

## **Can Rural Communities be Partners in Tourism? A Hopeful Model for Zambia**

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Tourism reflects a country's capacity to successfully preserve its natural treasures for the world to see and enjoy. Once degraded or depleted, their aesthetic appeal is lost and tourist numbers decline. We all know this, which is why conservation is at the very heart of tourism. And for Zambia, wildlife is the heartbeat of tourism. Lose wildlife and tourism dies.

The tourism industry stands on the threshold of making significant investments on some very treasured real estate in Zambia. Many of these investors, however, will discover that living not far away are communities who cannot easily feed themselves or make enough money to pay school fees or buy medicines to treat malaria. With a total boundary perimeter of over 4,600 km for national parks, with average household income below \$100 in most areas surrounding these parks, and with law enforcement absent or grossly understaffed along these boundaries, there is little doubt that fires, poaching and illegal land clearing are taking a serious toll on wildlife production in Zambia. Much of Kafue National Park, for example, is now depleted of wildlife, as are many of the game management areas that surround it. The human footprint has silenced the large herds of buffalo and elephants that once graced this park. As the reality of poverty's impact on Zambia's much treasured tourist attractions becomes more apparent, the industry may need to pause to consider how best to invest in tourism.

Economic spin-offs from tourism in Zambia is estimated to be well into the 100's of millions of US dollars. It is hard to imagine why a country so much in need of revenue has allowed its wildlife estate to decline at the hands of its own citizens. It is a question worth examining, especially if it leads us to a clearer, more constructive way to help reverse this trend.

First, consider the relationship between urban dwellers and rural people characteristic of so many parts of the world, including Zambia. Urban communities are havens for wealth generation where financial institutions and services exist to serve and benefit the interests of those who live in the city. Rural areas lack these services and generally have to rely on their own labour and land to supply urban markets their wants – either farm-based goods or non-farm goods, where the latter are typically produced from the conversion of natural resources into usable commodities. Urban-based traders find lucrative arrangements with market-naïve rural communities who undervalue their natural resources as well as their own labour and sell at low prices and in large quantities, typically in the form of charcoal, fish and game meat, often out-stripping landscapes of their natural resources. It is a relationship built around urban control. Lack of enforceable regulations creates an open and often illicit market for resource degradation and the result is depleted fisheries, denuded forests and wasted wildlife, leaving rural communities ultimately poorer and more vulnerable. It is a pathway to desperate communities, where solutions can lead to crime, prostitution and social disharmony, certainly not an attractive backdrop for tourism nor an environment conducive to keeping tourism attractions safeguarded.

It seems difficult to talk about “tourism for peace” or “tourism for the next millennium” unless the urban rural divide is brought more into balance.

Luangwa Valley is Zambia's most valued wildlife area and is critical to Zambia's tourism. It also provides a very helpful lens for examining this urban rural relationship and is where I would like to focus my talk today. Equally important, the Luangwa Valley is giving rise to a new and emerging model for rural development, which is helping to overcome some of the environmental threats this relationship has helped perpetuate. As called for in Zambia's Poverty Reduction Strategy Paper, Government and its partners must find solutions capable of sustaining a strong

foundation for tourism growth. The model I'll share with you today is helping to find these solutions. Endorsed and supported by the MTENR, the model builds critical linkages between markets, agriculture and conservation as a way to more effectively address the growing conflict between rural poverty and tourism: that low-income, food insecure communities cannot support tourism if they rely on destructive land use practices to sustain their basic livelihood needs.

### Environmental threats

Chronic food shortages and low household income are well documented in Luangwa Valley and have contributed to land use practices that have seriously degraded watershed and wildlife resources over much of the past decade. Baseline surveys in 2000 revealed household heads earned on average an annual income of \$76 and not less than 20% of resident households failed to grow enough food to feed themselves from one harvest to the next. Farmers cite poor farming skills, lack of inputs and extreme weather as contributing factors. Unscrupulous traders who keep farm commodity prices low have exacerbated this problem by discouraging better-farming skills. This has reduced food production and increased household reliance on game meat to exchange for food produced by more successful farmers. Two commercial promoted cash crops, cotton and tobacco, have offered rural communities better prices but have also drained soils of their nutrients and have contributed to increased rates of deforestation, which has led to increased soil erosion, river siltation, and extreme flooding. Household management of income derived from these crops is generally male-controlled, and income shortages still occur, leaving many families poor and food-insecure during the latter stage of the farming cycle. Illegal hunting and wildlife snaring remain an important coping strategy for many of those affected by these problems.

Attempts to address these problems were once thought possible by increasing law enforcement, equipping scouts with better transport and offering increased incentives for making arrests. Save the Rhino Trust was the first such effort during the 1970's. Rhinos were not saved, community reaction to severe policing tactics in their area proved hostile and detrimental to conservation and after about a decade, operations proved unsustainable. Community-based efforts like ADMAD followed in the 1980's and 1990's, which supported community-employed scouts as well as a system for sharing revenues derived from the legal hunting of wildlife to help meet community needs. Improvements were noted but tourism-based revenues shared with communities were not able to address basic household needs, like food security and income. Instead, many households relied on wildlife snaring as well as a range of other land use practices detrimental to wildlife production to compensate for food shortages and income needs. Tourism ownership on community lands has remained largely in the hands of outside investors throughout this period and has raised questions and suspicions over the lack of tourism ownership by local communities.

### The COMACO model

Community Markets for Conservation (COMACO) is a new model for conservation in Zambia. It represents an appreciation of rural development needs in Zambia and has given rise to innovative ways to build community commitment to conservation through a broader set of markets than just wildlife-based markets. It is a pilot program in Eastern Province closely watched by the Ministry of Tourism, Environment and Natural Resources as a program helping to pioneer a solid foundation for rural communities to support and benefit from natural resource management and tourism.

COMACO uses a combination of extension support, marketing, added-value products, and pricing strategies organized around a regional trading centre to use market incentives to leverage better farming and land use practices. The trading centre operates as a limited company with majority share profits held by participating communities and offers incentives to grow crops considered environmentally friendly. Trade benefits are conditional on a producer's compliance to acceptable farming practices guided by community land use plans. Pilot results in Lundazi and Chama Districts demonstrated the approach has strong local stakeholder support and is capable of sustaining market-driven solutions to resource management and food security challenges in areas outside protected areas.

The trading centre works through a network of trading depots to facilitate improved trading services and producer prices for households prone to low income and food shortages in exchange for conservation compliance. It sustains these services by processing producer goods into high-valued products and by operating on a scale of efficiency that reduces product production costs. Once registered with the trading centre, producer groups may access the full range of trading services and benefits, provided group members are food secure and have adopted by-laws that pledge abeyance by group members to required conservation guidelines. Guidelines include the use of conservation farming and abandoning all forms of illegal hunting, including the use of wire snares. In addition, COMACO requires that participating communities through their local leadership develop land use plans that will safeguard the future of natural resources through the use of improved land use practices.

Producer groups are organized into cooperatives, which are associated with each depot. Cooperative leaders encourage producer groups to abide by their by-laws and land use plans and promote improved use of skills that increase agricultural yields without degrading their environment. Should a producer group not comply, the trading centre denies trade benefits to those groups until compliance is reestablished. In summary, COMACO facilitates the establishment of a community-owned company that rewards producers with relatively high producer prices for producing environmentally friendly commodities, for maintaining household food security, and for remaining compliant to improved land use practices.

#### COMACO products, prices and production

COMACO currently trades in the following products: rice, groundnuts, soybeans, honey and poultry. These are commodities that do not compete with food security, as do cotton and tobacco, can be produced by most farmers, and if farmed or produced properly have minimal conflicts with wildlife habitat. COMACO is able to leverage farmers' interest in better farming practices for the production of these desired crops by offering them high market value. To do this, COMACO increases the value of raw commodities into processed, high quality products, such as packaged polished rice, bottled honey, peanut butter, and cooking oil, and passes the increased value onto the producer. Because COMACO's objective is to attract large-scale community compliance to improved land use practices, it gives back a significant share of its profits in the form of increased producer price but holds producers accountable to their agreed compliance to improved land use practices.

Since its inception and pilot efforts in Eastern Province, COMACO has demonstrated a significant increase in producer prices for the above commodities. In relation to cotton, COMACO has offered farmers viable alternatives that are far more conducive to sustaining wildlife production and watershed management. The table below reflects the trends in producer prices as driven by the COMACO program. In addition, all transactions are made at the community depot so that both women and men can have equal access to the COMACO market.

This contrasts with the system used by the commercial interests of tobacco and cotton out-grower schemes, which pay with cheques. Under this arrangement it is normally the men who travel to towns to cash the cheques, which in turn increases the opportunities for HIV/AIDS transmission back into rural areas of Zambia.

**Table 1. CTC price trends for commodities purchased from COMACO producer groups**

Commodities	Unit	Pre-	2004	Projected	% increase from pre- COMACO prices
		COMACO prices (2002)	COMACO prices	2005 COMACO prices	
Rice	kg, unpolished	ZMK 600	ZMK 950	ZMK 1,000	58.30%
Chicken	adult-size, one	ZMK 5,000	ZMK 9,000	ZMK 9,000	80.00%
Honey	kg	ZMK 1,200	ZMK 2,000	ZMK 2,500	108.30%
Groundnuts	kg, shelled	ZMK 950	ZMK 1,200	ZMK 1,400	47.40%
<b>New commodities introduced (for 2005) by CTC</b>					
Soybeans	kg			ZMK 1,000	
<b>Commodities not traded by CTC</b>					
Cotton	kg		ZMK 1,200		

A very significant source of help and influence on the success of COMACO is the use of donated maize from World Food Programme to engage farmers' time and interest to learn better farm production skills. COMACO offers households selected on the basis of verified food insecurity a one-year opportunity to receive three 50 kg bags of maize in exchange for meeting various conditions that will lead to increased food security. To receive the first bag, farmers learn and use improved farming practices, including conservation farming, composting to replace fertilizer, and crop rotation. Conditions for the second bag require beneficiaries to organize themselves into farmer producer groups, elect leaders, develop group by-laws, and prepare their fields using the farming skills they were taught. If group members see an improvement in food security and less need to depend on snares or illegal firearms, groups are asked to surrender these items to their respective depots. As farmers demonstrate their commitment to conservation farming in terms of regular weeding, beneficiaries receive their final bag of maize. COMACO oversees this whole process with a network of community-based trainers supported by extension staff who provide year-round supervision and technical assistance to farmer groups.

## Results

### 1. Food security

COMACO initially targeted in 2001 about 2500 households selected as food-insecure or unable to grow enough food to complete a farming cycle. By 2004 COMACO had expanded to cover about 25,000 km<sup>2</sup> with over 16,000 participating households (see Figure 4). COMACO interventions of leveraging households to learn and adopt better farming practices with provisioning of maize-food support from World Food Programme to households who complied achieved significantly improved food security (see Table 2). Among the participating households, 67% achieved food security their first year.

**Table 2. Compliance and food security results of the “food-for-better-farming” initiative**

Year	Total farmers per year	Total assessed per year	Total conservation farmers from those assessed	Total h/holds composting from those assessed	% food secure from those assessed	Total farmer groups cumulative
2001-02	2,434	1,584	961	0	30%	102
2002-03	5,574	2,697	2,176	1,899	68%	371
2003-04	8,621	2379	1,414	1,373	48%	862
2004-05	7,523	<i>Monitoring in progress</i>				1000+

### Impact on rice, groundnut and soybean production

Rice production among registered producer groups will increase by approximately 80% in the 2005 harvest season and the number of rice farmers participating in COMACO has increased by about 400 farmers. Yields for 2005 will likely exceed 400 tons. This increase is attributed to the increased producer price and increased availability of rice seed provided by the CTC. COMACO production of groundnuts into processed products (peanut butter and cooking oil) began in 2004 on a pilot scale to assess market potential and production techniques. Groundnut products will be marketed on a full scale in 2005 and will be a major source of added income for COMACO producers. 2005-2006 yields for groundnuts are expected to follow a similar trend as rice. Groundnuts grow best on well-drained plateau soils and offer farmers a favorable market alternative to cotton. Soybeans may prove to be an even more ideal crop for both plateau and valley areas and offers farmers a favorable alternative to cotton. COMACO provided soybean inputs to 1900 farmers in 2004 and yields will exceed 400 tons for 2005. Initial reaction toward soybean is favorable among first-year soybean growers, who recognized how much easier it was to grow a comparable harvest of soybeans as compared to cotton. COMACO is currently assessing the feasibility of processing soybeans into different commercial products (heps, milk and snacks) to help promote more widespread soybean farming as a basis for reclaiming degraded soils, protecting woodland cover, and increasing food security without dependence on fertilizers.

### Reliable markets, farmer groups, land use plans and field-day training at depots

Under COMACO rural farmers in Luangwa Valley are experiencing open access to market and farm production information through their respective depots. Most of these depots have HF radio contact with the trading centre to facilitate the dissemination of information on market prices and also allows farmer group leaders the opportunity to communicate with the trading centre on such issues market prices and marketing schedules for their area. This has created an increased sense of community ownership of their trading centre as a provider of trade benefits to their area. Also associated with each depot are community-based trainers supervised by a community coordinator and depot manager to provide easy access to extension help on a range of livelihood skills, such as honey production, chicken husbandry, vegetable gardening, and so forth. Depots are also sites for demonstrating best practices and sharing lessons and technical skills among farmer groups in the area. This is done on a regular basis through field days convened at the depot. Throughout these activities, COMACO maintains active discussion and linkage between efforts to improve rural livelihoods with local commitment

to adopt better land use practices, as guided by community land use plans and producer group by-laws.

## 2. Conservation Results

Aerial wildlife census surveys were flown in 1999, 2002 and 2004 over 7 sampling blocks, covering approximately 4500 km<sup>2</sup> of the project area along fixed transects at a sampling intensity of 19%. Species counted for assessing wildlife production were elephant, buffalo, kudu, zebra, eland, wildebeest, waterbuck, puku, hartebeest and roan. Survey results (Table 3 and Figures 1 and 2) showed an overall trend of population increase for 9 of the 10 species. Kudu, puku, elephant, zebra and buffalo had a more widespread increase across the project area with significant increases for more than half 7 sampling blocks sampled. Population increases in roan, hartebeest and eland were least representative of the area surveyed. The frequency of population increase for each sampling block, as measured for each species by a greater than a 20% increase in population estimate from 1999 to 2004, outnumbered population decline by a factor of 1.55. For species considered most abundant in 1999 and least sensitive to sampling area, occurrences of population increases outnumbered population decreases by a factor of 3 to 1.

**Table 3. Statistics of aerial survey census**

	Buffalo		Wildebeest		Elephant		Puku					
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
1999	4042	468.4	1820	173.0	1014	82.0	1256	131.4				
2002	3719	380.9	847	69.6	568	46.0	744	57.6				
2004	15104	1258.6	1596	101.7	2510	181.9	3652	179.7				
	Waterbuck		Zebra		Eland		Hartebeest		Roan		Kudu	
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
1999	40	13.3	400	26.6	89	10.6	85	9.6	5	1.3	55	9.4
2002	147	9.1	559	44.1	77	5.6	15	1.2	365	3.6	69	6.4
2004	514	52.3	781	59.7	687	89.5	260	24.1	912	56.9	619	31.9

Figure 1.

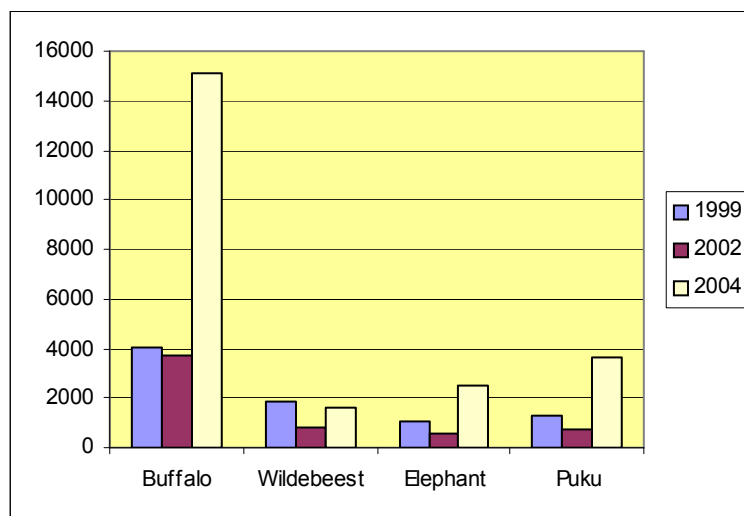
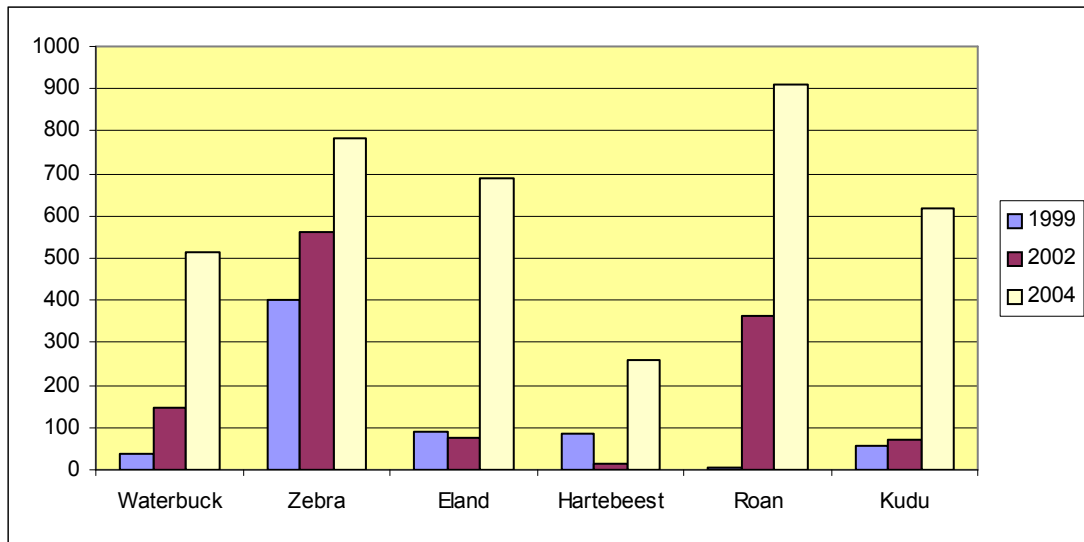


Figure 2.



During the period from 2001 and 2004, farmer groups participating in COMACO honored their agreement to surrender wire snares or illegal firearms in exchange for the assistance they received and as they became confident about their capacity to grow enough food to become food secure. Total number of snares and firearms surrendered by these groups were 32,492 and 493, respectively. This represented over 50 times the recovery rate of snares by conventional law enforcement efforts and a potential saving of over 3000 wild animals annually. Independently collected data on incidence of snares encountered by safari hunting clients and wildlife scouts while on patrol strongly suggested local farmers were not replacing the snares they had surrendered and that the use of snares in Luangwa Valley had declined in areas of COMACO interventions.

Additional potential impacts on conservation, not yet adequately studied, were reduced bush fires from the cessation of burning crop residues, a practice which increases the spread of bushfires from agricultural lands, and the reduction of tree cutting from the introduction of bee hives and increased market value of hive-produced honey. The large-scale introduction of soybean is designed to reduce tree clearing for new farmland and the benefits of enhancing soil fertility from soybeans allows farmers to practice crop rotation more successfully.

### Discussion

An underlying barrier to Zambia's long-term tourism growth and sustainability is land management that maintains the aesthetic quality of those areas, especially national parks tourists come to enjoy. Rural communities living around these areas provide an incredibly important influence on land management in terms of their land use practices, many of which are culturally driven while many are market-driven. COMACO is a rural development approach to conservation that tries to combine the two in a way that results in land use practices more acceptable to sustaining the needs of rural livelihoods as well as tourism. The experience from Luangwa Valley shows what a hugely disproportionately effect a relatively small number of poor, food insecure households can have on natural resource degradation, particularly wildlife. By targeting these households with interventions that address both food security and income

needs, it is possible to reduce these threats. COMACO has taken this approach an extra step by using a business model to help drive these interventions and in so doing, influence the behaviour of farmers to adopt better farming methods and land use practices. Investment levels in the COMACO approach are relatively small but investment returns in terms of threat reduction for sustained tourism development are impressive. These results suggest new and perhaps more cost-effective ways to invest in tourism and should be a serious consideration by major bi-lateral donors seeking to help Zambia promote its tourism industry.

One of the key lessons applicable to the Zambian situation is that the COMACO model does not lend itself to any single sector. The approach is very much multi-sectoral and cuts across many of the line ministries engaged with rural areas, including Ministries of Tourism, Environment and Natural Resources, Agriculture, Local Government, and Commerce and Industry. As an experimental model, local District Councils have facilitated the coordination of these different line ministries through their respective technical expertise represented at the District-level. Successful efforts by both Lundazi and Chama Districts to support COMACO and overcome many of its initial “start-up” problems signify an opportunity for District Councils to provide a critical role, in partnership with local NGOs, to help promote rural markets that reward food security and improved land use practices.

The COMACO model has a three-year track record as a pilot initiative based at the trading centre in Lundazi and has recently expanded its area of operations with two new trading centres, one in Mfuwe and the other in Luangwa (Feira). This expansion creates important opportunities for testing the general applicability of the model where variables such as human density, livelihood levels, and resource diversity and threat levels vary considerably. Continued development and monitoring of COMACO’s interventions will provide a helpful set of results and lessons to help formulate an improved basis for managing Zambia’s natural resources and securing Zambia’s tourism assets.

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