and fully endorsed by a highly committed Ministry of Environment and Tourism (MET) led to the development of powerful CBNRM policies and legislation. In 1995 the Cabinet of Namibia approved the new policy for communal area Conservancies, put into law by the Parliament in 1996. The policy entitles communal area residents to form Conservancies with conditional rights to wildlife and tourism and the right to retain the revenues generated in the process.

Growing international interests in the successful conservation efforts by Namibian NGOs at grassroots level on public lands has resulted in substantial donor funding in support of CBNRM and Conservancies in particular. The 1993 launch of the community Conservancy model known as “Living in a Finite Environment (LIFE) Programme” has brought major donor funding by USAID and the WWF family to the country. But it was not until 1997 that the first communal area Conservancy was gazetted.

The process of forming a communally owned and operated Conservancy on public land involves the following steps: The community (a) defines its membership and geographical boundaries; (b) elects a committee from its members; (c) decides on a plan for the equitable distribution of benefits; and (c) adopts a legally recognised constitution.

Once a Conservancy has been gazetted, the Nature Conservation Amendment Act (Act 5 of 1996) gives the Conservancy Committee on behalf of its constituents “rights and duties” related to the consumptive and non-consumptive use and sustainable management of identified game species for their economic benefits in return of proven conservation efforts. The Act provides the Conservancy Committee the same rights, privileges, duties and obligations that the Nature Conservation Ordinance confers on a commercial farmer (Jones, 1999).

A public interest legal firm assists the fledgling Conservancy in developing the Conservancy constitution and negotiating contracts with the private sector regarding tourism initiatives and the use of hunting quotas. Further assistance is provided by the “Wildlife Council”, a regional Government institution under the umbrella of the Ministry of Environment and Tourism, in the process of developing a candidate Conservancy.

The policies and legal framework related to Conservancies in Namibia have triggered a nation-wide conservation and development movement that now covers an area of 71,000 km<sup>2</sup> registered Conservancy land with a combined total of 95,000 Conservancy constituents. Within the Eastern Caprivi five Conservancies with a membership of 7,500 persons have been registered to date, covering an area of approximately 1,760 km<sup>2</sup>. Eight other Conservancies have applied for registration and numerous other communities are actively pursuing Conservancy status.

It is widely recognized that Namibia’s Conservancy movement has significantly changed the attitude of communal area residents which have begun integrating wildlife and tourism enterprises into their livelihood strategies. As a consequence, land-use patterns across Namibia’s communal areas are changing towards more environmentally appropriate and

sustainable forms of game production, which concomitantly enhances the viability of Namibia's extensive protected area network (Hanks, 2006).

### **3. Comparison of the Tanzanian and Namibian CBNRM Approaches**

It may safely be assumed that CBNRM models currently applied to Anglophone Africa have directly evolved from or at least been influenced by the lessons learnt from Zimbabwe's "Communal Areas Management Program For Indigenous Resources" (CAMPFIRE). The CAMPFIRE approach, adopted by Zimbabwe's Department of National Parks and Wildlife Management in the early 1960's, replaced the rather protectionist colonial style wildlife and nature conservation policies which had dominated Anglophone Africa for the past century. This new approach to conservation management focused on the step-by-step integration of communities living in support zones of protected areas. It was based on the rationale that community empowerment, which manifested itself through providing communities with legal rights to the sustainable use of wildlife on communal lands, would gradually lead to community "ownership" in conservation management. Jones (1999) argues that rural communities receiving income related to the sustainable use and management of wildlife under CAMPFIRE will actively engage in wildlife and habitat conservation as long as the perceived benefits exceed the costs associated with being part of the CAMPFIRE Program. It is suggested that this statement may safely be extrapolated to all offshoots of the CAMPFIRE model developed to date. The major shortcoming of CAMPFIRE was that revenues generated from wildlife were channelled through Government institutions, prone to corruption. This also limited the participating communities' decision-making powers, contributing to the growing alienation of communities from the system.

The basic principles of the CAMPFIRE approach are also common to both CBNRM models investigated by this paper. Revenues generated within the targeted models, however, are collected directly by the communities with shares to be provided to Government agencies. Community empowerment is central to the Selous-Niassa ecological corridor connecting prime conservation areas of Mozambique and Tanzania and central to the two proposed ecological corridors transecting Namibia's Caprivi Strip connecting key conservation areas of Botswana, Namibia, Angola and Zambia. In both cases communities are given access to wildlife and other resources in lieu of wildlife and wildlife habitat conservation commitments.

Both models, the WMA of Tanzania and the Conservancy of Namibia (generically called "CBNRM models"), result in tangible and indirect community benefits. Benefits common to both CBNRM models are:

- designated and gazetted CBNRM areas and officially recognized boundaries of communal lands;
- ultimate allocation of wildlife quotas for communal and commercial use under own management;
- rights to retain a portion of revenues generated from common property resources;
- controlled CBNRM membership rights to sustainable use of forest resources and minor products;
- community rights to capitalize on nature-based tourism opportunities and to issue tourism related land-leases;
- strengthening community identity and community cohesiveness;
- mobilizing community members;
- democratization of communal decision-making processes;
- participatory approach to CBNRM;
- cooperation between traditional leaders and CBNRM administrative structures;

- accountability and transparency of CBNRM structures (good governance);
- communal institution building and capacity development;
- creating employment opportunities;
- training community scouts for law- and community policy enforcement;
- CBNRM membership engaging in voluntary conservation activities;
- skill development and leadership training;
- forging partnerships between communities and institutions;
- creating joint venture opportunities between communities and private sector;
- attracting assistance from NGOs and international donor community;
- leading to integrated spatial land-use planning as part of a regional planning approach.

It is evident that the direct benefits and spin-offs of the two CBNRM models compared by this study exceed the original scope of CAMPFIRE, indicating the steep learning curve in CBNRM since its early origin. Some of the more visible differences between the two approaches are highlighted as follows.

In contrast to the policy framework of Namibia's Conservancy model, the Tanzanian policy and legal framework associated with WMAs:

- provides legal tenure to communal lands registered under a WMA;
- requires that community boundaries within a WMA have to be fine-tuned, agreed upon with neighbouring communities and free of disputes and conflicts prior to application for WMA status;
- requires the elaboration of a spatial land-use plan with designated categories defined by the WMA policies;
- requires the designation of a wildlife conservation area to be contiguous with wildlife conservation areas of joining WMAs and/or designated protected areas respectively (**of critical importance to WMAs created in support of ecological corridors**);
- Joint management boards of communities deciding to jointly form a WMA.

It is suggested that the greater security of village land as a spin-off of the Tanzania WMA model may well be of even greater importance to a village than the potential economic benefits derived from an allocated wildlife quota. This particular aspect plays an important role in the development process of the two proposed WMAs located in the southern section of the Selous-Niassa ecological corridor. It may also be a further explanation of the surprising enthusiasm and positive response to the creation of the WMAs by villagers of the corridor surveyed in this context by Schuerholz and Bossen (2004). Village Councils appeared to be fully cognizant of the powerful tool provided to them in defence against the alarming and ever growing number of squatters migrating from the drought-ridden north-western part of Tanzania to the more fertile south-western part of the country in search of arable land. Recognition of WMAs on village land and a well structured spatial land use plan will allow village governments to more effectively control and manage settlements and land- and resource use.

In comparison, the Namibian legal framework related to Conservancies does not affect land tenure. It rather empowers Conservancies to "administer" natural resources on communal lands and to allocate leases for tourism-related infrastructure. Although the Namibian model requires the production of a "management plan" as part of the Conservancy registration process, no spatial land-use plan with areas exclusively designated to wildlife conservation is required as mandatory for a Tanzanian WMA. Schuerholz (2006) suggests that the lack of spatial land use plans and the absence of designated wildlife areas in particular may be of serious future consequences to frontline Conservancies of the Caprivi Strip located in the

proposed wildlife corridors. The author argues that in the absence of interlinked conservation areas which are free of human settlements and which permit free movements of mega fauna growing wildlife-human conflicts encountered by the 13 registered and proposed frontline Conservancies of the Caprivi Strip eventually may outweigh the economic incentives provided through wildlife allocations. This will be exacerbated if the income generated by a Conservancy through safari hunting and tourism will not reach the household level of the Conservancy's constituents and if wildlife damage to crops and livestock is not sufficiently compensated for.

At present most of Namibia's Conservancies permit livestock grazing throughout a Conservancy. In the absence of spatial land use plans subsistence farmers and their fields are widely scattered exacerbating wildlife-human conflicts. Salambala at current appears to be the only frontline Conservancy in the Eastern Caprivi Strip having set aside land for wildlife habitat conservation.

In comparison livestock grazing within a Tanzanian WMA is confined to specially designated livestock grazing areas. Designated conservation areas are kept free of livestock and any other land use, thus reducing the risk of livestock predation, at the same time providing high quality wildlife habitat without human disturbance.

In the absence of designated and clearly defined viable conservation areas within the frontline Conservancies of Namibia the direct contributions of the Conservancies to biodiversity conservation appears comparatively low. Actual benefits are more in terms of community empowerment rather than in support of biodiversity conservation

Schuerholz (2006) argues that the widely praised economic benefits derived from wildlife and tourism benefiting Conservancies, WMAs and other CBNRM models are overrated. He observes that although financial sustainability of Caprivi frontline Conservancies may be achieved through revenues generated from trophy hunting and community-based tourism, revenues rarely reach Conservancy members. Most of the revenues generated are currently absorbed by the Conservancy's administrative structures leaving little for disbursement amongst members. This author concludes that Caprivi Conservancies could significantly be improved through better budget transparency, greater accountability and improved communication between Conservancy administrators and Conservancy members.

A serious constraint related to WMAs in Tanzania is that the Wildlife Department as the institution responsible for allocating wildlife quotas (trophy hunting) to gazetted WMAs rarely complies with its legal obligation. Frequently, quotas are directly supplied to commercial safari operators for areas located within WMAs, thus circumventing WMAs Councils and depriving WMAs of their legal rights to generate much needed revenue, the key incentive to participate in conservation efforts (Schuerholz and Bossen 2005). As a result WMAs are unable to generate sufficient revenue for covering operational costs and no funds are available for disbursement amongst WMA constituents.

The Tanzanian Wildlife Administration initiated its own version of CBNRM in the late 80s convinced that this would benefit game management and biodiversity conservation alike. This replaced the country's traditional "fines and fences" approach to wildlife management and the "fortress conservation" philosophy prevalent throughout Anglophone Africa during the last century. When confronted however with actually empowering communities by giving them their rights in accordance with the official Wildlife Policy of Tanzania (1998) the Wildlife Administration proved to be reluctant to relinquish its powers affiliated in the past with significant informal and illegal income from tourist hunting. Commercial hunting operators proved to be equally opposed to community empowerment being afraid of losing privileges traditionally provided to them by the Wildlife Department under highly favourable conditions

(i.e., receiving rights to hunting blocks for unusually long periods of time at a fees below market value and hunting blocks awarded without public tender). To date this continues to be the biggest challenge to the effective functioning of WMAs in Tanzania (Baldus 2006).

In their analysis of Tanzania's current hunting system Baldus and Cauldwell (2006) criticize the lack of transparency and accountability of the country's Wildlife Department, resulting in substantial losses in revenue to the Central Government. The authors suggest that the revenues are going to a group of civil servants intimately cooperating with influential members of the hunting industry instead. The fact of "Poor Governance" within certain sectors of Tanzania's Ministry of Natural Resources and Tourism appears to be common knowledge in Tanzania and have become subject to public and Parliamentary debate. Resistance to reforms appears the major reason why CBNRM so far did not have the success it deserves in spite of efforts by cooperating communities and the international donor community. It is apparent that unless the Government of Tanzania fully complies with its legal obligation to CBNRM the ambitious goals of WMAs cannot be achieved.

The successful establishment of "trans-boundary fora" which promote transboundary cooperation between Conservancies in the Eastern Caprivi that share common boundaries with neighbours from Botswana, Zambia and Angola should receive special recognition in a transfrontier conservation context. This applies in particular to the four emerging Trans-Boundary Fora of Imushi-Kwando (Namibia and Zambia), Salambale-Chobe Community Trust (Namibia and Botswana), Impalila/Kasika-Sekuti (Namibia and Zambia) and Tocadi-Kyaramacan (Namibia and Botswana). Common interest areas of the trans-boundary fora are: fire management, combating cattle theft, wildlife monitoring, problem animals, anti-poaching, fishing, and information exchange. To achieve this, IRDNC and CI with financial assistance of international donors facilitate transboundary exchange visits between neighbouring communities, implement workshops and seminars, provide training and assist in the preparation of Memoranda of Cooperation between neighbouring communities. Schuerholz (2006) suggests that the establishment of transboundary fora and transfrontier cooperation at grassroots level is "key" to the success of the KAZATFCA leading to a valuable mutual learning process and creating important synergies and friendship between neighbouring communities. This initiative is highly relevant and of a high priority in the framework of any TFCA.

Trans-frontier cooperation between Tanzania and Mozambique is currently also being promoted in context with the Selous-Niassa Ecological Corridor Project co-financed by the German Government and the Global Environment Facility.

## **Conclusions**

It is suggested that the ambitious conservation goals of trans-frontier conservation areas and ecological corridors can only be achieved through participatory spatial land- and resource use planning and management, securing the livelihood of the rural poor, generating tangible benefits, and fair equity sharing down to the household level. Local empowerment and synchronized land- and resource use policies by neighbouring countries sharing a designated conservation area will play a decisive role in this process. Lessons show that the CBNRM approach chosen for the Selous-Niassa ecological corridor linking the largest conservation areas of Tanzania and Mozambique and for the ecological corridors traversing the Caprivi Strip of Namibia in the heart of the KAZATFCA may well be the right strategy in support of reaching the highly ambitious transfrontier conservation goals.

Since Tanzania's WMA- and the Namibia's Conservancy models both hinge on the conditional economic utilization of wildlife the link between community income and wildlife conservation is emphasized. It is argued that without devolving management participation and economic benefits derived from CBNRM to the household level members of neither model are likely to develop the much desired ownership in CBNRM.

Community empowerment rather than direct economic benefits appear of foremost importance to the WMA approach in Tanzania. On the other hand the WMA approach will not fully achieve its conservation goals as long as the Government of Tanzania does not honour its legal obligation in providing game quotas directly to the WMAs and the right of WMAs to fully retain revenues generated through the game harvest for communal benefits.

In comparison, the Government of Namibia is fully committed to its highly successful Conservancy approach, willing to devolve management authority and the right to generate and retain the revenue generated from wildlife allocations to groups of people applying for Conservancy status on communal land. Namibia has created an enabling legal and administrative framework accordingly, actively promoting and supporting Conservancies to become established.

The efforts of the Government are complementary to the CBNRM programs of IRDNC and other NGOS assisting existing and emerging Conservancies to function effectively while reaching social, economic and environmental sustainability and to effectively manage and conserve their natural resources in partnership with government. The IRDNC program in particular has been instrumental in empowering communal frontline Conservancies of the Eastern Caprivi guiding them through the process of becoming self-sufficient. Furthermore, synergies are created through good cooperation with complementary NGO programs supported by the international donor community, all operating at grassroots level. Preliminary findings also show that strong Conservancy structures open doors for new business opportunities and joint ventures.

It is suggested that the Namibian Conservancy model would benefit from the participatory elaboration of spatial land use plans with focus on designated conservation areas which are free of other use. Spatial land use planning and designated conservation areas as an important land use category should become an integral part of the Conservancy's legal framework.

Mainstreaming conservation into all facets of Conservancy life has to become a key objective. Without the appreciation of the full value of goods and services provided through ecosystem conservation Conservancy members will continue to focus on anti-poaching measures and on how to solve wildlife-human conflicts. A holistic ecosystem approach to conservation is needed in order to realize full benefits for Conservancy members and biodiversity alike.

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