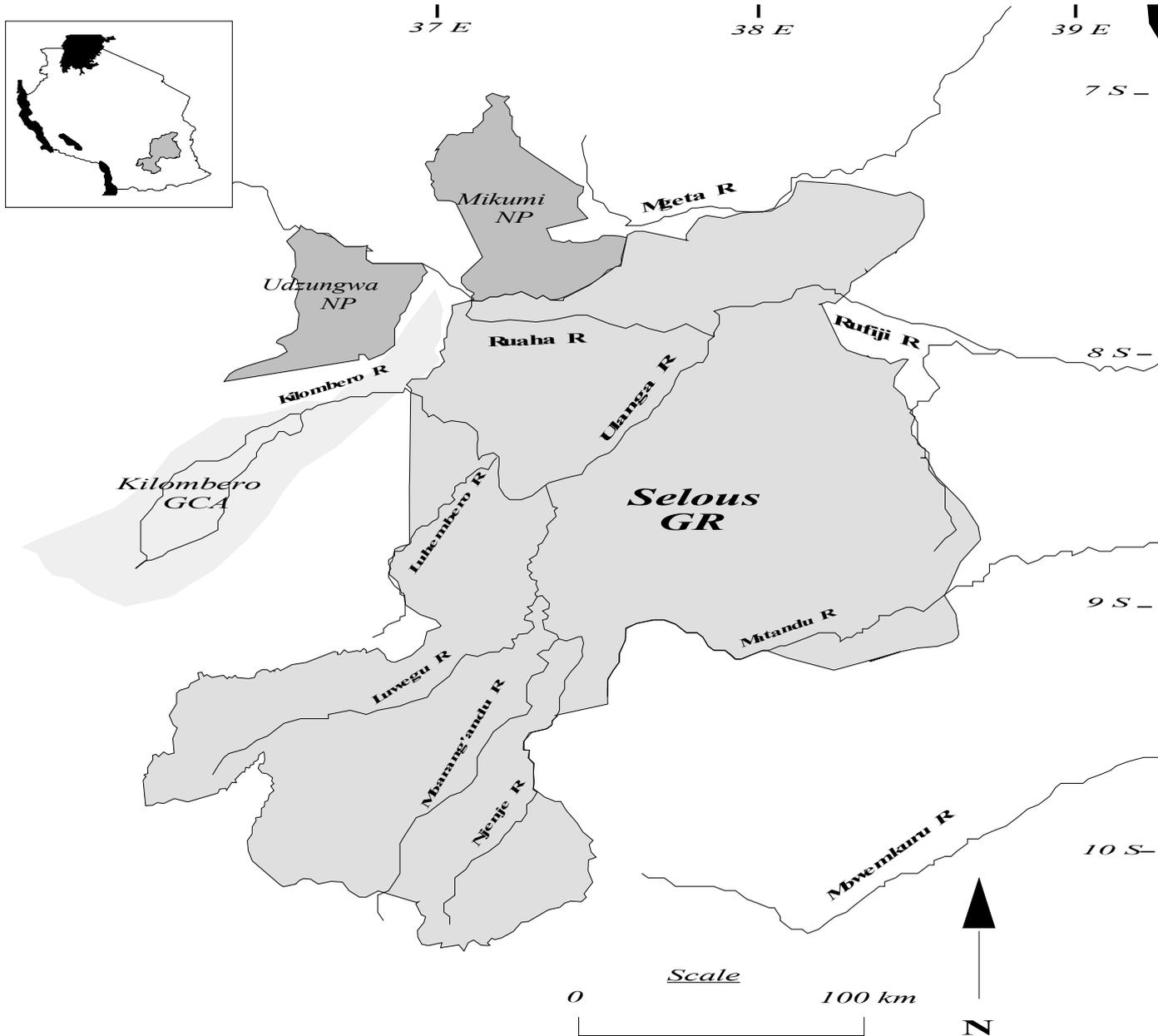


SCP DISCUSSION PAPER NO 21

Ludwig Siege (Ed.)

Financial Potential of the Selous Game Reserve and its Bufferzones

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Deutsche Gesellschaft fuer Technische Zusammenarbeit
Dar es Salaam 1996

This report summarizes the results of a review of the finances of the Selous Game Reserve and its surrounding bufferzones. The review was conducted in 1995 by Price Waterhouse Zimbabwe under contract of SCP with the intention of establishing the financial status of the Reserve and surrounding areas, and of the potential of these areas. The purpose of these exercises was to ascertain if, and how, the present financial status of these areas can be improved.

Some additions have been made by the editor to the original manuscript.

The results published in the Selous Discussion Papers do not necessarily reflect the position of the Wildlife Division Tanzania or the Selous Conservation Programme.

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Background

The Selous Game Reserve and surrounding areas constitute one of the largest continuous protected and undeveloped wildlife areas in the world. The Reserve is remote and inaccessible, due to poorly developed infrastructure. The roads both to and within the Reserve are poor, and many are impassable during the rainy season. A number of large rivers are impassable during significant parts of the year.

Government of Tanzania (GoT) efforts to rehabilitate the Selous Game Reserve have in the main been through, and in conjunction with, the Selous Conservation Programme. This is a donor-funded initiative, with the bulk of the funds and technical assistance coming from GTZ. The Selous Conservation Programme has concentrated on securing the financial self-sufficiency of the Reserve, upgrading the infrastructures within the Reserve, and strengthening the anti-poaching effort.

By far the most important "use" of the Reserve is made by commercial tourist hunting operations. There is also a small photographic tourism industry, which is in its infancy. A limited amount of harvesting for staff rations also takes place.

Funding of the Selous Game Reserve

Funding for management and conservation within the Selous comes from three main sources:

- Selous Game Reserve Retention Fund
- GoT budget support
- GTZ's Selous Conservation Programme.

The retention scheme is the vehicle through which it is intended the Reserve will become self-sufficient. The retention fund is entitled to keep 50% of all hunting revenues generated within the Reserve, as well as 100% of all tourism revenues generated (at least for the time being). The remaining portion of the hunting revenues are channeled either into GoT Treasury, or to the Tanzania Wildlife Protection Fund. Revenues retained in the SGR fund are then used to cover the various capital and recurrent costs involved in managing the Reserve.

Additional support comes from the GoT, in the form of salaries for Reserve staff. These are all paid through GoT budget allocations. Additional support in the form of firearms, ammunition and uniforms is also given.

GTZ's Selous Conservation Programme is the third source of funding support for the Reserve. Levels of funding vary from year-to-year.

Hunting Activities in the Selous

The Selous Game Reserve is presently divided into 47 blocks of which 45 are allocated to 17 hunting companies, including the parastatal TAWICO. The hunting in these blocks is sold to international tourist hunters, who are accompanied by professional hunters.

These hunting activities generate a variety of fees to Government, of which the most important are block, game and conservation or observer fees. During the 1994/95 financial year, these fees were potentially US\$1.6 million, with the result that the SGR RF was entitled to retentions of the order of US\$800 000. The operators in the Selous charge their clients a rate per day while on safari, and it is conservatively estimated that these incomes exceed US\$2.5 million per annum. The combination of the Government and the operator charges is such that hunting in the Selous is amongst the most expensive in Africa,

perhaps as much as 20% more expensive than in other parts of southern Africa. This price premium appears to be sustained by the vast size of the reserve, and the large hunting blocks, which is attractive to clients who wish to experience the feeling of hunting in a vast, uninhabited tract of Africa.

Hunting offtakes are regulated by quota. The present offtake quota, if 100% utilised, is worth US\$2.3 million in game fees to GoT. During the most recent hunting season, 33% by number, or 39% by value, of the quota was used, thereby theoretically realising approximately US\$900 000 in game fees. Analysis of quota offtakes suggests that numbers of animals being shot by these hunting operations are well within sustainable limits.

There appear to be two factors which limit the numbers of animals sold by the outfitters:

- a The short season, which is a function of the rains and the poor roads.
- b The marketing rules which restrict which animals may be sold on hunts of varying durations.

Analysis of options for increasing hunting revenues suggest that the two most obvious options are:

- a To increase the numbers of animals sold by the operators, and therefore the game fees to GoT.
- b To increase the block fees.

Analysis of the activities of existing hunting operators suggests that they are already selling the maximum number of animals possible under the above two constraints. They are doing this by selling multiple hunts, where more than one client is involved at any one time. Therefore, if the number of animals shot is to be increased, it will be necessary to either:

- a Remove the marketing restriction, and/or
- b Increase the number of operators.

The first of these options seems achievable, and should be implemented. The purpose of the regulation is to ensure that animals sold are cost-effectively used. However, given that operators earn their revenues from hunter-days sold, there is already an in-built incentive for them to maximise hunter-days. Therefore the need for the rule actually falls away. It is probably counter-productive anyway.

Increasing the number of operators is more complex, because it requires either increasing the number of available blocks (which in turn requires reducing the sizes of existing blocks), or reducing the number of blocks allocated to any one outfitter. Analysis of the efficiencies of the various operators shows that the larger operators (i.e. those holding large numbers of blocks) are the most efficient users of their quotas, which suggests that reducing block groupings might actually reduce quota efficiencies. At the same time, the state of knowledge of the ecology of the Selous, and of the effects of existing hunting activities, is low. This means that making changes to the existing blocks would probably be premature.

The option of increasing block fees to the operators is another obvious means to increase revenues to GoT. However, even here there are limitations. Comparison with other southern African countries suggest that GoT, as the landowner, is earning revenues equivalent to landowners in that part of the world. There are factors which render these numbers not strictly comparable, but nonetheless the point stands that total fees to Government probably cannot be increased significantly. At the same time, the system for

allocation of existing hunting blocks gives no recognition to the inherent potential of each block, and applies a flat block fee across them all. Allowing a more market force driven system to allocate and price hunting blocks would compensate for this latter weakness, and also probably force block fees upwards to their sustainable limits.

A further weakness of the system is the small percentage charged by the GoT upfront for the concessions. Only around 10 to 15 % are paid in advance by the outfitter, mostly in form of the block fee, the rest is paid as the hunting season proceeds. This means that the risk of the operation is placed on the Governments shoulders, because an operator failing to obtain clients is forfeiting only the small advance payment, whereas the GoT ends up with empty pockets, because there is no further income from the concession.

In other countries the quota is bought by the outfitter in advance, thus relieving Government from the risk.

Tourism in Selous Game Reserve

The tourism industry in the Selous is still in its infancy. Tourism operations are concentrated in the northern sector of the Selous, with much of the existing potential presently untapped.

The existing operations take place from seven private camps located in two blocks (B1 and Z1). An additional camp to be located in the west at Boma ya Ulanga is at an advanced stage of planning. These camps cater largely to foreign tourists. It is believed that investment in these camps runs at approximately US\$1.7 million, and that they are operating at approximately 15% bed occupancy overall.

The Reserve is (or should be) earning revenues of approximately US\$72 000 per annum in the form of conservation fees from these operations, as well as a further US\$124 000 in entry fees. Together with a variety of other smaller charges, total income to GoT from tourism in the Selous presently stands (or should stand) at US\$205 000. All these revenues are retained in the Selous Reserve Retention Fund. These revenues could increase dramatically, particularly in the long term, if, with increasing interest in wilderness tourism, greater bed utilisations in the existing camps were achieved and possibly if more camps were opened. However, realising both these goals will probably require improved quality in the form of the camps themselves, and in the form of the supporting infrastructures.

SGR Management Expenditures

As previously mentioned, expenditures on management and conservation of the Selous come mainly from three regular sources:

SGR management and conservation expenditures by agency in 1994/95

Funding Agency	\$ Value
Selous Game Reserve Retention Fund (income of 1993/94 minus overspending of 150 000)	282 000
Government of Tanzania	156 000
GTZ SCP	227 000
Total	665 000

There are no accurate estimates as to what these levels of expenditure "should" be. Nonetheless, a SCP progress review has suggested that a budget of US\$1.5 million per annum would be "adequate". This is more than double the existing levels of expenditure, and, if available, would certainly make a large difference:

Projected annual budget Selous Game Reserve after investment to necessary level:

Item:	Costs:	Depreciation and vehicle running costs:
Salaries: 300 times 380	105.5	
1. Allowances 21 days/scout/2400 Tsh	148	
2. fuel projected from present consumption	66.6	
3. Spares for maintenance projected from present consumption	81.5	
4. Vehicles:		
1 Landcruiser 18 (4)	121.5	45
1 Lorry 10 (6)	100	50
1 Grader 4 (8)	65	40
1 Motorbike 18 (3)	18	18
1 Tractor 7 (6)	35	17.5
1 Wheelloader 2 (8)	40	14
1 Generator 10 (10)	15	15
1 Boat engine 4 (4)	4	4
5. Construction and maintenance of buildings		
1 Houses 300 (20)		
1 Functional rooms 30 (20)	50	5
	1.5	.15
6. Field equipment		
1 Uniforms (1)	7.5	.75
1 Boots (1)	7.5	.75
1 Guns (20)	10	1
1 Ammunition	20	
1 Tents 70 (4)	4.5	
1 other	5	
7. Medical expenses	20	
8. Aviation gas	15	
9. Casual labourers	10	
10. Road maintenance without vehicle costs	40	
11. Patrol rations	15	
12. Servicing of aircraft	20	
13. Lubricants	30	
14. Miscellaneous	10	
15. Flight allowance	4	
17. Transfer cost	20	
18. Magazines and newspapers	5	
19. Stationary	5	
Training	50	
Radiocommunication	70	7
Total	1,438.25	218.15

Figures are given in US\$. The workforce is assumed to be 380, which is the present level. The introduction of IPCs for Rhino protection would require the employment of additional 200 scouts with the corresponding equipment.

The figures represent full depreciation on machinery, full allowances for the scouts and officers on duty as per Government regulation. Depreciation time of machinery is given in brackets. Salaries, presently paid directly by Government, are included.

The question of the accuracy of this budget is however largely academic due to funding

shortages, with the result that management and conservation activities will almost invariably be curtailed to those which are affordable under the funds available. Because of the funding shortfalls, the more important questions to answer are how to maximise the funds available to the management authority, and also how to make the most efficient use of those funds which are available.

Selous Game Reserve's Net Financial Position

It should be noted that providing precise illustrations of the Selous' finances is not possible, due to poor data, and also to non-comparability of data (brought about by the involvement of various different organisations, with different accounting years). Nonetheless, the table which follows illustrates the net position of the Selous and of its various funding agencies.

Theoretical net financial position of SGR and its principal funders in 1995

Funding Agency	US\$ Receipts	US\$ Expenditure	Net US\$ Position
SGR Retention Fund	1 021 272	431 667*	589 605
GoT Budget	at least 700 000	156 000	at least 544 000
TWPF	at least 203 851	0	at least 203 851
GTZ SCP	0	227 832	(227 832)
Overall Total	1 925 123	815 499	1 109 624

**includes over expenditure of US\$ 150 000*

Notwithstanding the reservations regarding accuracy of this data, it can safely be concluded that the Selous Game Reserve generates a great deal more income than is spent on managing it, and that the principal GoT agencies involved are significantly to the good. In fact, it appears that existing levels of activity should be resulting in revenues sufficient to cover the target expenditure of US\$1.5 million per annum discussed in the previous sub-section.

Financial Administration

As mentioned above, it was difficult to obtain accurate data in support of this review. This is a result of the fragmented (owing to the fact that a number of different institutions, all with different accounting systems and financial years, are involved) and unsuitable (in that they are the standard GoT systems, and were not designed to serve this purpose) government accounting systems for this task which exists at present. These shortcomings have also probably resulted in a situation where the Retention Fund has not received the revenues it "should" have. It is therefore necessary for financial administration systems relating to the Selous Game Reserve to be improved, to the point where:

- a It can be assured that all revenues due have been received.
- b Greater control can be exercised over levels of expenditure.

Given that the retention fund remains an integral component of GoT, and therefore continues to be subject to GoT accounting and auditing systems, it is probably not possible to institute radical changes. Therefore, the most obvious method by which to effect these

improvements is to introduce a "memorandum" accounting system which operates in parallel with existing accounting systems. This will however be inefficient and expensive, but is possibly warranted in view of the levels of revenue and expenditure. An alternative (at least from the perspective of revenue control) will be to route all hunting revenues through the Retention Fund first, before paying on the relevant shares to TWPF and Treasury.

Conclusions and Recommendations

A number of general conclusions arise:

- a The Selous is under-funded, which is undermining its long-term economic and conservation value. This is not necessary, as the Reserve presently generates more than sufficient income to fund itself, if the appropriate changes to institutional setup can be made.
- b There is significant potential for tourism in the Selous, particularly in the medium- and long-terms, and this potential will contribute to self-sufficiency.
- c Market forces should be allowed to be further involved in the process of allocating and pricing hunting blocks. This will force an increase in block fees, and the recognition of the differences in potential between blocks.
- d Many of the fees or charges presently levied are at their maximum, either in terms of what the operators, or the client, can bear. Therefore, with a few exceptions, improving the Selous' financial position can best be achieved through efficiency improvements, rather than fee increases.

The most important options for further improving the financial position of the Reserve, which emerge from the analysis, and which appear to be feasible, are:

- a To remove the restriction on the number of days hunting which must be sold when certain animals are shot.
- b Introduce additional hunting outfitters to the Selous to assist in selling a greater proportion of the quota. However, given that the marketing efficiency and ecological implications of such a change are not properly understood, this option should be delayed until much more information is available. This will require the introduction of appropriate monitoring systems in the meantime.
- c Assist tourist operators to increase bed utilisations in existing tourism operations.
- d Increase the share of hunting revenues which are kept in the SGR RF.
- e Ensure that management activities take place to maximum cost efficiency.
- f Maintain management and research at present (or at least close to) levels of activity, and resist temptation to expand them.
- g Delegate certain management authority to outfitters.

Action and Implementation Plan

A number of implementation actions are suggested as a result of the findings in this report. It is useful to collate the most important of these suggested actions in one place, and to identify their time horizons:

Action Required	Timing	Implementation Time-Span
1 Secure GoT agreement to increasing the SGR RF's share of hunting revenues generated in the Reserve (if possible).	Commence lobbying immediately	Possibly medium term
2 Resolve financial administration issues.	Immediate	Some months (at least)
3 Improve cost efficiency.	Immediate	Short, medium and long term
4 Allow market forces to determine allocation and pricing of hunting and tourism concessions.	Before 1997 season?	Immediate
5 Remove marketing restrictions on number of days hunting to be sold for each animal shot.	Medium term	Immediate
6 Facilitate other policy changes.	Commence lobbying immediately	Possibly medium term
7 Contain SGR management paradigms and research activities.	Medium term	Medium and long term
8 Delegate management responsibilities to outfitters.	Medium term	Medium and long term
9 Monitor block utilisations and distribution and density of hunting effort.	Medium term	Medium and long term
10 Review block sizes/boundaries and groupings.	Once (9) achieved to satisfaction <i>i.e.</i> certainly medium term	Long term
11 Stimulate improved quality of tourism operations.	Ongoing	Medium and long term
12 Stimulate additional tourism development.	Medium term	Medium and long term

FINANCIAL POTENTIAL OF THE SGR BUFFERZONES

GoT recognises that rural landholders are the best custodians of their natural resources, provided they have the right to use those natural resources, and to benefit from that use. This principle is embodied in the draft Policy for Wildlife Conservation and Utilisation, in terms of which it is GoT's intention to transfer much of the economic value of wildlife to rural communities. The draft policy recognises that security of tenure over land, together with the rights to use wildlife and other natural resources, are fundamental to implementing this policy.

At the present time, all monies arising from use of wildlife in rural areas are paid to GoT. Making any real progress in implementing this new philosophy therefore requires that the draft policy comes into force, and appropriate legislative changes made.

Community Wildlife Management Programme

These GoT principles are embodied in the GTZ sponsored Community Wildlife Programme,

which now involves 70 000 people living in 41 villages in five districts surrounding the Selous. Generally, these are villages which share common boundaries with the Selous, or with one of its contiguous protected areas. The programme is being implemented by regional and district authorities, but with extensive assistance from GTZ.

Wildlife Utilisation in Community Wildlife Management Areas

The most important wildlife utilisation activities currently taking place in the community wildlife management areas are:

a Village Quotas

Each village within the programme is allocated an offtake quota, which is then hunted, on behalf of the community, by the district game scouts. The meat is then sold amongst the villagers. These quotas are almost never fully utilised, for a variety of practical reasons. The cash involved in the purchase of this meat arises from sale of crops, and no "new" money circulates in the local economy.

b Sport Hunting

Sport hunting is conducted in the surrounding districts by both resident hunters, and international sport or trophy hunters. The former category is insignificant in financial terms, and is not considered further here. International sport or trophy hunting takes place in hunting blocks which are allocated and priced on exactly the same bases as in the Selous. All fees are paid to GoT, and the operators make no direct payment to the district councils or local communities other than some "voluntary contributions". At the present time, there is very little benefit to local communities from these activities, particularly when compared with revenues to GoT and the operators.

Some problem animal control is also conducted, which results in some meat for the rural communities. There is no photographic tourism taking place in the bufferzones at this time.

Revenues from CWMA Utilisation Activities

Options for improving the revenues to local communities from these utilisation activities are presently restricted owing to two factors:

- a The policy and legal environment discussed above.
- b The fact that many of these areas have limited scope for additional activities, certainly at the present time.

Conclusions and Recommendations

The most important options for generating income to these communities, and for maximising these incomes are:

a Sport Hunting

Sport hunting is potentially the major earner of revenues in the bufferzones, and it is believed that some of them could generate up to US\$40 000 per block per annum for surrounding communities. (Once the policy/legislative changes have been implemented.) The most important implementation actions in the short term appear to be:

- i To "twin" a bufferzone block with an SGR block, and then channel revenues from hunting in the bufferzone block through the SGR Retention Fund, back to the surrounding communities.

- ii To formalise the present "voluntary" contribution system to surrounding communities.
- iii To allow market forces to dictate in the allocation and pricing of hunting blocks.

b Photographic Tourism

The potential for photographic tourism is believed to be limited in most areas at the present time. The most obvious exception is Morogoro, which is believed to have longer term potential to generate incomes up to US\$36 000 per annum in the community.

c Meat Recovery

The great deal of meat arising from sport hunting operations in the Selous is presently wasted, for a variety of practical reasons. Given the nutritional status of the surrounding communities, this is a great pity. A number of options are suggested to make use of this meat.

d Cropping

It is possible that cropping of species such as hippo and zebra will generate additional revenues for the communities. However, these options should be investigated in detail on a case-by-case basis, as preliminary investigations have suggested that many such options are non-viable.