

# MID TERM REVIEW OF THE PROGRAMME OF THE DEVELOPMENT OF KAFUE NATIONAL PARK AS A MODEL OF SUSTAINABLE ECONOMIC USE AND BIODIVERSITY CONSERVATION IN A MANAGEMENT EXTENSIVE ENVIRONMENT: KAFUE NATIONAL PARK PROJECT

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MID TERM REVIEW  
OF  
THE PROGRAMME OF THE DEVELOPMENT OF KAFUE  
NATIONAL PARK AS A MODEL OF SUSTAINABLE  
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MANAGEMENT EXTENSIVE ENVIRONMENT

KAFUE NATIONAL PARK PROJECT

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## ABBREVIATIONS

AMU	Area Management Unit
AW	Area Warden
AWPB	Annual Work Plan and Budget
CAMU	Chunga Area Management Unit
CBNRM	Community Based Natural Resources Management
CIA	Chief Internal Auditor
EoI	Expression of interest
ERPP	Emergency Resource Protection Project
GEF	Global Environmental Fund
GEO	Global Environment Objective
GMAs	Game Management Areas
HQ	Head Quarter
IA	Internal auditor
IDA	International Development Association
KNP	Kafue National Park
MTC	Management Tender Committee
MTENR	Ministry of Tourism, Environment and Natural Resources
NAMU	Ngoma Area Management Unit
PCU	Project Coordination Unit
PDO	Project Development Objective
PIU	Project Implementation Unit
PM	Park manager
PMS	Plant and Maintenance Supervisor
RDA	Road Development Agency
RM	Regional Manager
RPF	Request for proposal
SEED	Support for Economic Expansion and Diversification
SLNP	South Luangwa National Park
SP	Strategic Plan
SWPO	Senior Wildlife Police Officer
WB	World Bank
WPO	Wildlife Police Officer
ZAWA	Zambia Wildlife Authority
ZNTB	Zambia National Tender Board

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## 1. SUMMARY: CONCLUSIONS AND RECOMMENDATIONS

### 1.1. Current Status of Project Budget, Progress to Date and Observations

In 2004 Norway and the World Bank agreed to join forces to support ZAWA and Kafue National Park (KNP) through the present Project under the SEED project. Quoting from the Prodoc the goal is

“The loss of biodiversity in KNP and its surrounding GMAs is reversed and sustainable tourism developed.”

and the **purpose** is

“Critical habitat and species secured in the park and surrounding GMAs through improved management, infrastructure and tourism development.”

To achieve the goal and purpose stated above, the Project has identified six Components: 1. Park Management and administration, 2. Infrastructure development, 3. Resource Protection, 4. Wildlife Research and Monitoring, 5. Community Based Natural Resource Management, and 6. Economic potential and role of KNP (Tourism Development).

The starting date of the Project is January 2005. The total budget was US\$ 22.193.249 of which US\$ 9.597.490 was to be disbursed during the first two years. At this stage it must be highlighted that the AWP's were overambitious and implementation fell far short of this target. The table below shows comparison of planned versus actual disbursement for each of the components.

	Prodoc Total	Revised Total	Planned 2005 - 2006	Disbursement 2005 - 2006	Utilisation to date %	Balance 2007 - 2009
Comp 1	4 048 182	5 175 800	1 840 627	1 622 700	88,2 %	3 553 100
Comp 2	8 675 066	11 124 700	3 659 460	596 800	16,3 %	10 527 900
Comp 3	8 077 947	5 364 100	3 301 040	2 103 300	63,7 %	3 260 800
Comp 4	512 054	479 800	305 763	251 100	82,1 %	228 700
Comp 5	710 000	386 100	372 000	96 100	25,8 %	290 000
Comp 6	170 000	335 100	118 600	79 600	67,1 %	255 500
Total	22 193 249	22 865 600	9 597 490	4 749 600	49,5 %	18 116 000

The table shows:

- The total budget is practically the same, but there has been a reallocation between the components
- The budgets have been substantially increased for three components (component 1, 2 and 6), while the budgets for the components 3 and 5 have been substantially reduced and for component 4 there has been a slight reduction.
- Of the planned expenditures for the two first years only 49,5 % has been disbursed, and this represents only 20,8 % of the total budget.
- The major shortcoming in the first two years is the non performance in the components 2 and 5.

## Component 1 Park Management and Administration

	Prodoc Total	Revised Total	Planned 2005 - 2006	Disbursement 2005 - 2006	Utilisation to date %	Balance 2007 - 2009
Comp 1	4 048 182	5 175 800	1 840 627	1 622 700	88,2 %	3 553 100

Component 1 budget has been increased from US\$ 4,048,182 to US\$ 5,175,800. The disbursement to date stands at 31, 4 % of the revised total budget, which suggests that there is sufficient funds to complete the targets of this component. However, examination of the different activity budget items in the Cost tab suggests that several of these appear to be overestimated (for instance activity 1.2.4 training 100 WPOs per year for three years at US\$ 929.000 and activity 1.2.9 training engineers in civil works for US\$ 45.000<sup>1</sup>), as well as including activities that are unrelated to the Project (US\$57,400 to review the Draft ZAWA Strategic plan for example) and should be reviewed.

All the activities necessary to mobilise the Project have been implemented (procurement of office equipment, recruitment of staff, and undertaking review missions), although the new financial management system is still to be adopted. Only a few of the planned training activities have been implemented.

## Component 2 Infrastructure Development

	Prodoc Total	Revised Total	Planned 2005 - 2006	Disbursement 2005 - 2006	Utilisation to date %	Balance 2007 - 2009
Comp 2	8 675 066	11 124 700	3 659 460	596 800	16,3 %	10 527 900

The primary factor underlying the poor performance of this component to date has been the long delay in procurement procedures, which in turn has led to long lead-in times for the civil works contracts as well as delayed delivery time for construction equipment – some of which has not even yet been delivered. A contributory factor to the poor procurement performance was the lack of capacity of the park management staff, in particular the Plant Maintenance Supervisors (PMS), in preparing ToRs for infrastructure projects. While the lack of suitable equipment has clearly directly hindered progress on road and track maintenance, the delay in initiating housing renovation contracts is less excusable.

There is a considerable increase in the budget for the infrastructure component in relation to that estimated in the Project document. The net increase is approximately US\$ 2,450,000. This is the result of a major re-design of the road network. For example:

- The rehabilitation of the northern sector of the Spinal Road (Chunga-Lufupa-Moshi) is included in the budget. In the Prodoc this was assumed to be funded through ROADSIP II and was not therefore included in the Project budget.
- In addition some access and secondary roads (including some sections of the boundary roads which have been reclassified) have been earmarked for upgrading, and also
- The budget for engineering services has been substantially increased.

On the other hand the interventions on most sections of the boundary roads, and game viewing roads have been down graded to merely annual grading. The combined result of these changes is a net increase in the component budget.



While some progress has now been achieved on rehabilitation of staff houses, very little progress has been made with permanent works on the road infrastructure – the latter principally due, as stated above, to lack of equipment.

A brief summary of the main infrastructure activities undertaken follows:

At Chunga AMU, three contracts for the rehabilitation of junior staff houses and one contract for the rehabilitation of the WPO Training School are ongoing at the time of the review mission. Rehabilitation of the rangers' house, 6 junior staff houses and an office block at Nalusanga has also been completed.

Minor works such as repairs to wooden decking on bridge on the Lufupa River at Moshi were completed in 2006.

The seasonal grading of the M9-Lufupa road has been undertaken independently of the Chunga AMU, while the grading of the game viewing tracks around Chunga have been carried out by the Mukambi Lodge operator but with fuel supplied by the Chunga AMU.

At Ngoma, two contracts for the rehabilitation of senior staff housing have commenced in late 2006. A bridge on the Nkala River at Ngoma has been built to replace the old vented causeway, which was in need of repair. This was overtopped in a flood in January and the approach embankment has been breached. Access to Ngoma has been temporarily secured and preparations are being made to undertake permanent remedial works.

Other minor road maintenance works including the use of a locally made drag grader have been undertaken by Ngoma AMU using a towed grader on local roads in the Ngoma area in 2006.

A number of other tasks have been carried out such as drilling of six boreholes, installation of 65 KVA generating set at Chunga, new 22,000lt fuel tank at Chunga in place, signs have been made and a few planted.

Procurement for additional housing rehabilitation contracts is continuing in 2007, while the procurement for the consultancy for the design and construction of new staff houses and office blocks and gates, as well as that for the design of the North Spinal Road, and other boundary and secondary roads is in hand.

Some maintenance and construction equipment has been procured at this stage. Additional essential equipment e.g. tractor and tipping trailer, are yet to be delivered. Until then the equipment cannot effectively be put to use.

### **Component 3 Resource Protection**

	Prodoc Total	Revised Total	Planned 2005 - 2006	Disbursement 2005 - 2006	Utilisation to date %	Balance 2007 - 2009
Comp 3	8 077 947	5 364 100	3 301 040	2 103 300	63,7 %	3 260 800

The budget for this component has been reduced by approximately three million, probably as a result of moving the training activities to Component 1, and reducing the procurement of patrol equipment. However, the 2006 Annual Report indicates that this component budget was overspent by US\$ 221,165. At this rate of expenditure the remaining budget may not be sufficient if the WPO force is increased over the next two years as indicated in the AWP.

Both AMUs have been able to deploy the WPOs to achieve near maximum patrol days in KNP. The Project has also been able to facilitate the coverage of the GMAs. Practically all equipment (vehicles, communications, and patrol gear) has been procured and as a result the patrol groups are now in the position to patrol extensively throughout the park. The resource protection data have been captured and analysed to show coverage, arrests and frequency of deployment.

Only limited training and recruitment of WPOs, investigation and prosecution staff have taken place.

No progress has been made on boundary demarcation because it was established that this is the mandate of the Surveyor General. However we believe that there is no reason why this task cannot be subcontracted to a competent licensed land surveyor to re-establish the beacons, since the coordinates are known.

#### **Component 4 Wildlife Research and Monitoring**

	Prodoc Total	Revised Total	Planned 2005 - 2006	Disbursement 2005 - 2006	Utilisation to date %	Balance 2007 - 2009
Comp 4	512 054	479 800	305 763	251 100	82,1 %	228 700

This component has undertaken most of the planned activities but with mixed results. Expenditures have covered consultancy studies and completing the aerial survey. However, a problem exists with the technical quality of two consultancy studies (fire and fish). The draft reports for these two consultancies have been rejected, and the consultants asked to substantially improve the documents by addressing the ToR. Had these studies been fully paid for, the budget would have been overdrawn by approximately 5 %.

The major achievement under this component is the MoU prepared with the University of Zambia, and the drafting of the Ecological Research and Monitoring Program for the Park and GMAs. Monitoring of the law enforcement program and tourism and hunting activities has taken place. The aerial survey has been successfully conducted and the report produced.

#### **Component 5 Community Based Natural Resource Management**

	Prodoc Total	Revised Total	Planned 2005 - 2006	Disbursement 2005 - 2006	Utilisation to date %	Balance 2007 - 2009
Comp 5	710 000	386 100	372 000	96 100	25,8 %	290 000

The budget for this component has been reduced by 45 %. Had the original budget been maintained, the Project would probably have been able to implement land use planning activities in all the remaining GMAs.

One of the three objectives (“To develop co-management agreements with traditional fisher folk in the Park and it’s surrounding GMAs”) has not been addressed. However, with limited amount of funds used, it seems that they have been spent efficiently. With a view to the future, though, it seems that some of the budget items may be somewhat overestimated and should be monitored carefully to ensure efficient use of the funds (for instance 5.1.11 to 5.1.13)

Judging from the meeting with the two CRBs and to the extent that they are representative, Project results within this component so far are encouraging, both regarding effectiveness and impact. The same observation applies to relevance, which for this component is unquestionable.

In all the nine GMAs the CRBs have been trained in basic skills in running GMA management. Land use planning has been initiated in selected GMAs. It shows good technical quality of the methodology and the processes applied. However, questions of enforcement and institutional anchoring remain to be issues to be addressed.

### **Component 6 Economic Potential and Role of KNP (Tourism Development)**

	Prodoc Total	Revised Total	Planned 2005 - 2006	Disbursement 2005 - 2006	Utilisation to date %	Balance 2007 - 2009
Comp 6	170 000	335 100	118 600	79 600	67,1 %	255 500

The budget for this component has been doubled to pick up the anticipated cost to prepare the KNP Business Plan. The bulk of the disbursement so far is related to the purchase of two vehicles, revenue collection and the feasibility study of the Tourism Block Concession in the park.

The main area of focus in this component is the allocation of concession agreements for lodges and camps within the park. Of the nine sites for which concessions were given prior to Project inception only three appear to be active and two of which are operational in some degree.

A further five sites were advertised in 2005, but there were no takers. In 2006 four of these were re-advertised together with a fifth site. Also Wilderness Safaris took over the operation of existing lodges and camps in the northern sector. And two sites on the south west of Lake Itezhi-Tezhi were occupied.

A number of studies have been planned such as Tourism Impact Study, Design of Tourism Monitoring System. ToRs for these have been prepared by the park Management and passed on the ZAWA HQ, but at present no further action has been taken. The business Plan for KNP has also not been undertaken as yet.

The only other significant achievements under this component are the commissioning of the block concession consultancy, for which the report is due in April 2007. Revenue collection is taking place in some of the tourist lodges, for example there is a revenue collector permanently stationed at Mukambi. Concurrently with this activity Tour Operators are being monitored for compliance with their TCAs.

Clearly the taking up of tourism concessions is not proceeding as rapidly as hoped. It is probable that attraction of the investments is being affected by the lack of road infrastructure, together with the uncertainty of future demands on the investors such as having to undertake road maintenance and possibly resource protection activities. These issues need to be made very clear to potential investors at the outset.

## **1.2. Issues and Challenges at Midterm**

### ***1.2.1. Overall Project structure and management***

The Project does not have a clearly defined leader who is ultimately accountable for all matters pertaining to the planning, implementation and overall management of the Project. This has been to the detriment of Project implementation and financial management.

The Prodoc states that the Project will be headed by the Regional Manager. Nevertheless, there are ambiguities in the Project document regarding the overall structure and lines of authority. In interviews, stakeholders have expressed contradicting understandings of both structure and authority. The consequence of this is that in actual practice on the ground the organisational command structure is ill defined throughout the Project.

There have been two deviations from the Prodoc. The first is that Area Wardens have been appointed in each of the AMUs to understudy the Park Managers. Although it is clear the Park Managers have the full authority and responsibility to run the AMUs, this has not been easily accepted by the Area Warden in Ngoma AMU.

The second deviation is that the Procurement Specialist at HQ has also been appointed Head of the Procurement Unit. In order to remedy shortcomings and speed up slow procurements the Project had to recruit a consultant procurement specialist.

There have been several resignations and transfers of senior ZAWA staff associated with the Project. There has also been a major change in the organizational structure of ZAWA HQ midway through the Project period.

The Park Managers recruited for the Project have different management styles and well defined strengths in different fields. This has resulted in the respective AMUs achieving different results.

The SEED refocusing that resulted in Mosi-oa-Tunya (MNP) project being closed down has meant that the structure and personnel at HQ, put in place for the purpose of catering to both projects, is no longer valid. The impact of this is that there is a surplus of Project procurement and accounting staff at HQ level.

### ***1.2.2. Planning, budgeting and reporting***

The process for planning and producing the budgets is adequate. However, there appears to be a problem of overestimating quantities and associated unit costs, as well as including activities that are unrelated to the Project

Project reporting on activities and their relations to outputs in the Log frame is quite good. However, there is scope to improve the information provided in the Annual Report to make it a comprehensive document on the total status of the Project. Apart from baseline data on the financial status, staffing levels and routine management and supervisory activities, the Report would also be enhanced if each AMU's activities and results were reported on separately before consolidation. This would facilitate the performance evaluation of each AMU.

### ***1.2.3. Procurement***

While the performance on procurement was lamentable in the early stage of the Project, most major procurements are now completed or in hand. The major challenge now is to sustain the momentum. There seems to be an issue that not all the three people recruited by the Project for procurement may be needed in the future.

### ***1.2.4. Financial management***

There has been a general improvement in the financial management and control of funds as opposed to the initial stages of the Project. To date a number of operational and financial weaknesses have been resolved or are in the process of being resolved.

The major financial management issue is to discipline all staff in the issuance and retirement of imprest.

There have been instances of accountable documents going missing that could potentially lead to mismanagement and acts of fraud. This also calls for the provision of safes in all revenue collecting areas and some offices where safes are not available.

There have been serious cases of misappropriations of funds where ZAWA had to take action by dismissing staff. Although the procedures and control mechanisms are in place, there is a need to maintain and even strengthen vigilance to prevent the recurrence of any financial misdemeanour. Tight control on direct shopping needs to be enhanced.

On large procurement contracts there is always room for corrupt practices, for example in the award, supervision and certification of infrastructure contracts. Therefore there is need to institute checks and balances in the system, for example by having a senior officer at higher level with experience of engineering contract administration who can monitor and advise on the technical issues relating to tender evaluation.

At field level the scope for corruption is low because wild life officers operate in groups. However, there is scope for collusion in the patrol effort not being done effectively and therefore at high cost to the Project. At the GMA the only real opportunity for corruption is for the WPO or Village Scouts turning a blind eye to not reporting animals that are wounded or hunters exceeding the quota.

At national level there is ample room for manipulation of concessions, tenders and misappropriation of donor fund. We have not come across any evidence that would indicate such activities in relation to this Project.

### ***1.2.5. Capacity and motivation to implement the Project***

The capacity of ZAWA staff to implement the Project varies between the components. The AMU staff is capable of carrying out components 1 and 3, but have limited capacity to carry out components 4 and 5. Regarding component 2 this comprises the design and management of civil works contracts as well as implementation of routine road maintenance and building maintenance. The current cadre of ZAWA staff, in particular, judging on performance to date, the PMSs have little experience or competence in these matters. The activities under component 6 require economic and business analysis skills, which need to be outsourced.

The lack of motivation at different levels is a major concern and is detrimental to the success of the Project. The salary differential introduced by the Project is a contributory factor. Nevertheless, despite the improved work and living environment brought about by the Project, e.g. improved housing, work tools, equipment, communication, and transport etc., motivation to ensure the success of the Project remains low.

#### ***1.2.6. Infrastructure Issues***

While the implementation of internal road infrastructure is under the control of the Project Management, and progress on this component can be expected to pick up over the coming years, the external access road infrastructure remains outside the influence of the Project. The condition of these external access roads obviously has a major impact on the effectiveness of the new internal road infrastructure as well as on the efficiency of the park management. It was implied in the Prodoc that investment in these access roads would run in parallel with the internal road infrastructure.

The economic feasibility of the proposed south Spinal Road (Chunga –M9) is predicated on improvements to both the southern access road (Kalomo-Dundumwezi-Itezhi-Tezhi) and to the Itezhi-Tezhi – M9 access road<sup>2</sup>. The latter road in particular, in its present state is a serious deterrent to visitors to Itezhi-Tezhi and the KNP. As stated in Section 5.1.3 there appears to be no plan for improvement works to be undertaken in the near future.

A feasibility study has been carried out in conjunction with that of Kalomo-Itezhi-Tezhi and we are given to understand by the RDA that the economics indicated that a gravel surfaced road only could be justified. We find this surprising and would have expected that, considering the tourism potential of the lake and Park together with the proposed Hydro electric development at Itezhi-Tezhi that upgrading to a Class1C bituminous surfaced road could be justified. There is already an existing road pavement which can be built on.

The rehabilitation/upgrading of the D769 therefore should be considered a priority as delay in doing so will reduce the effectiveness of the infrastructure works being undertaken in the southern sector of the park. It would also undoubtedly reduce the incentive for tourism investment. Because of the fact that this road was once tarred and has a remnant cement stabilised gravel base which is very hard, grading is difficult expensive and not very effective. So periodic grading is not particularly effective. This is further justification for carrying out improvements to this road as soon as possible.

Not enough attention has been paid to the north section of the Spinal Road (M9-Lufupa – Busanga Plain). It has got submerged in the backlog of infrastructure procurement issues and is only now being attended to albeit as part of a package of road rehabilitation projects. This is a key road in KNP and should be given priority attention.

As at presently designed the rehabilitation of the road infrastructure will greatly improve accessibility to the tourist lodges in the park and will help to extend the tourist season. It will have only a limited effect on improving the quality of the tourism product however, because during the rain season access to game viewing areas in the vicinity of the lodges may still remain restricted. This will reduce the attraction of an extended tourist season in the Park.

This can be remedied by upgrading game viewing roads by means of drainage improvement and gravelling selected sections.

It is observed that the design for the south section of the Spinal Road consists of a 150mm gravel base and sub base totaling 300mm in all. This is a substantial pavement structure taking into consideration the expected density and class of traffic predicted. Consideration should be given to reducing the pavement thickness and investing the savings on improvements to secondary and game viewing roads.

### **1.3. Overall Assessment / Evaluation Criteria**

- **Efficiency**

A wide range of resources has been made available for this Project. To date the outputs have been limited and hence the overall efficiency so far has been rather low. Regarding component 1, where disbursement has been high, greater efficiency could have been achieved if the Park Managers and one of the PMS had been permanently accommodated at the AMU, rather than the current situation where a great deal of travelling time and unnecessary fuel usage is incurred. Regarding component 3 the Project has been good at deploying the patrols. However, although it has registered some success in curtailing illegal activities, this seems to have been achieved at a high cost. There seems to be scope for improving the overall efficiency of operating in the field, the question being – can you do more for less?

In the case of selected technical consultancy studies, the poor quality of work has meant that other activities reliant on these studies have had to be delayed. Additional costs will be incurred to complete the studies and the subsequent delays will impede the progress of some components.

- **Effectiveness**

Regarding effectiveness, component 1 has improved the ability of ZAWA to administer and manage KNP and surrounding GMAs.

Component 3 has shown some effectiveness in decreasing poaching; resulting in reported localized increases in wildlife sightings.

Under component 4 the provision of equipment (computers etc) has enabled the AMU ecologists to undertake analysis of baseline data.

However, the effectiveness of different outputs has been hampered by slow delivery and the achievement of the overall Project set objectives will only be determined at the Project implementation.

- **Impact**

Compared to the pre Project situation (2004) there is no doubt that the Project, in spite of its shortcomings, has improved the capacity of ZAWA to manage the Park. However, it is difficult to measure any significant impacts, given the short period of two years. It is expected that with the imminent arrival of the remaining plant and equipment some impact will result from improved maintenance of existing tracks. The fulfilment of the road rehabilitation contracts will of course provide a major impact, but this will not be felt for at least 12 months. However, the effectiveness and impact of the Project may not be fully realized until the supporting road infrastructure giving access to the park is implemented e.g.

the improvement of the southern access road Kalomo-Dundumwezi and improvement to the D769 (M9-Itezhi-Tezhi).

- **Relevance**

The relevance of this Project is addressed and confirmed in the Appraisal Report and remains fully valid.

- **Sustainability**

This Project will not ensure economic sustainability of KNP in the foreseeable future. Whether and how sustainability may be achieved will need to be addressed in the KNP Business Plan.

## **1.4. Recommendations**

### **1.4.1. Components**

The Team is of the opinion that the content of the components remain valid and should not be subject to major changes, although with some modifications:

#### **Component 1: Park Management and Administration**

Recommendation 1: The budgeting needs to be more focused on Project operations in the field applying the most realistic costings. It must be ensured that funds are Project related, in particular when funds are to be spent at HQ.

Recommendation 2: Following the SEED refocusing the need for technical assistance personnel at HQ must be reassessed so that this responds adequately and efficiently to the present needs of the Project.

Recommendation 3: Although topping up of salaries for selected ZAWA staff has not been implemented, this should be avoided since this would impact on the sustainability of the Park in the future.

Recommendation 4: In order to improve the sustainability of the Project, donors and ZAWA should come to an arrangement on the scale of allowances paid to staff undertaking their normal functions.

Recommendation 5: In view of the various modifications introduced, the original Log Frame matrix should be revised

Recommendation 6: An extensive external audit should be undertaken in the Parks. Special attention should be given to:

- Utilisation of rations
- Consumption of fuel
- Issuance of imprest and subsistence allowance
- Revenue collection
- Handling of accountable documents such as entry permits, fish permits fees, license fees etc
- Award of all types of contracts
- Certification of works contracts payments
- Reconciliation of bonuses paid to WPOs



- Reconciliation of disbursement of funds in the various components

## **Component 2: Infrastructure Development**

Recommendation 7: Fast track the upgrading of the Chunga – Lufupa – Moshi road as part of the Spinal Road. The road pavement should be designed as an all weather gravel road. Only the watercourse crossings should be designed with limited access where economics dictate with the proviso that delays should not exceed four hours.

Recommendation 8: All the contract documents relating to the housing rehabilitation contracts and the administration thereof must be supervised meticulously, in order to ensure a high standard of contract design and administration which will in turn guarantee good value for money.

Recommendation 9: Game viewing loop roads should be upgraded by means of light gravelling on selected sections in order to extend the game viewing season. It is recommended that an enhanced maintenance unit under the new organisational structure, be considered to carry out this task.

## **Component 3: Resource Protection**

Recommendation 10: The strategy to increase the WPO force should be put on hold until the existing patrol force is operating at maximum efficiency, and alternative patrolling methods implemented (e.g. 7-day patrols vs. 10-day patrols).

Recommendation 11: Monitoring of patrol force activities in the field should be improved through the use of regular aircraft surveillance and routine field checks by the Ranger/Area Warden/Park Manager.

Recommendation 12: Gaps in the radio communication coverage should be resolved by relocating and/or installing new repeaters. Acquire additional hand held radios and batteries to allow more frequent contact between senior staff and patrols in the field.

Recommendation 13: Priority must be given to sorting out all issues pertaining to fishing in the Park.

## **Component 4: Wildlife Research and Monitoring**

Recommendation 14: The ecologists in the Park need to be provided with funding for fuel, transport etc to undertake routine ecological research activities as well specific research programmes identified under the Draft Research Programme.

Recommendation 15: The research program should be management driven.

Recommendation 16: The Project should provide greater mentoring of the ecologists and their technical assistants to enhance their motivation.

Recommendation 17 As a matter of urgency the two rejected consultancies (fire and fish) need to be completed to the satisfaction of the Project at no additional

cost. Closer supervision of on-going technical consultancies is introduced to avoid a similar situation developing in future.

#### **Component 5: Community Based Natural Resource Management**

Recommendation 18 The budget should be revised in order to allow for land use planning (including baseline surveys) in all remaining GMAs similar to the one being finalised in Nkala.

#### **Component 6: Economic Potential and Role of KNP (Tourism Development)**

Recommendation 19: The sustainability of the KNP is in question. Therefore it is imperative that the Business Plan and the separate Tourism Impact Study are undertaken without delay. It is understood that the ToRs for the latter have already been prepared at park level.

Recommendation 20 The allocation of Concession Agreements for tourist activities in the park and GMA are central to encouraging and developing Public/Private Sector partnerships. Efforts at marketing these concessions need to be renewed and if necessary professional marketing firms should be employed for this purpose. The impetus for this activity should come from ZAWA HQ.

#### ***1.4.2. Financial management***

Recommendation 21 A deadline should be set for immediate recovery of all unretired imprest and all monies credited to Project account. Strict rules should be enforced on the retirement of imprest and issuance of subsistence allowances.

Recommendation 22 Adequate safes for safeguarding of valuables and cash must be installed.

#### ***1.4.3. Overall structure and management***

The present organisational structure has major shortcomings that are detrimental to Project implementation. Unless this is redesigned it is unlikely that the Project will achieve its objectives.

The design of the structure needs to take into consideration the long term perspective to manage KNP after the completion of the Project.

It is the ambition of ZAWA that the capacities of Area Wardens to manage the AMU should be strengthened through the Project and that the Area Wardens is given greater autonomy as their capacity increases. This review recognizes that there has been a transfer of skills through the support of the Park Managers. It is the view of the Team that this process should be maintained, but the modality modified.

It is our strong recommendation that a competent Project Management Team is established at the Regional Office, and that the Regional Manager is recognized as the substantive Project

Manager who is fully accountable and responsible for all aspects of Project implementation. The Regional Office must be strengthened to enable him to fulfil this mandate.

The following organisational structure as illustrated in Figure 1.1 is proposed and is in line with ZAWAs policies on decentralisation:

**The Project Management Team** at the Regional Office will consist of:

- The Regional Manager also called the “Project Manager”
- Park Manager – Research and CBNRM
- Park Manager – Resource Protection and Infrastructure
- Park Accountant
- Procurement Specialist
- Technical Assistant Infrastructure

The line of authority between the Management Team and HQ is through the Regional Manager to the Directorate of Conservation and Management. However, lines of communication may be directly to the other directorates and units.

The DG, together with the Heads of the various ZAWA Directorates, will approve the annual work program and budgets and review Project progress.

With the Management Team in place there will be no more need for special Project positions at HQ such as Project Accountant and Procurement Specialists. Furthermore, with the Technical Assistance (infrastructure) in the Management Team there will be no need for the position of PMS at the AMU level, who can be replaced with infrastructure foremen (see below). The fact that the PMS at Chunga has resigned and is about to leave will facilitate this process while the PMS Ngoma can be phased out at the end of his contract

**The Regional Manager** will be the “Project Manager” with full responsibility and authority for the planning and implementation of all aspects of the Project and have specific responsibility for implementation of component 1 and coordinating the activities under component 6, particularly the completion of the business plan. All Management Team members will report to the Regional Manager.

**Park Manager – Research and CBNRM**, will be responsible for the coordination, planning and implementing of components 4 and 5. He will mentor the officers under his command, viz. the ecologists and the extension officer. He will also be responsible for coordinating strategic planning for KNP and associated GMAs.

**Park Manager – Resource Protection and Infrastructure**, will be responsible for the coordination, planning and implementing of components 2 and 3. He will mentor the Area Wardens, particularly in relation to infrastructure as well as the Infrastructure Foremen, fire management and boundary demarcation issues. He will also oversee resource protection activities.

**Park Accountant** will be responsible for the financial management of revenues, expenditures and budget control in line with ZAWA financial management system. With this position at the Regional Office there will no longer be a need for a Project Accountant at HQ.

**Procurement Specialist** will be responsible for preparing and updating the procurement plan in conjunction with Project Management Team. He will also be responsible for preparing the bidding documents for the procurement of goods, works and services. It is envisaged that the work load will gradually decrease and that this function will eventually be fulfilled by the Procurement Unit at HQ.

**Technical Assistant Infrastructure** will provide technical back up and advice to the Park Management Team in relation to all matters pertaining to infrastructure such as roads and tracks, bridges, buildings, airfields, jetties. He will be a qualified and experienced engineer with a general background in civil engineering project design and supervision, procurement, contract documentation and contract management. He will, through the PM (Resource Protection and Infrastructure), mentor the Infrastructure Technicians/Foremen. He will liaise with and monitor the architectural/engineering consultants employed for specific projects on behalf of ZAWA. He will report through the PM (RPI) to the Regional Manager. This is not envisaged as a fulltime position and will be phased out as the Project matures. The assignment of this Technical Assistance will preclude the necessity to employ two PMS, one in each AMU.

At the AMU level the PMS will be replaced with an experienced Infrastructure Technician/Foreman, who will be an experienced civil/building foreman at the Ranger level. He will be in charge of the maintenance team and will organise and supervise its work programme. He will oversee all works and contracts in the Park that are not assigned to outside consultants such as, for example, the construction of the Spinal Road. The Infrastructure Technician/Foremen will report to the PM (RPI).

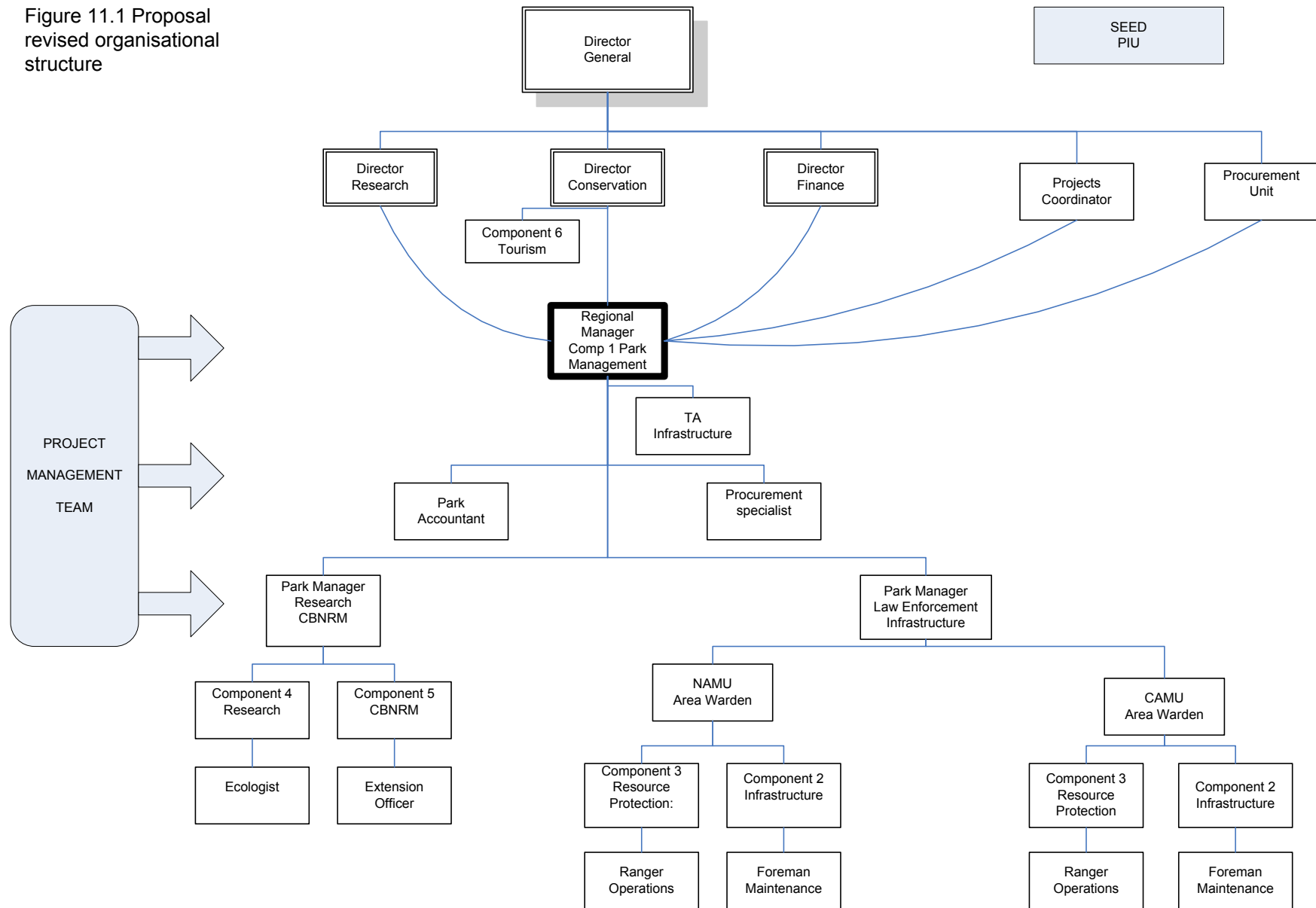
It is important that the Infrastructure Technician/Foreman is integrated into the ZAWA Park Management Structure. To cement this process, he should where appropriate wear the ZAWA uniform. It is felt that the PMSs did not integrate sufficiently into the ZAWA structure in this Project.

The Area Wardens (CAMU and NAMU) will be in overall charge of the AMUs and will report to the Regional Manager through the Park Manager - Law Enforcement and Infrastructure.

The Ecologists and Extension Officer will report to the Regional Manager through the Park Manager – Research and CBNRM.

It is envisaged that this organisational structure will evolve to the point where KNP will be managed as one entity headed by one Park Manager outside of the ambit of the Regional office.

Figure 11.1 Proposal revised organisational structure



## 2. BACKGROUND AND INTRODUCTION

### 2.1. Historical background and current status

The Kafue National Park (KNP) at 22,400 km<sup>2</sup> is the largest national park in the country. It is also the oldest, being originally proclaimed on 28<sup>th</sup> April 1950 in Government Notice No.108. The Park is almost completely surrounded by Game Management Areas (GMAs). Since there is little movement across the boundary, and where it occurs it is generally unimpeded, the Park forms a remarkably complete ecosystem containing many of Zambia's habitat types and associated flora and fauna.<sup>3</sup>

The park began receiving visitors in 1955, once sufficient infrastructure was in place. Through the fifties and sixties, KNP was the most popular venue for wildlife viewing experience, being replaced by South Luangwa National Park (SLNP) in the early seventies. For the next twenty years there was a decline in visitor interest, but an increase has been experienced in the last five years. At present visitors to KNP remain static at between 2,500 and 3,000, which are well below that of SLNP, which receives 16,000 to 20,000 visitors annually.

After years of neglect, the Park's infrastructure and natural resources have deteriorated to a point where it now requires significant investment to restore the protection and management of its biodiversity. It faces a number of challenges that include an ill-defined boundary, illegal off take of wildlife, frequent and unplanned fires, over fishing and low tourism turn up. Its other major management constraints include poor infrastructure and facilities, particularly roads, inadequate transport, plant and equipment, poor staff working conditions, inadequate training for park staff and increased number of aggressive and sophisticated poachers.

To address some of the challenges faced, the Government of the Republic of Zambia, through the Ministry of Tourism, Environment and Natural Resources (MTENR) and ZAWA, with the World Bank and GEF funding developed a project "Support for Economic Expansion and Diversification" (SEED). One component in the SEED project was to improve management of Kafue and Mosi-oa-Tunya National Parks to underpin the long-term sustainable development of the tourism sector.

From August 2002 KNP benefited from the support from Norway through the project Emergency Resource Protection Project (ERPP), whose purpose was to assist ZAWA to regain management of the park and reverse the high levels of illegal hunting.

In 2004 Norway and the World Bank agreed to join forces to support ZAWA and KNP through the present Project under the SEED project. Quoting from the Prodoc the goal is

"The loss of biodiversity in KNP and its surrounding GMAs is reversed and sustainable tourism developed."

and the **purpose** is

"Critical habitat and species secured in the park and surrounding GMAs through improved management, infrastructure and tourism development."

To achieve the goal and purpose stated above, the Project has identified six Components:

1. Park Management and administration
2. Infrastructure development
3. Resource Protection

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<sup>3</sup> P.De Vere Moss Kafue National Park A Management Plan.

4. Wildlife Research and Monitoring
5. Community Based Natural Resource Management
6. Economic potential and role of KNP (Tourism Development)

In 2006 the SEED project underwent a refocusing that culminated in the discontinuation of the Mosi- oa- Tunya National Park project. This had important implications for the KNP Project. First the remaining funds were transferred to KNP and secondly the organisational structure built to cater for the two projects did not have the same justification any longer. The SEED refocusing is described in more detail in chapter 9.

Early in 2007 the various budgets were revised. The original budget was US\$ 22.193.249. The revised and current budget is practically the same (US\$ 22.865.600) but the budgets for the different components have changed considerably, as shown in table 2.1.

Table 2.1 Project financing per component

	<b>Prodoc Total</b>	<b>Revised Total</b>	<b>Planned 2005 - 2006</b>	<b>Disbursement 2005 - 2006</b>	<b>Utilisation to date %</b>	<b>Balance 2007 - 2009</b>
Comp 1	4 048 182	5 175 800	1 840 627	1 622 700	88,2 %	3 553 100
Comp 2	8 675 066	11 124 700	3 659 460	596 800	16,3 %	10 527 900
Comp 3	8 077 947	5 364 100	3 301 040	2 103 300	63,7 %	3 260 800
Comp 4	512 054	479 800	305 763	251 100	82,1 %	228 700
Comp 5	710 000	386 100	372 000	96 100	25,8 %	290 000
Comp 6	170 000	335 100	118 600	79 600	67,1 %	255 500
<b>Total</b>	<b>22 193 249</b>	<b>22 865 600</b>	<b>9 597 490</b>	<b>4 749 600</b>	<b>49,5 %</b>	<b>18 116 000</b>

The table shows:

- The budgets have been substantially increased for three components (component 1, 2 and 6), while the budgets for the components 3 and 5 have been substantially reduced and for component 4 there has been a slight reduction.
- Of the planned expenditures for the two first years only 49,5 % has been disbursed, and this represents only 20,8 % of the total budget.
- The major shortcoming in the first two years is the non performance in components 2 and 5.

Table 2.2 shows the contribution of the donors (Norway and World Bank) and ZAWA to fund the Project at its inception (Prodoc) and how this budget was allocated to different cost items.

Table 2.2 Cost Items and Financiers<sup>4</sup>

	<b>ZAWA</b>	<b>Norway</b>	<b>IDA</b>	<b>GEF</b>	<b>Total</b>
<b>Costab Feb. 2007</b>					
A. Civil Works		3,584,500	5,658,800	1,000	9,244,300
B. Equipment		1,597,600	1,091,100	168,100	2,856,800
C. Consultants			135,500	3,594,800	3,730,300
D. Training		122,700		12,900	135,600
E. Operating costs	934,700	6,669,300	207,100	322,700	8,133,800
	934,700	11,974,100	7,092,500	4,099,500	24,100,800
Excl Mosi- oa- Tunya	2,800	0	682,500	550,000	1,235,300
<b>Total Costab figures</b>	<b>931,900</b>	<b>11,974,100</b>	<b>6,410,000</b>	<b>3,549,500</b>	<b>22,865,500</b>
<b>Prodoc</b>	<b>205,600</b>	<b>12,956,305</b>	<b>6,544,920</b>	<b>2,486,424</b>	<b>22,193,249</b>

<sup>4</sup> Extracted from WB Costab figures

Table 2.3 shows the updated (2007) main cost items for the six components as per Costab figures

Table 2.3 Revised Cost Items per Component

	Comp 1	Comp 2	Comp 3	Comp 4	Comp 5	Comp 6	Total
<b>Investment</b>							
A. Civil works	0	9,058,400	0	0	0	0	9,058,400
B. Goods, equipment	396,900	829,700	913,700	123,300	41,900	56,800	2,362,300
C. Consult-ancies, training,	2,329,100	883,200	26,000	140,200	61,400	239,600	3,679,500
<b>Operating</b>							0
1. Field, Office operations	1,520,100	94,600	99,500	216,400	282,800	38,600	2,252,000
2. Infrastr. maintenance	0	258,800	0	0	0	0	258,800
3. Patrol Operations	0	0	4 324,900	0	0	0	4,324,900
4. Zawa ZAWA staff	929,700	0	0	0	0	0	929,700
<b>Total</b>	<b>5,175,800</b>	<b>11,124,700</b>	<b>5,364,100</b>	<b>479,900</b>	<b>386,100</b>	<b>335,000</b>	<b>22,865,600</b>

## 2.2. Terms of Reference, work methodology and report structure

The Terms of Reference for the Mid Term Review, presented in Appendix 1, states that  
 “The main purpose of the review is to assess the overall development of the Project since its inception in December 2004 and how this relates to the Project document and subsequent work plans and budget approved since the inception of the Project”.

The Mid Term Review Team was appointed by the Norwegian Embassy. The work consisted in a series of interviews with key stakeholders, ZAWA staff at Chilanga HQ, Regional Manager’s office and the two AMUs at Chunga and Ngoma, and perusal of available studies and reports. The visit to the park took place in the period from 15<sup>th</sup> to 25<sup>th</sup> of March. Preliminary findings were presented at a debriefing on March 28<sup>th</sup>. A draft was circulated and comments received. These have been incorporated when found relevant and factual errors have been corrected.

Chapter 2 3 in the report gives a presentation of the organisational structure, administration and resources for the Project. The purpose of this chapter is to provide the overall framework for the following chapters 3 4 through 89, which address each of the components, answering the questions listed in the ToR. Chapter 9 10 discusses the collaboration between cooperating partners. Chapter 10 11 views KNP in the context of Zambian wildlife conservation. Chapter 11 12 presents conclusions and recommendations. It highlights issues and challenges the Project is facing at its mid term, makes an overall assessment based on usual evaluation criteria (efficiency, effectiveness, impact, relevance and sustainability). The chapter presents two sets of recommendations, the first pertaining to each of the components, the second to the overall structure and management of the Project.



### **3. PROJECT ORGANISATIONAL STRUCTURE, ADMINISTRATION AND RESOURCES**

The purpose of this chapter is to give a descriptive and analytical overview of the framework, set-ups and procedures which help to review and explain the achievements, shortcomings and challenges of each of the Project components.

#### **3.1. Overall structure and human resources**

##### ***3.1.1. Summary presentation of Planned Project organisational structure and human resources***

Chapter 6 in the Prodoc describes how ZAWA, as the Project Implementation Agency, will organise the implementation of the Project. This is further elaborated in Annex 5 of the Prodoc. This describes the functions of the Project Coordination Unit (PCU) at ZAWA, the relationship between this and the SEED Project Implementation Unit (PIU) and the Terms of Reference for each of the technical assistance positions.

Figure 14 in the Prodoc presents the structure, including the technical assistance personnel to be included in the Project. This is repeated in figure 3.1 in this report to facilitate the overview of the Project structure. The detailed actual administrative set-up and staffing at the Regional Manager's Office and the two AMUs is presented in annex 3 to this report.

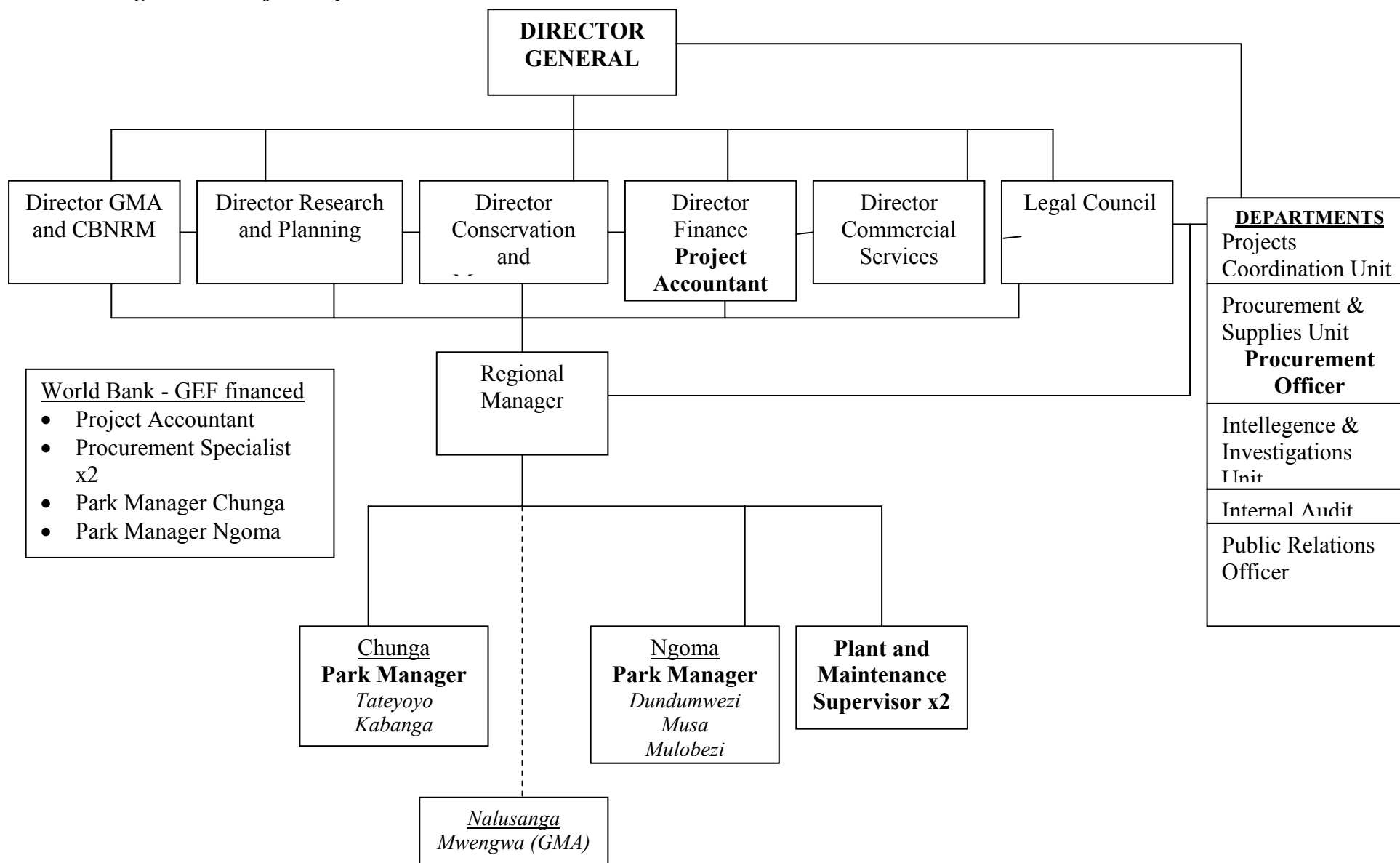
The Project structure consists of three levels:

- Central level with ZAWA Headquarter and the donors – the Norwegian embassy and the World Bank (IDA and GEF). As KNP Project is also a subcomponent of the World Bank SEED project (see chapter 1) the World Bank has organised a special Project Implementation Unit, referred to as the SEED PIU.
- Regional Manager's Office at Mumbwa, where KNP is an integral part of the total jurisdiction of the Western Region
- KNP, where the Project is implemented through the two Area Management Units (AMU), Chunga and Ngoma.

ZAWA staff would be in charge of the Project implementation at all these levels through the normal structure of ZAWA. However, there were two major modifications. Firstly, that the Project would include technical assistance staff (Project Accountant and Procurement Specialist at Head Quarters, and Park Managers and Plant and Maintenance Supervisors at the two AMUs – Chunga and Ngoma). Secondly, that the internationally recruited Park Managers would replace the Area Wardens and therefore would be in charge of the respective AMU's. (As further elaborated below, this was not followed up in practice as both AMUs came to have Area Wardens with the same seniority levels as the Park Managers).

The technical assistance staff was recruited by ZAWA and given ZAWA grades to ensure that they would carry out their responsibilities and reporting procedures in line with ZAWA rules and regulations.

**Figure 3.1: Project Implementation Structure**



The following summary descriptions of the organisational structure are provided in the Prodoc.

Table 3.1 Positions and Prodoc statements on responsibilities

ZAWA Head Quarter	Head Office staff shall provide technical backstopping and the supervisory role in the planning, implementation, monitoring and evaluation of the programme (Prodoc page 81)
Regional Manager	<ul style="list-style-type: none"> <li>• Responsibility for implementation under this Programme will be delegated to the Regional Manager based in Mumbwa (Prodoc page 81)</li> <li>• The KNP programme will be headed by the Regional Manager based at Mumbwa, who will report to the Director Conservation and Management. However, the Manager will also liaise directly with other directors and the Projects Coordination Unit on matters related to implementing the programme (Prodoc page 82)</li> <li>• The Regional Manager will supervise local implementation on a quarterly basis and consolidate quarterly reports to Head Office (Prodoc annex 5)</li> </ul>
Projects Coordination Unit (PCU)	<ul style="list-style-type: none"> <li>• The PCU is already in existence as a core unit of ZAWA's corporate structure and is in charge of all projects implemented by ZAWA. The PCU comprises a Projects coordinator, a Projects Procurement Officer, Projects Accountant and Project Officers (Prodoc annex 5)</li> <li>• The Projects Coordination Unit (PCU) under the Office of the Director General shall coordinate the internal review of quarterly, bi-annual and/or annual reports required by ZAWA (Prodoc page 81)</li> <li>• The PCU will serve as the Project Implementation Unit responsible for managing the implementation of the Project (Prodoc annex 5)</li> <li>• Under the supervision of the PCU Project Coordinator, a Project Accountant and a Procurement Officer will lend their services (Prodoc annex 5)</li> <li>• PCU will be directly responsible for planning and implementation of the Tourism Component (Prodoc annex 5)</li> </ul>
Park Managers (one in Chunga and one in Ngoma)	<ul style="list-style-type: none"> <li>• Responsible for implementation of the Prodoc at Park level (Prodoc annex 5)</li> <li>• Planning, monitoring and evaluation of the Project will be carried out by the park Managers (Prodoc annex 5)</li> <li>• Carry out all normal functions as described in ZAWA's institutional terms of reference in KNP and adjacent GMAs (Prodoc annex 5).</li> <li>• The Park Managers will coordinate with ZAWA head office for the recruitment of consultants, the procurement of goods and civil works as well as for the delivery of goods/services and monitoring of construction works (Prodoc annex 5)</li> </ul>
Projects Accountant	<ul style="list-style-type: none"> <li>• Under the supervision of the PCU Coordinator a Project Accountant will lend his services to the financial management</li> </ul>

	of the Project (Prodoc annex 5) <ul style="list-style-type: none"> <li>• Situated at HQ in the Directorate of finance and Corporate Services Directorate</li> </ul>
Procurements Specialist *)	<ul style="list-style-type: none"> <li>• Located at HQ in the Procurement and Supplies Unit</li> <li>• Under the supervision of the PCU Coordinator a Project Procurement Officer will lend his services to the procurement requirements of the Project (Prodoc annex 5)</li> </ul>
Plant and Maintenance Supervisors – PMS (one in Chunga and one in Ngoma)	The two PMSs are responsible for implementation of the infrastructure construction, rehabilitation and maintenance programmes at Park level (Prodoc annex 5)

\*) In addition two procurement officers were recruited

The organisation and staff at the Regional Manager's Office (RM) and the two AMUs (Chunga and Ngoma) are shown in figures 1,2 and 3 in Appendix 3.

In addition to the above it may be mentioned that the Prodoc states that the KNP will be run as a profit centre with performance based annual work plans (AWPs).

In the course of the implementation of the Project two developments have taken place which is of importance for the organisational structure.

As mentioned above, the Prodoc does not envisage that an Area Warden (AW) will be in position at the respective AMUs as their responsibilities would be undertaken by the Park Manager (see below). In practice, however, ZAWA has chosen to have AWs in both AMUs under the PM. One of the reasons given for this change is that this would provide a counterpart for transfer of technical skills. This is an important modification of the organisational structure at Park level.

The second situation is that at this stage there seems to be a certain redundancy in the number of staff provided for accounting and particularly procurement because of two developments. Firstly, as a consequence of the SEED Refocusing the SEED project is no longer involved in the Mosi-oa-Tunya National Park, which means less work at HQ and the possibility to focus resources on KNP. Secondly, most procurement will have finished by June this year and future procurement work will be quite limited.

### ***3.1.2. Issues and assessment of overall structure***

The present organisational structure has major shortcomings that are detrimental to Project implementation. The section above shows that the Project does not have a clearly defined leader who is ultimately accountable for all matters pertaining to the planning, implementation and overall management of the Project. These overall responsibilities are at present divided between the PCU Coordinator, the Regional Manager and the Park Managers. This is further exacerbated by the fact that there are ambiguities or conflicts between the responsibilities ascribed to these three key actors.

The Prodoc states that the Project will be headed by the Regional Manager but there are statements in the Prodoc giving responsibility of overall management of the

Project to both the Regional Manager and the PCU Coordinator. At the same time it is stated that the Regional Manager's task is (only) to supervise the local implementation on a quarterly basis. Regarding the Park Managers, a major concern has been lines of communication i.e. whether they report directly to the RM or to ZAWA HQ. It is not surprising that contradicting understandings of both structure and authority have been expressed in interviews with stakeholders. The consequence of this is that in actual practice on the ground the organisational command structure is ill defined throughout the Project.

In the course of the implementation of the Project there have been two events which have further exacerbated the lack of clarity and possible conflicts. The first being that Area Wardens have been appointed in each of the AMUs to understudy the Park Managers, and the second that the Procurement Specialist has also been appointed as the Head of the Procurement Unit at ZAWA HQ. Moreover, in order to remedy shortcomings and speed up slow procurements the Project had to recruit a Short term Procurement Consultant.

There have also been several resignations and transfers of senior ZAWA staff associated with the Project, not to mention that there has been a major change in the organizational structure of ZAWA HQ midway through the Project period. These events have also significantly impacted on the Project.

The SEED refocusing that resulted in Mosi-oa-Tunya (MNP) project being closed down has meant that the structure and personnel at HQ intended to cater for both projects is no longer valid. The impact of this is that there is a surplus of Project procurement and accounting staff at HQ level.

## **3.2. Financial management and administration**

### ***3.2.1. Donors perspective***

In line with the IDA, GEF and the Government of the Kingdom of Norway agreements, it is a requirement that the recipient of Project funds (Zambia), through the Zambia Wildlife Authority (ZAWA), establishes and maintains a sound financial management system. This includes records and accounts, and preparation of financial statements in accordance with consistently applied accounting standards acceptable to the Bank and the Norwegian Government that adequately reflect the operations, resources and expenditures relating to the Project. The requirements also include *inter alia* how special accounts should be operated, including procurement procedures in line with best practice and Zambia procurement regulations and various reporting procedures. These are meant to facilitate the implementation of Project activities in an efficient and effective manner and provide for good financial management. Below we describe financial management systems and responsibilities at different levels of the Project. The assessment and control of the financial systems is also described, highlighting issues and concerns of the Review Team.

### ***3.2.2. Description of financial management system and responsibilities at the different levels of the Project***

In line with the various agreements, ZAWA maintains three (3) Special Accounts with local commercial banks as follows: Two Dollar Accounts in respect of IDA and GEF are kept and maintained with Standard Chartered Bank Plc. The other Dollar Account for the Government of Norway is kept and maintained with Stanbic Bank. Respective Kwacha Accounts are kept and maintained for each of the Dollar Accounts. The Accounts are managed and controlled at ZAWA headquarters through the Directorate of Finance and Commercial Services, which also houses the Project Accountant. The Park Accountant is based at the Mumbwa Regional Office and oversees Assistant Accountants housed at the two Area Management Units. The Park Accountant is responsible for the Kwacha Accounts with commercial Banks in which transfers of Project funds are made whenever funds are released from donors and Head Quarters upon meeting the various procedural requirements such as Work Plans.

Separate procurement plans are prepared based on authority levels and best practice. Project funds are supposed to be spent in line with the work plans, systems and procedures put in place and in accordance with the authority prescribed and required by donors.

In terms of accounting, all financial reports and other financially linked information from Regional Office and Area Management Units are sent to Director of Finance and Commercial Service department through the Project Accountant for final consolidation using the required format.

In terms of responsibilities, the Director of Finance and Commercial Services is responsible for accounting for SEED Project funds at Head Quarters. His main role is to ensure that Project funds are disbursed to all Project beneficiary Accounts whenever authority is granted. He supervises the Project Accountant who assists him in doing Project Accounts. The Project Accountant ensures that funds have been transferred to all the beneficiaries, receives reports from AMUs and prepares consolidated reports for the entire Project, carries out bank reconciliations, maintains various books of accounts, consolidation of Project Accounts and provides coordination and guidance to Park and Assistant Accountants. The Park Accountant is in charge of the Regional Office accounting and supervises the two Assistant Accountants in the AMUs who are in charge of the AMUs accounts.

Generally, financial authority varies according to Project financial guidelines and procedures. At AMUs level the threshold is K5 million. Any amount above K5 million and up to K10 million is authorized by the Regional Manager. Amounts above K10 million and below K50 million are authorized by the Director General at ZAWA Head Quarter. Amounts above K50 million but below a threshold of US\$30,000 for goods and services procurement and US\$50,000 for civil works procurements are authorised by the ZAWA Management Committee. Any procurement to be done above US\$30,000 and US\$50, 000 must be authorized by the Zambia National Tender Board Committee (see also 3.3 on procurements).

### **3.2.3. *Assessment of financial management and control of Project funds and Accounts***

There has been a general improvement in the financial management and control of funds as opposed to the initial stages of the Project. To date a number of operational and financial weaknesses have been resolved or are in the process of being resolved. The following areas have been or are being taken care of:

- **The process of decentralising the accounting function and computerization using the Sun System at the Regional Office in Mumbwa is well under way.** The package has been procured and training of staff done. This will see the Project Accounts being done at the Regional Office in Mumbwa as opposed to ZAWA Head Quarters. This will improve the efficiency of producing the accounts and will result in savings in a number of costs incurred such as transport, accommodation, subsistence allowances etc, time spent travelling and correction of defects and increased availability in the Parks.
- **Some officers who were involved in misappropriation of funds both in Chunga and Mumbwa have since been fired.** This has instituted a sense of responsibility in those handling revenue and Project funds and acts as a deterrent to would-be culprits. Similarly, the Directorate of Finance and Commercial Services has taken steps aimed at improving procedures for revenue collection and control. This again will minimize issues of misappropriation and enhanced revenue collection efforts. A Financial Management Procedure Manual was prepared in June 2005 but it has not been put into practice yet.
- **Procurement of goods and services has improved.** The problem could have been the duality roles played by the Procurement Specialist and failure to recruit Procurement Officers. However, with the outsourcing of the short term Procurement Consultant and subsequent recruitment of Procurement Officers, the procurement of the outstanding works and infrastructure rehabilitation seems to be progressing well (see section 3.3 on procurement).
- **Safeguarding of Project assets has been enhanced.** Inventory of assets are kept using asset registers, bin cards, stock registers, Accountable document registers, fuel registers and rations registers. A master assets register is also kept at Chilanga. Efforts are also being made to recover imprest outstanding. However, there have been lapses in the issuance, control and management of imprest, subsistence allowance, maintenance of various registers, and accounting for revenue. Most prominent of all is the non - retirement of imprest within the stipulated time. Some of the assets procured under the programme such as computers and printers have not yet been entered in individual registers at Unit level. This is contrary to the principle of safe guarding business resources to be used in enhancing Project objectives and ultimately exposes them to the risk of pilferage, misappropriation and acts of fraudulent behaviour.
- **Ability to utilise and spend approved budgets has improved.** This is evidenced in the 2006 annual financial report where there was an over

expenditure of \$221, 165 (118%) under the Resource Protection Component and \$22,598 under Component 1 sub-component 1.1 on office equipment and furniture for KNP as opposed to the under expenditure of \$897,074 in 2005. The under expenditure is an indication that the Project had no capacity to manage its finances by not putting them to effective use on planned activities in the work plans and as per Project schedule. The lack of man power in the procurement section could have contributed to this inefficiency as authenticated by the recruitment of a short term Procurement Consultant.

- **Internal audits for both 2005 and 2006 have been conducted.** This has enhanced controls in the accounting and utilization of Project funds and is the likely reason why there are general improvements in the whole operational and financial control systems. However, there has been no extensive independent audit done in the Chunga and Ngoma Parks and Mumbwa Regional Office. It should also be noted that the external audit reports and management letters issued for both the “credit” and “grant” under the SEED project largely points out weaknesses observed in areas that this consultancy did not reach and therefore does not change the stance of the observation on the need for external audit in the mentioned areas.

Generally sufficient accounting records are kept and maintained to support the preparation of various financial reports, and are produced and submitted as per requirements of the donors. There is still a need to undertake an extensive external audit in the areas mentioned. However, it can be concluded that during the elapsed period, the Project team was unable to make tangible investments in both infrastructure and civil works as expected of them in the work plans resulting in a delay in carrying out of Project activities as scheduled.

#### ***3.2.4. Issues and concerns in financial management system***

**Issuance, control and management of imprest and subsistence allowances** is a major concern. As at December 2006, a total amount of outstanding imprest at the Regional Office and AMUs was K151,785,362.29. Staff has a tendency of not retiring imprest within the required time. Some of the un-retired imprest ends up being recovered through the payroll i.e. imprest have turned into advances against individual salaries. Consequently, imprest recovered at Head office is not remitted back to the Unit budgets. This is not acceptable as working capital is held by staff and Head Office that does not remit back the money when deducted. In line with the internal audit reports, issues of false claims of subsistence allowances have been highlighted for both Head Office and Chunga Area Management Unit.

**Non-performance of research studies conducted by some Consultants** is a major concern. These research studies are expected to bring about future returns for ZAWA. Though some may not directly entail an increase in revenue generation, it is crucial that these activities are done in an efficient, effective and economic manner. The review discovered that most of the research carried out did not bear much fruits. Out of the five research studies conducted by various consultants, namely Aerial Survey, Design & Test Vegetation – monitoring System, Fire Management Plan, Assess the Fisheries Potential, and Block Tourism Concession, it is reported that only the first two have been accepted, finished and paid for in full. Though the other three researches have been partially paid for i.e. Fire management (40%), Fisheries study



(37.6%) and block tourism concession (20%), there is no guarantee that the studies will be completed within the remaining individual budgets in the event that they are given to other consultants to complete or continue with the same. This may result in poor financial management on the part of those implementing the Project (see also section 3.3 on procurement).

**Misappropriation of funds in AMUs is a major concern.**

The firing of the two accountants at Chunga, Chunga and one at Mumbwa is indicative enough that financial management systems can easily be abused. The internal audit report clearly highlights instances of misappropriation of revenue. For instance, a total sum of K11, 001,600 and \$680 were misappropriated by the Assistant accountant and his accounts clerk between January and December 2004. Subsequently between August and December 2005, an amount of K38, 846,240 and \$12,294 were misappropriated out of which K14, 100,000 were purportedly used for official duties at Chunga. However, the K14,100,000 was not backed up with receipts. Its authenticity therefore remains doubtful. Internal audit also reported the missing of accountable documents. This act is contrary to the financial regulations that require that all money collected must first be deposited with Chilanga and not spent upfront. It is a clear testimony that management has relaxed the systems that require that issuance and retirements of imprest are subjected to thorough checks and approval is only done based on factual information provided. Additionally, it was observed that no safes are availed to revenue collectors' at collection points thereby exposing revenue collected to misuse. It is important that ZAWA provides safes as a means of deterring who be fraud stars.

**Review the 2005 audited accounts for ZAWA**

A review of the ZAWA financial statements for the year ended 31 December 2005 revealed a slight improvement in revenue of about 23% which was mainly due to an inflow of extra grant from the World Bank, a slight increase in funding by Norwegian Government and Zambian Government. There was also a reduction in expenditure of about 5%. This resulted in ZAWA reducing its deficit in 2005 by 53% though the Authority still recorded a deficit. It is hoped that ZAWA management will continue with its cost reduction strategy in order to avoid a recurrence of deficits. Similarly, the current ratio has deteriorated further in 2005 thereby making the Authority to record a negative working capital which in fact increased by 470% in 2005. Worse of all, the return on capital employed has deteriorated further from -128.7% in 2004 to -1,040% in 2005 due to a lower capital employed. This signifies that the capital base of the Authority has been eroded. There is need therefore to re-capitalize the Authority with more productive assets as opposed to administrative assets. However, the auditors have made a mention in their report to management that there is a material uncertainty which may cast doubt about the Authority's ability to continue as a going concern. It is also evident from the accounts that shareholder funds are negative making the Authority to be more risk. The shareholders' funds have drastically fallen by 196% thereby pushing it to negative shareholders fund in 2005. This is basically due to a decrease in the accumulated funds by 30.2% and a slight reduction in deferred income. It could also be concluded that the performance of the Authority is not satisfactory and its financial position has tumbled drastically. This will impact heavily on the projected sustainability of the KNP and the Authority has a whole.

### **Overdrawing of the cash book and over expenditure on the various Project Accounts.**

A review of the bank reconciliation statements for various accounts maintained at Head Office revealed that three (3) Accounts were overspent and one (1) Account overdrawn as indicated below.

Table 3.2 Review bank reconciliation statements

<b>Bank</b>	<b>Account No.</b>	<b>Amount overspent (K)</b>	<b>Overdrawn (K)</b>	<b>Date</b>
Norwegian - Stabic	0140031815201	75,492,636.34		August 2006
IDA Standard Chartered	0100112257100	8, 106,147.56		September 2006.
IDA Standard Chartered	0100112257100		1,660,905.94	April 2006
GEF Standard Chartered Bank	01002256900	17,735,325.27		April 2006
GEF Standard Chartered Bank	01002256900	8,299,402.37		April 2006

It was also noted that there was unexplained reconciling item of K28, 171,195.49 in September 2006. The above scenario depicts a weakness in the management of cash flow and depending on the time lag within which cheques are presented and funds transferred from dollar accounts, they may result in overdrafts and attract penalty charges.

### **3.3. Procurement**

Procurement has been a problem from the outset, due some extent to the lack of familiarity of procurements procedures by the Project, Regional and HQ staff. This was further compounded by the fact that the recruited procurement specialist was and also remains the Head of Procurement at ZAWA HQ. He has therefore had to deal with other procurement issues aside from those relating to the KNP Project. An additional procurement officer was recruited in July 2005 but left in November the same year. Two further Procurement Officers were only recruited late in 2006 but with difficulty as it was said that the conditions of service were not attractive. This further exacerbated the poor performance of the Procurement Section of the Project

By the time of the joint Norway/WB support mission in November 2005, there was a great deal of dissatisfaction with the lack of progress – Procurement had achieved only 40% implementation of the original Procurement Plan. Furthermore the plan contained many errors. As a result a Procurement Specialist was recruited in January 2006.

Arising from that mission a decision was made to increase the threshold for Project level procurement to \$30,000<sup>5</sup> for goods, works and services. In a further effort to

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<sup>5</sup> Discussions with ZAWA and project staff indicate that the threshold for works is now \$50,000. This is confirmed by examination of the Procurement Plans (Works) where it shows contracts of \$50,000 being awarded under "shopping" procedures.

ameliorate the situation it was resolved that HQ, Regional, and park staff attended procurement training organised by the SEED PCU

At present the Procurement plan is in place and the situation is now in hand.

### **3.3.1. Description of procurement rules**

- Procurement rules

The World Bank (WB) requires that where WB (IDA and IBRD) is funding or partly funding a project, WB procurement guidelines shall be followed. This is incorporated in the Agreement between WB and the recipient country. Therefore although we have not had sight of the present Agreement, we assume that this is also the case, hence the obligation to follow WB guidelines on this Project.

- Threshold levels

At the commencement of the Project WB threshold levels of \$30,000 and \$50,000 applied at HQ level. In order to speed up procurement, these threshold levels were moved to Park and Regional Levels \$30,000 for Goods and \$50,000 for Works under the “Shopping” procurement rules. Above these thresholds, the ICB or NCB procurement procedures shall be followed.

All “shopping” procurements are carried out at AMU/Regional level. ICB and NCB are handled at ZAWA HQ level. Also all consultancy procurements are done at HQ.

The special thresholds of \$30,000 and \$50,000 have allowed some flexibility in the procurement process, so that the need to seek WB “no objection” is precluded. Within this lower threshold range the existing ZNTB guidelines are followed. For example, at Park level a threshold of K5.000.000 applies for local “shopping”- the rules demanding three pro forma invoices to be provided. A threshold of K10.000.000 applies at the Regional Level. Between K10.000.000 and K50.000.000 approval has to be sought from ZAWA HQ.

At this stage of the Project a modus operandi has been worked out between ZAWA and ZNTB which allows ZAWA to operate up the \$30,000 and \$50,000 level without “no objection” from ZNTB. The “no Objection” below these thresholds being provided by the Management Tender Committee (MTC) at ZAWA

**Observation:** It was observed that in certain instances, the Park Manager for Chunga exceeded his authority of K5 million and signed for transactions exceeding his authority as indicated below:

Table 3.3 Transactions signed by Park manager Chunga

Date	Cheque no.	Amount	Detail	Approved/authorised by
13/6/05	001784	6,000,000	Fuel	Park Manager
16/6/05	001793	17,000,000	Fuel	Park Manager
27/7/05	001888	13,406,00	Rations	Park Manager
07/10/06	000148	5,273,443	Stationery	Park Manager
10/11/06	000166	13,360,000	Student allowances	Park manager
20/11/06	000168	11,535,000	Rations	Park Manager
09/12/06	000192	5,620,000	Casual workers	Park Manager

This has to be looked at in the light of the thresholds given above and is therefore unacceptable.

The \$30,000 and \$50,000 thresholds have greatly helped in speeding up procurement and implementation of works projects. It is observed that there has been a deliberate policy to keep infrastructure contracts below the \$50,000 threshold. This is considered acceptable but may sometimes result in situations where the same contractor wins two side by side contracts running simultaneously as has happened for example at Ngoma where Dokery construction have been awarded Lot 1 and Lot 2 of the Rehabilitation of senior staff houses. Had the contract been awarded as one lot it would have been above the threshold, but there might have been a cost saving if it had been awarded as one larger contract. However, the procurement process would have slower. The solution to this dilemma would have been to request a discount in the event of both lots being awarded to the same contractor.

- Tender processes

The procurement procedures currently being adopted are set out briefly here below:

Shopping:

Specifications and /or contract documents are prepared at AMU level and passed through Regional HQ on to ZAWA HQ. The Head of Procurement checks that the documentation is in order. Advertising date and the date for submission of bids are set in accordance with procurement rules by the AMU/Regional Office.

The bidding period allowed is generally about 4 weeks while 2 weeks is allowed in special cases.

After bids are received a Bid Evaluation Committee is set up at Regional HQ at which Procurement Office ZAWA HQ acts as the secretariat. After selection of the successful bidder, the minutes are submitted to the ZAWA Management Tender Committee if the value of the contract is above K50.000.000. The Procurement Office ZAWA HQ issues the letter of offer and prepares the contract Agreement. Once the Contract Agreement is signed, the contractor thereafter deals with the AMU during implementation. Payments certificates are checked at AMU level and submitted through the Regional Office to ZAWA HQ for payment.

ICB & NCB

Above the \$30,000/\$50,000 thresholds, the procurement follows ICB or NCB procedures, depending on the circumstances. Specifications and /or contract documents are prepared at AMU level. Documents are forwarded to the procurement unit at ZAWA HQ. Advertising and receiving of bids is done at ZAWA HQ. For ICB adverts are required to be placed in *Development Business*. A bid evaluation Committee sits at HQ with representatives from AMU level, Regional level. In the early stages of the Project a representative from ZNTB used to attend, but we are informed that in recent times, with the improvement in the capacity of ZAWA procurement officers, they are no longer directly represented.

For ICB adverts are placed in *Development Business*.

### ***3.3.2. Present status of procurements compared to plans and comments on the suitability of procurement procedures to the needs of the Project***

The Procurement schedule is well behind that envisaged in the Project Document. However with the help of the Procurement Consultant there are now in place detailed Plans which are regularly updated and give a clear picture of the status of procurement at any given time.

With regard to the suitability of procurement procedures in the context of this Project; the popular notion is that the WB Procurement requirements are too complicated and unwieldy. To some extent this is true as they inevitably involve a substantial lead-in time. However the procedures have been developed over some considerable time and are now a fact of life. The Bank states that they are necessary and are required by the Bank for the purposes of:

- a) Economy and efficiency in the implementation of the Project
- b) Giving all eligible bidders an opportunity to compete
- c) Encouraging domestic contracting and supply industries
- d) Transparency

The WB procedures are well documented with published guidelines and ought to be well understood. However it has to be admitted that there is a learning process involved. This can be alleviated by the use/assistance of an experienced procurement specialist within the organisation. . Moreover when the procedures become familiar, the lead-in time for activities are known and therefore they do not necessarily involve undue delays.

Within the WB rules for procurement there is sufficient flexibility between the various procurement methods such as ICB, Modified ICB, NCB, LIB (limited international bidding), Shopping (International and National), and Single Source. With hindsight the complexity of the procurement processes should have been foreseen on this Project and a Procurement Specialist should have been employed for the early stages.

### ***3.3.3. Issues and concerns on procurements for the remaining Project period***

While procurement is for the present in hand there are numerous smaller procurements in the 'shopping' category still to be undertake.. It is important to ensure that no slippage occurs in the future.

#### **Issues of corruption**

On large procurement contracts there is always room for corrupt practices, for example in the award, supervision and certification of infrastructure contracts at AMU level in particular. There is need therefore to institute checks and balances in the system, for example by having a senior officer at higher level with experience of engineering contract administration responsible for scrutinising the documents at the various stages of procurement.

At field level the opportunity and scope for corruption is low because wild life officers operate in groups. However, there is scope for collusion in the patrol effort not being done effectively and therefore at high cost to the Project. At the GMA the only significant opportunity for corruption is for the WPO or Village Scouts turning the blind eye to not reporting animals that are wounded or hunters exceeding the quota.

At national level there is ample room for manipulation of concessions, tenders and misappropriation of donor fund.

## **Conclusion**

It is believed that the procurement process and the required procedures are now sufficiently understood by Project personnel. Most of the major procurements are now in hand and the remaining ones consist mainly of “shopping” procedures. It is essential that that procurement is kept on track and that procurement plans are kept updated. In line with the new proposed Project organisation, the Procurement Specialist should be assigned to the Regional Office (see New Organisation Proposals in Chapter 11).

## **3.4. Project planning and reporting**

### ***3.4.1. Description of planning and reporting procedures***

The Project has adequate planning instruments (annual work plans, budgets, procurement and training) and reporting processes in place.

Monthly, quarterly, bi-annual and annual reports are submitted by the respective Area Management Units to the Regional Office<sup>6</sup>. Having to report to the Norwegian Embassy and the World Bank using two different reporting formats made this a tedious process, however the Project has now agreed on a single format to cover the needs of both donors. It has also been agreed that the annual reports from the respective AMU's be merged into a single document at the Regional level in order to reduce the volume of paperwork.

The Annual Work Programme and Budget (AWPB) for 2005, 2006 and 2007 were prepared by the Project. This process followed the conventional format of drawing up draft work programmes and budgets at the AMU level between June and September and then, as a team, preparing the final drafts at the Regional level. The Project Coordinator is then responsible for coordinating the process for submission and approval by ZAWA HQ and donors at the annual meeting in December. Thereafter quarterly activity plans and budgets are prepared and the request for funding submitted to the donors. The overall budget is then allocated to the respective AMUs and the Regional Office, who then control these at the Unit level.

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<sup>6</sup> The monthly reports are prepared by the respective Area Warden, Rangers, and Ecologists and sent through to the Park Manager and Regional Office. The Park Managers are responsible for collating these into quarterly reports for submission to the Regional Manager. The reports are then forwarded to ZAWA HQ where the Projects Coordinator is responsible for submitting these to the respective donors.

The 2007 AWPB proved problematic following the SEED refocusing initiative that reduced the SEED budget by approximately 35%. This resulted in the AWPB only being finalised in March 2007.

#### ***3.4.2. Assessment of planning and reporting procedures***

- Quality of preparation of AWPB and reporting

The Programme of the Development of Kafue National Park as a Model of Sustainable Economic Use and Biodiversity Conservation is an ambitious and complex Project that includes 6 major components and approximately 180 activities. The responsibility for these six components is split between ZAWA HQ, the Regional Office and the two respective AMU's. Many of the activities are implemented simultaneously by both AMU's (resource protection in particular) but there are some activities that are global (e.g. tourism impact study). In these cases it is not clear which of the two AMU's should take the lead in completing the task.

The approach of the Project at its inception was to tackle the entire Log Frame and prepare an overall annual work programme that encompassed all 6 components. While commendable, this approach was over-ambitious. At no time did the "team" consider an inception phase with a shorter AWPB (say 6 months) to assess the practicality of implementing all 6 components simultaneously, or whether some of the outputs of the various components could be staggered across the 5-year period. Furthermore, no attempt has been made to revise the Log Frame with a view to streamlining the outputs/activities and/or delegating responsibility for various outputs/activities between the two Park Managers.

In 2005 the primary focus of the AWPB was on putting in place the human resources for the Project, procuring all the equipment (vehicles, office furniture, computers etc.) and preparing tenders for the renovation and construction of the infrastructure. As it transpired, unforeseen events such as the restructuring of the ZAWA HQ, resignations of key staff (e.g. Project Accountant), changes in the Regional Warden Manager, the Area Warden's remaining on station to understudy the Park Managers, and the Procurement Unit being overwhelmed by the volume of the procurement, all contributed to the non-performance of the Project in the first year.

Some progress was made to rectify these problems in the second year, although the 2006 AWPB was still too ambitious attempting to undertake 151 activities. The delay in securing key equipment (the vehicles were only delivered in October 2006) adversely affected this work plan and little overall progress was achieved.

The 2007 AWPB has now been approved albeit late (March 2007) as a result of the disruptions caused by the SEED refocusing exercise. The approach to this AWPB is similar to that in the previous two years i.e. an attempt will be made to address a large number of activities in all 6 components. Once again this is an extremely ambitious programme. It is anticipated that once the balance of the heavy equipment needed to undertake the road maintenance programme is delivered (anticipated for June 2007), the Project will become more active and a greater impact will be seen on the ground.

However, there are still concerns that many of the activities will not be completed as planned (training of WPOs, fishery management, various infrastructure activities)

- Budget preparation

Detailed budgets have been prepared to accompany each of the three work programmes. Considerable input is made at the AMU level to prepare these budgets, which are linked directly to the respective components and Log Frame. The Review Team was provided with an electronic version of the 2005 budget, four different versions of the 2006 budget and two versions of the 2007 budget – the latter having now been transferred from an Excel-based activity costing table to the “Costab” format favoured by the World Bank.

Attempting to track all the changes that have occurred has been difficult, especially as the various budgets do not have a date, version number or indicate the primary author. Without access to the original draft budgets submitted by the respective AMU’s it is not possible to gauge the level of changes that are made at the HQ level before these are finally submitted for approval. Some indication of the magnitude of these changes is evident in the various versions of the 2006 budgets. For example, Activity 1.5.11 Review of Strategic Plan has been adjusted upwards from US\$30,000 to US\$74,800 and then reduced to US\$45,800 in different budget versions. The 2007 COSTAB provides a figure of US\$57,400.

Although no detailed analysis has been undertaken of the COSTAB, it is strongly suspected that the overall budget, particularly under Component 1, has been “padded out” to facilitate the diversion of Project funds to Head Office at Chilanga. Some examples are provided below:

Activity 1.1.3 – Undertake Annual Reviews: A budget of 70 man days and 8600km is provided for with a total budget of US\$27,500.

Activity 1.1.4 – Prepare reports: An overall budget of US\$81,400 seems excessive. This equates to approximately US\$6,000/month for the two AMU’s, the Regional Office and HQ.

Activity 1.1.8 – Vehicle maintenance: It is assumed that this activity covers the maintenance of 18 vehicles in the field, with a total budget of US\$583,100 (approximately US\$32,394/vehicle/year). A further US\$116,000 (US\$29,000/vehicle) is provided for under Activity 1.5.3 for the maintenance of four HQ vehicles. It is also noted that individual budget items seem excessive. For example under “Batteries” the budget suggests that the Project will purchase 28 batteries/year. It is not clear what these batteries will be used for, but given that all the vehicles in the Project are new and therefore should not require new batteries for at least 3 years, this seems excessive.

- Monthly, quarterly and annual reports

Project reporting on activities and their relations to outputs in the Log Frame is good. The reporting process is coordinated at the AMU level by the respective Park Managers, but it is not clear who is responsible for these reports once they reach the



Regional Office level. It would appear that the PM (Chunga) has had to step in and consolidate the reports from the field since there is no capacity at the Regional Office to undertake this task, especially as the Regional Manager is often away on other official business and often not available. The end result is a duplication of effort. It also appears that the report is seldom used to guide the Project at a Regional level but mostly used as a source of information and data for other reports prepared at HQ level.

The reporting system, especially the annual report, should be able to convey fully what has been done and where the money has been spent, what it achieved and indicate the links between the various components of the Project, and the implication for future actions.

The 2006 Annual Report, which is a combination of the respective CAMU and NAMU annual reports, provides a detailed description of the individual activities undertaken by both AMU's. Our review of this document however identifies several shortcomings and omissions that would have made this a more comprehensive document on the total status of the Project, such as:

- The introduction does not indicate that this is a combined report from the two AMUs. As a result the report loses some of the individual characteristics of these two different units.
- One would have expected that the Project Accountant would have provided a summary of the financial reports, budgets and plans by units (AMUs, RM office and HQ) to indicate the current financial status of the Project.
- The Project funds a large staff complement yet there is no information on the numbers of staff, resignations, vacancies, recruitments etc.
- There is no description of the HQ Procurement Unit activities
- There is no information on
  - summaries and follow ups of review missions
  - summaries of supervisory trips from HQ, RM, PM, AW (dates, locations, duration etc.)
- There is no information on vehicle distribution and current status
- There is no analysis of income and expenditure, which given the title of the Project, is a serious omission.
- An up-to-date assets register as an annex would have been useful.

Finally the Report would be enhanced if each AMU's activities and results were reported separately before consolidation e.g. resource protection statistics, tourism statistics, roads maintained/rehabilitated etc. in order to allow the reader to evaluate the independent performance of each AMU and identify where problems and issues may occur.

### **3.5. Conclusions**

The Terms of Reference lists several questions of a general nature which apply to the issues described and analysed in the previous sections. Below the Review Team summarises its conclusions for each of these questions in the ToR.

### ***3.5.1. Division of responsibilities between Project and ZAWA HQ - Regional Manager – Project (decentralization)***

The Prodoc has definitions of responsibilities of all key actors at the different levels. However, there are inconsistencies, contradictions and lack of clarity, as shown in section 3.1 and table 3.1.

The intention of the Prodoc is that this Project is to be executed in a decentralised manner. To a degree this is achieved through the preparation of annual work plans and budgets (AWPB) that involves the AMUs up through to the RM's office to Headquarter and annual meeting with the donors. ZAWA HQ does not interfere in the daily management of the implementation of the Project which is the responsibility of the respective Park Managers. What is not clear is the division of responsibilities between the two Park Managers. Because the proximity of the Chunga AMU to the Regional Office in Mumbwa there is a tendency for the Chunga Park Manager to assume the lead role in many of the activities that are global in nature (e.g. preparing ToR for studies etc.). In some instances neither PM is taking the lead in specific activities, notably the CBNRM component, which is being driven by an Ranger Extension Officer out of the Regional Office.

The criticism that is voiced from the AMU level is that changes to the annual budgets are introduced by ZAWA HQ and donors without adequate consultation and feedback.

### ***3.5.2. Is the Park Management and administration structure appropriate to the needs of the park and the GMAs***

The Kafue National Park is ranked amongst the top five largest protected areas in southern Africa, and when combined with its associated GMAs it is second only to the Niassa Reserve in Mozambique and Selous Game Reserve in Tanzania. The management of these internationally renowned protected areas is complex but is based on a sound foundation that recognises a clearly defined hierarchical administration system.

In the opinion of the Review Team, the current KNP management and administration structure is not appropriate to the long term needs of the Park and the GMAs. The two AMUs are operating as independent units and although theoretically these are answerable to the Regional Manager, there is no overall person in charge of the Park. The risk here is that different standards will evolve at these respective AMUs depending on the management styles of the incumbent Area Warden. The absence of a clearly defined leader means that there is no person who is ultimately accountable for all matters pertaining to the long-term planning, implementation and overall management of the Park.

The role of the Park Managers under this Project is to implement the broad range of activities designed to secure the Park and surrounding GMAs through improved management, infrastructure and tourism development. ZAWA should be reviewing its future management and administration options with a view to building on this foundation at the conclusion of this Project.

One scenario would be to appoint a “Senior Park Warden” to fulfil the role as Project leader and begin to build the management structures for KNP. This strategic planning (for example) could potentially involve establishing an additional AMU at Nalusanga to control the eastern bank of the Kafue and the Mumbwa and Namwala GMAs. Chunga AMU could focus on the development of tourism in the northern sector while Ngoma could concentrate on managing the fisheries on Lake Itzhi Tezhi.

The organisational structure of the management staff could be re-defined to identify Wildlife Police Officers (WPOs) responsible for law enforcement and other WPOs that are directly involved in park management (road maintenance, fire breaks, tourism etc.).

### ***3.5.3. Are the definitions of responsibilities, lines of communication, work environment, conditions of employment, gender etc conducive to the achievement of Project objectives***

It has already been stated that definitions of responsibilities are not fully conducive to the achievement of Project objectives.

Lines of communication in the Project follow the line of command of ZAWA. However, in practice, lines of communication are not strictly adhered to. These are some of the issues brought to the attention of the Review Team.

- It follows from ZAWA procedures and lines of command that the Park Managers should communicate with Head Quarters through the RM. However, the Prodoc states that “The Park Managers will coordinate with ZAWA head office ...” without any mentioning of the RM.
- AMU junior staff have been in the habit of communicated with both RM and HQ without going through the Park Managers, in some cases directly with HQ.
- Park Managers have communicated directly with both the Norwegian Embassy and the World Bank

There is no doubt that the Project has contributed greatly to the work environment and conditions of employment, which has become more conducive to the achievement of Project objectives. However, the fact that salaries for Project recruited staff is considerably higher than salaries for ZAWA permanent staff has created many misgivings and undermined motivation, which is detrimental to the achievement of Project objectives.

Gender issues are discussed in the Prodoc to be addressed under component 1. The 2006 annual Report states that nothing was done in this regard. Although this is not acceptable, one cannot say that gender issues as such have been an issue which have hindered the implementation of the Project as such.

### ***3.5.4. Quality of preparation of AWPB and reporting***

The process for planning and producing the budgets is adequate. However, there appears to be a problem of inflating quantities and associated unit costs, as well as including activities that are unrelated to the Project (US\$57,400 to review the Draft

ZAWA Strategic plan for example). Project reporting on activities and their relations to outputs in the Log frame is quite good, although there is scope to improve the quality of information in the Annual Reports .

### ***3.5.5. Assessment of financial management and control of park income and expenditures and Project accounts***

There has been a general improvement in the financial management and control of funds as opposed to the initial stages of the Project. To date a number of operational and financial weaknesses have been resolved or are in the process of being resolved. The following areas have been or are being taken care of:

- The process of decentralising the accounting function and computerization using the Sun System at the Regional Office in Mumbwa is well under way.
- Some officers who were involved in misappropriation of funds both in Chunga and Mumbwa have since been fired
- Safeguarding of Project assets has been enhanced
- Generally, the utilization and efficiency to spend has improved drastically.
- Internal audits for both 2005 and 2006 have been conducted

Notwithstanding these important improvements and achievements, there are still some areas of concern:

- The major financial management issue is to discipline all staff in the issuance and retirement of imprest.
- There have been instances of accountable documents going missing that could potentially lead to mismanagement and acts of fraud.
- There is need to provide safes in all revenue collection points in order to abate pilferage and misappropriation of funds.
- There have been serious cases of misappropriations of funds where ZAWA had to take action by dismissing staff. Although the procedures and control mechanisms are in place, there is a need to maintain and even strengthen vigilance to prevent the recurrence of any financial misdemeanour. Tight control on direct shopping needs to be enhanced.

### ***3.5.6. Present status of procurements compared to plans and comments on the suitability of procurement procedures to the needs of the Project***

The Procurement schedule is well behind that envisaged in the Project Document. However with the help of the Procurement specialist there are now in place detailed Plans which are regularly updated and give a clear picture of the status of procurement at any given time. Most of the major procurements are now in hand and the remaining ones consist mainly of “shopping” procedures (For more details see section 3.3. above)

### ***3.5.7. Identify and assess any factors that have hindered the efficient implementation of the Project***

Table 2.1 shows that only 49,5 % of the planned AWPB expenditures (20% of the overall budget) was disbursed during the first two years of the Project. This implies that the implementation of the Project has been far from efficient. The Review Team acknowledges that the Prodoc and initial plans were far too ambitious and that implementation plans should have been staggered in order to be more realistic. Implementation related to individual components is addressed in the respective chapters. General factors which have affected the implementation include:

- Procurement
- Lack of clear Project leadership driving the implementation process at all levels
- Not sufficient motivation of some staff at different levels

### ***3.5.8. Is the capacity of staff (number and quality) effective for Project implementation***

The capacity of ZAWA staff to implement the Project varies between the components. The AMU staff is capable of carrying out components 1 and 3, but has limited capacity to carry out components 4 and 5. Regarding component 2 this comprises the design and management of civil works contracts as well as implementation of routine road maintenance and building maintenance. The current cadre of ZAWA staff in particular, judging on performance to date, the PMS have little experience or competence in these matters. The activities under component 6 require economic and business analysis skills which need to be outsourced.

The lack of motivation at different levels is a major concern and is detrimental to the success of the Project. The salary differential introduced by the Project is a contributory factor. Nevertheless, despite the improved work and living environment brought about by the Project, e.g. improved housing, work tools, equipment, communication, and transport etc, motivation to ensure the success of the Project remains low.

### ***3.5.9. Assess the technical assistance financed as a part of the programme both at HQ (coordination, procurement, accounting) and in the park (park managers, plant managers)***

The Project provides technical assistance at all levels. The amount of technical assistance at HQ was justified by the fact that they were to cater to all the SEED components implemented by ZAWA.

The technical assistance on accounting seems to have performed well at both HQ and RM levels although the Project Accountant recruited first had to resign and the Park Accountant brought from Mumbwa Regional Office to fill in the vacancy. This created some problem at regional level as it remained with no qualified accountant. Subsequently, there was misappropriation of money at the Region and Chunga AMU.

However, as indicated in the proposed organisation structure in section 1.4, there is a need to have well trained Assistant Accountants at Park level.

The Technical Assistance for procurement, however, did not perform satisfactorily in the early stages of the Project. The result of this has had a major adverse effect on the implementation. The situation has been retrieved to some extent with the employment of a Consultant to redesign the procurement plan, but at least 18 months has been lost. The procurement situation is now in hand and should be within the scope of the procurement specialist to keep matters that way.

The technical assistance provided through the appointment of the two Park Managers must be considered on two levels. Both are capable managers but with differing management styles and experiences that is shaping the performance of the respective AMUs. In the case of Chunga, the PM has a strong research background and therefore has been proactive in promoting the various research studies. However, his experiences in practical park management and law enforcement are not as well developed, and it is fortunate that this AMU has two Rangers that have driven the Resource Protection component. The opposite situation exists at Ngoma where the PM has very strong practical park management skills and experienced but his management style and approach that requires a high level of discipline does not sit well with the local staff. It was also noted that the PM has spent little time in the field and therefore is in a weak position when having to deal with day-to-day management issues (patrol deployment etc.).

It must be noted however that the respective PMs have had to deal with vastly differing staff and administrative issues at the AMUs. At Chunga the Area Warden has respected his role in relation to the PM and has embraced the Project. The opposite is the case at Ngoma where the PM has had to deal with uncooperative staff, particularly in the form of the Area Warden. Furthermore this situation was not helped by the fact that the Ranger Operations at Ngoma was away on study leave for nearly a year.

In both cases the Review Team was aware that the PMs were finding it difficult to develop a healthy work environment in which there was mutual respect, more so at Ngoma than Chunga.

The Park Maintenance Supervisors cannot be said to have achieved much during the period. Theirs is a task which has to be judged mainly in the light of infrastructure works implemented and equipment put to work, notwithstanding the fact that they are not to shoulder the entire blame for the procurement problems experienced in the beginning which badly affected the implementation. Nevertheless, the problems with preparation of TORs and specifications for equipment must rest to a large extent with PMSs.

The inability of the PMS to solve the problem of his accommodation at Chunga is a disappointment and indicative of a lack of initiative on his part. It had a serious effect on his working time and inevitably on his efficiency. It is felt that a more proactive approach by the individual would have solved that problem within the first few months.

In both cases the performance of the PMs in respect of building works was better than that related to bridges and roads. Contract supervision work was poor in some cases e.g. at Tatayoyo where the supervision appeared to be carried out at long distance, and at the bridge at Ngoma due to lack of experience with that type of work. Furthermore the quality of documentation produced by the PMSs was in general of a mediocre or at times a poor standard and compared unfavourably with the documentation produced by the PMs. There are many challenges ahead in the Infrastructure component and the performance of the PMSs to date gives cause for concern regarding their capacity to carry out their function.

The SEED refocusing that resulted in Mosi-oa-Tunya (MNP) Project being closed down has meant that the structure and personnel at HQ intended to cater to both projects is no longer valid. The impact of this is that there is a surplus of Project procurement and accounting staff at HQ level.

On a general note, the MTR Team was disappointed that neither of the PMs had made the effort to place maps of their respective AMUs in their offices. One would have thought that having such large areas under their command they would at least been able to explain to a visitor where the outposts and tourism camps were located, location of communication repeater links or even an indication of the priority primary and secondary roads that they intended to open.

It was also noticeable that neither AMU had prepared an organisational chart of the AMU. There seemed to be a lack of interest in any of these fundamental requirements.

### ***3.5.10. Monitoring and control of corruption***

On large procurement contracts there is always room for corrupt practices, for example in the award, supervision and certification of infrastructure contracts at AMU level in particular. There is need therefore to institute checks and balances in the system, for example by having a senior officer at higher level with experience of engineering contract administration responsible for scrutinising the documents at the various stages of procurement.

At field level the scope for corruption is low because wild life officers operate in groups. However, there is scope for collusion in the patrol effort not being done effectively and therefore at high cost to the Project. At the GMA the only real opportunity for corruption is for the WPO or Village Scouts turning the blind eye to not reporting animals that are wounded or hunters exceeding the quota.

At national level there is ample room for manipulation of concessions, tenders and misappropriation of donor fund.

ZAWA and the Anti Corruption Commission (ACC) collaborate on a wide range of wildlife related activities. ZAWA involves the ACC in some of its specific law enforcement activities. For example, ZAWA invited the ACC to collaborate on a recent ivory bust in Singapore. ZAWA has also invited the ACC to participate and

facilitate awareness of the determinant effects of corrupt activities in the wildlife sector.

ZAWA is making efforts to put in place systems to maintain transparency in its dealings with the private sector and CRBs. It is also applying a no-tolerance policy on its own staff on corruption. This is clearly stated in messages from the Director General. As already mentioned, ZAWA has an intelligence unit whose task it is to detect corruption. ZAWA intends to contract a totally independent person for this task.

## **4. PARK MANAGEMENT AND ADMINISTRATION - COMPONENT 1**

### **4.1. Original plans and current status**

The objective of this component is to ensure that the Project is efficiently and effectively managed by providing adequate and trained staff. It also facilitates the financial management of the Project, including the procurement of transport and office equipment. HIV/AIDS is dealt with here, including backstopping by ZAWA HQ.

This component has a significant budget (US\$ 5,175,800) that represents 23% of the overall Project budget. To date 31,4 % of the revised total budget has been disbursed, which suggests that there are sufficient funds remaining (US\$3,553,100) to complete the targets of this component.

Table 4.1 Budgets and disbursements

	<b>Prodoc Total US\$</b>	<b>Revised Total US\$</b>	<b>Planned 2005 – 2006</b>	<b>Disbursement 2005 - 2006</b>	<b>Utilisation to date %</b>	<b>Balance 2007 - 2009</b>
Comp 1	4 048 182	5 175 800	1 840 627	1 622 700	88,2 %	3 553 100

All the activities necessary to mobilise the Project have been implemented (procurement of office equipment, recruitment of staff, and undertaking review missions), although the new financial management system is still to be adopted. However, only a few of the planned training activities have been implemented.

### **4.2. Revised plans**

In respect of this component the Project has not deviated from the original Project Document, and the AWP's have captured all the intended activities.

### **4.3. Assessment of Component**

This Component has 5 major outputs:

- 1. Effective Park Management in place:** This output has absorbed 24% of the Component budget (~US\$1,267,831) and is largely responsible for procuring



office equipment, conducting supervisory and annual reviews and maintaining vehicles (~US\$583,000) and equipment (~US\$130,000).

2. **Recruit, remunerate and train Park staff:** The budget for this output (~US\$2,900,00) accounts for 56% of the component budget. Project staff (Park managers, accountants, plant supervisors and procurement staff) cost approximately US\$1,61 million while the budget for training of WPOs (100 per year for three years) is approximately US\$929,000. This latter seems excessive, especially as it is not clear whether this training is aimed at only KNP WPO staff or other ZAWA staff not associated with the Project. Similarly it is difficult to justify the budget for Activity 1.2.9: Training engineers in civil works for US\$ 45.000 – the Project should be employing experienced professionals who do not need this addition training.
3. **Financial management systems enhanced:** This output is responsible for the preparation of the annual work plans and budgets, and undertaking internal and external audits. The Project has put in place the management systems to monitor and manage the Project finances, however, although the Project has procured the Sun System accounting software and hardware, and trained the Assistant Accountant in its use, it has not yet succeeded in establishing the system at the Regional and AMU level. The Project is still relying on the existing ZAWA, World Bank and government systems, which is unsatisfactory if tight control of the finances is to be achieved.
4. **Mainstream Gender and HIV AIDs:** Satisfactory progress has been made in creating HIV and AIDs awareness amongst all staff in the Project.
5. **Project output delivery enhanced (HQ Backstopping):** 17% (~US\$892,000) of the component budget is allocated to this output. This is excessive given that this Project is advocating decentralisation and should be managed from the Regional level. A greater proportion of this budget (~US\$388,000) is earmarked for HQ-based Project staff (Project Accountant, Procurement specialists and officers) and maintaining HQ vehicles (~US\$116,000). With the closure of the SEED-funded Mosi- Ooa- Tunya NP Project, there is no longer the necessity to retain all these staff. In addition, ZAWA HQ benefits from a portion of the patrol day allocation (US\$4.5) that is designed to cover its day-to-day backstopping responsibilities. The budget for this component should be reviewed in view of these changes.

#### 4.4. Conclusions

- Efficiency

The Project start-up progressed smoothly with the two internationally recruited Park Managers in place by January and February 2005 respectively. The remaining staff were recruited during the course of the year, however there has been a large turnover of staff (accountant, procurement officer, plant and maintenance specialist, vehicle mechanic) resulting in vacancies at key positions. The turn over of staff at the Regional office (3 Regional Managers in 2 years), and the restructuring of the ZAWA Directorate had a negative impact on the performance of the Project in the first 18 months.

Although beyond the control of the Project, the delay of approximately 18 months in procuring the vehicles affected the efficiency of the Project.

The requirement to service the vehicles every 5000km in order to maintain the warranty results in a great deal of unproductive time and mileage being incurred. The cost effectiveness of this should be reviewed – it may be more efficient to have the vehicles serviced on site by the agents.

The fact that it has not been possible to accommodate the Park Manager at Chunga (and later the plant and maintenance specialist) has been disappointing.

- Effectiveness

Despite the problems with procurement, this component has been effective in mobilising the Project and putting in place the administrative procedures to prepare annual work programmes and budgets. The provision of equipment, vehicles, computers etc. and the greatly improved communication facilities as a result of the internet facilities installed at the Regional office and two AMUs, has greatly enhanced the effectiveness of the KNP management. However, it is too early to determine the achievement of Project objectives, considering that major equipments have just been procured.

- Impact

The slow progress with procurement coupled with the changes that have taken place at the Regional office and ZAWA HQ have dampened the impact of the Project. However it can look forward to improving its position now that it has acquired all the necessary equipment and has an established management “team”.

- Sustainability

Although this issue is raised elsewhere, the high cost of the Park management and administration component is not sustainable.

- Particular concerns to be investigated

The budget for this component should be reviewed with the objective of reducing unnecessary overhead expenditures. This aspect should be dealt with when the Business Plan for the Park is completed.

The Project should re-examine the necessity of retaining the Project Accountant and Procurement Specialist at HQ, and the Plant and Maintenance Specialist at the AMU levels.

## 5. INFRASTRUCTURE DEVELOPMENT – COMPONENT 2

### 5.1. Original plans and current status

A brief summary of the original and revised budgets together with the planned and actual disbursements to date is set out in Table 5.1. As can be seen Component 2 has the distinction of being the least satisfactory component to date in terms of effective implementation.

Table 5.1 Plans and disbursements

	<b>Prodoc Total</b>	<b>Revised Total</b>	<b>Planned 2005 - 2006</b>	<b>Disbursement 2005 - 2006</b>	<b>Utilisation to date %</b>	<b>Balance 2007 - 2009</b>
Comp 2	8 675 066	11 124 700	3 659 460	596 800	16,3 %	10 527 900

There is a considerable increase in the budget for the infrastructure component in relation to that estimated in the Project document. The net increase is approximately US\$ 2,450,000. This is the result of a major re-design of the road network. For example:

- The rehabilitation of the northern sector of the Spinal Road (Chunga-Lufupa-Moshi) is included in the budget. In the Prodoc this was assumed to be funded through ROADSIP II and was not therefore included in the Project budget.
- In addition some access and secondary roads (including some sections of the boundary roads which have been reclassified) have been earmarked for upgrading, and also
- The budget for engineering services has been substantially increased.

On the other hand the interventions on most sections of the boundary roads, and game viewing roads have been down graded to merely annual grading. Also there has been a considerable scaling back on new housing construction. The combined result of these changes is a net increase in the component budget.

To quote the Project Document; the infrastructure component “is the most demanding of all and one that will require a high level of coordination and commitment, especially in the early stages of implementation.” Events have subsequently borne out the truth of that statement.

Prior to the commencement of the Project, the housing and office accommodation at park headquarters, gates and outposts were in a very poor state due to the fact that no maintenance had been undertaken for many years and, in the case of some of the outposts and parts of Chunga, also as a result of vandalism. The road infrastructure also had been neglected for many years and only a small proportion of roads were usable even in the dry season. The Ngoma-Chunga road, part of the spinal road, was impassable –due to washouts at bridges culverts and drifts and had been abandoned for many years. Because of this the Park was in effect physically divided into two parks.

Boundary roads were no longer maintained and east-west roads along the watersheds had become overgrown with vegetation and had been reclaimed by the bush.

Hence, because effective management of the Park requires a functioning infrastructure, the staff housing, offices and roads required major rehabilitation and renewal.

The Infrastructure component has six outputs designed to re-establish the Park infrastructure and rehabilitate the road network:

- Output 1: Park Staff housed in acceptable office and house accommodation and Park Gates in place
- Output 2: Good welfare and staff training facilities offered to staff, and boat jetties and historical sites rehabilitate
- Output 3: Major Access roads to the Park in place. (This output is outside the jurisdiction of the Project and no budget provision has been made for it)
- Output 4: Park roads infrastructure rehabilitated and maintained
- Output 5: Park airfields fully functional
- Output 6: Park equipped with plant and machinery necessary to maintain infrastructure

#### ***5.1.1. Output 1: Housing Offices and Gates:***

The extent of the existing housing infrastructure was based on a survey carried out by the Kantipo Action Plan in 2002. The existing housing, offices and gates are summarised below:

In order to support the planned Park establishment, additional housing and office accommodation were required. All existing buildings and gates needed rehabilitation and in addition a substantial numbers of new housing and offices were required. A summary of the existing housing and offices estate together with the planned new buildings and new construction is set out in Table 5.2. The planned budget for the component output was K1, 923,200

Table 5.2: Planned Housing Construction

Existing Buildings		Planned construction	
Item	Number	Number	Item
Office Blocks	33	5	New
		4	Renovations
Assorted Rooms and Stores	21		
Staff Houses	170	8	High
		14	Medium
		265	Low
		5	Main Gates
		8	Other Gates
		In this phase new low cost housing construction would be limited to 130 houses	

#### 5.1.1.1. Work Carried out to Date

A brief summary of the main work items under this output which have been carried out to date by both AMUs is described herebelow:

- 2005

We have not had sight of any Annual Work Plan (AWP) for 2005. The Annual Report for 2005 lists 13 activities scheduled for that year. Of these one had been completed, four had been partly completed, four had commenced or procurement had been set in train, and four had not been done or were deferred. In summary:

- A set of tools has been obtained for both AMU's.
- No work has yet been done on the workshop rehabilitation. This is now expected to be carried out in 2007.
- A 65 KVA Diesel generator has been installed at Chunga, but cabling not yet installed.
- Rehabilitation of offices at both AMUs was commenced.
- TORs for water supply and reticulation bidding documents were prepared and bids sought.
- Preparation of BOQs and contract documents for renovation of 2 guesthouses at Chunga and Ngoma completed and funding being awaited. This appears not to have been implemented.
- Garbage collection at both AMUs commenced.
- Preparations for staff housing rehabilitation contracts also commenced in conjunction with the procurement office at ZAWA HQ.
- Bids were received for the Feasibility Study on Relocation of Chunga HQ.

- 2006:

The AWP for 2006 listed 12 activities for action. Of these 3 have been completed, three have been partly completed, three have been commenced or procurement is in hand and three have not been commenced or have been deferred. In summary:

- Boreholes have been drilled (6 in the Chunga sector and 3 in the Ngoma sector) but water reticulation has not yet been done.
- Signs have been made but only a few have been put in place.
- A study has been undertaken to determine the feasibility of moving the Chunga AMU HQ to a site near the Hook Bridge outside the park. The findings have recommended that the HQ be retained in its current location.
- A number of housing and office rehabilitation contracts including one for the rehabilitation of the Training School at Chunga have been awarded (see output 2 below) and are ongoing at present. These are summarised in Table 5.3
- It is expected that a number of additional housing rehabilitation contracts in various locations will be awarded in the course of 2007.
- A consultancy for the architectural and engineering design of staff houses office blocks and gates has been advertised. It is expected that the consultancy will be completed by Sep 2007. The associated works contract is expected to commence in Mar 2008 and be completed by Apr 2009. The Scope of the proposed contract is as follows;
  - 10 medium cost houses
  - 55 low cost houses
  - 3 office blocks
  - 5 main gates
  - 6 other gates.

This will complete the construction of new gates, office and housing under the Project and supersedes the original construction plan as set out in the Prodoc.

#### ***5.1.2. Output 2: Good welfare and staff training facilities offered to staff, and boat jetties and historical sites rehabilitated***

The continued training of Park Staff and securing their welfare is an intrinsic element of the Project. The improvement of basic schools and clinics for staff and their families at both Ngoma and Chungu was included, as well as the rehabilitation of Chunga WPO Training school. This output also included the building of a boat jetty at Chunga and the rehabilitation of historical sites e.g. Hippo Mine.

The original budget for the output was \$55,600.<sup>7</sup> It has since been increased to \$158,100.

A contract for the rehabilitation of the WPO Training School, contract amount, K179,000,000 has been awarded and is ongoing. The scope of the work includes rehabilitation of the classroom block, two dormitory blocks and completion of another dormitory block, and a new ablution block. It is expected that this will be completed early this year. Details of this contract are also summarised in Table 5.3

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<sup>7</sup> In the cost breakdown for the various component inputs, the total cost comes to only \$37,600.

No other work has been carried out to date under this component output. The rehabilitation of Ngoma basic school is being carried out in 2007 under Output 1 of this component. The rehabilitation of boat jetties has been deferred until 2007.

Table 5.3: Summary of Staff Housing and Office Rehabilitation Contracts

Chunga AMU						
Description	Contractor	Contract Price	Progress	Contract Period (weeks)	Scope	Remarks
1. Renovation of Junior Staff Houses. Chunga	Phiri & Sons Mumbwa	K190,000,000	Practical Completion	12weeks +2ext		6month maintenance period
2.Renovation of Junior Staff Houses Tatayoyo	Nampundwe Enterprises	K106,000,000	30% completion according to PMS	11 weeks	11 houses + 1 office (16m <sup>2</sup> ) Office design on site.	5 weeks on site. Expected to be late. Inspected this site. Nowhere near 30% work done.
3. Renovation of WPO Training School	Mandika Contractors Kaoma	K179,000,000	Dormitories and Classroom blocks practically complete.	16 weeks	Rehabilitation Classroom block Rehabilitation two dormitories Ablution blocks	Commenced Nov 06
4. Nalusanga	Eden Contractors and general dealers Mumbwa	K116,000,000		10 weeks	Rehab of Rangers House Office block and 6 junior staff houses.	
Ngoma AMU						
5. Rehab of senior staff houses Lot 1	Dokery construcion	K183,564,492	40% completion	-	Rehab of 3 Senior staff houses	
6. Rehab of senior staff Houses Lot 2	Dokery construcion	K198,312,608	20%completion	-	Rehab of 3 Senior staff houses	



#### **5.1.3. Output 3: Major Access roads to the Park in place**

Three roads provide access to the park namely the M9 (Lusaka-Mongu), which bisects the park and accesses the Chunga area, the D714 (Kalomo – Dundumwezi) which provides access to the Park from the south and D769 (M9 – Itezhi Tezhi), which links Ngoma and Itezhi Tezhi to the M9.

The work on the M9 is completed from Lusaka through to Tatayoyo and beyond. This has reduced the journey from Lusaka to Kafue Hook to a pleasant trip of about three hours on a good road, and is a substantial boon to the park in terms of management and revenues. The engineering feasibility study has been completed on the Kalomo-Dundumwezi road including the continuation on to Itezhi-Tezhi, but no physical work has been done. The latest information from RDA is that there is a budget allocation for the construction of the Kalomo-Dundumwezi section in 2006 sufficient to construct a mere 2km.

Although an engineering study has been carried out on the D769 there is alas no budget allocation in the RDA programme for this year. The status of this road has a major influence on the management and the revenue potential of KNP. At present it is a hindrance to the development of tourism in the Itezhi Tezhi area and the southern sector of the Park.

#### **5.1.4. Output 4: Park roads infrastructure rehabilitated and maintained**

In order to achieve the Project objectives, an extensive road rehabilitation programme was planned. Because of the existing state of the road network in the Park, this in effect has meant that virtually all roads will require some kind of intervention.

The new and improved road network will be anchored on to the main north-south road (the Spinal Road) through the Park. The southern 170km section of this (Ngoma-Chunga) had not been in use for about twenty years due to washouts of bridges and drifts at numerous river crossings. On the other hand the northern section (Chunga-M9-Lufupa) has been kept open for the dry season throughout the years with Government Funds and with the assistance of Lodge Operators in the northern sector. This has enabled limited tourist activity to be maintained

In the Project Document the plan was to upgrade this road to all weather standard – preferably tarred. All secondary roads and game viewing loops would link into this road.

The costs relating to the Spinal Road were expected to be met by Donors under the auspices of ROADSIP II. In the event only the southern section, Ngoma-Chunga-M9, has been funded.

The planned length of the Spinal Road – 389.1km -was undoubtedly too ambitious for this phase of the Project. However the core section, Ngoma-Chunga-Lufupa-Moshi remains a “*sine qua non*” for the effective management and exploitation of the tourist resources in the Park.

The list of roads scheduled in the Prodoc for intervention is set out in Table 5.4. In addition to the Spinal Road, there were game viewing roads, boundary roads, connecting roads and firebreaks/tracks classified according to their function. Although

the actual planned intervention for each category of road is not explicitly set out, it can be interpreted from the Prodoc text and the unit prices in the budget.

- The spinal Road was intended to be all-weather, gravelled or tarred;
- The boundary roads were intended to be near all weather with gravelling only where necessary – some roads requiring more gravelling than others due to differing soil conditions;
- Connecting roads were generally old management/firebreak roads reinstated with some new drainage works where necessary;
- Game viewing roads were existing tracks, some recently put in by lodge operators, which were to be lightly graded with minor drainage works with a view to extending the game viewing season.

Table 5.4: Original Planned Road Construction

Road	Length (Kms)				
	Main Link	Game Viewing	Firebreaks	Boundary Roads	Connecting Roads
Spinal Road	389.1				
<i>Boundary Roads</i>					
Northern Boundary				95	
South west Boundary				200	
Tatayoyo-Lushimba				78	
Lushimba0D310				40	
Nalusanga-Kabulushi				30	
<i>Connecting Roads:</i>					
Edge Busanga Plain - Lushimba					72
Spinal Road – Katobo					78
Spinal Road –Mafunta					58
Spinal Road – Katoka					23
Nkala South – Kaunga					21
Cattle cordon Road					84
Moshi- Ntemwa					25.0
Ntemwa - Mazoshi					34
Moshi-Tree Tops-Edge Busanga					33.5
<i>Game Viewing Roads</i>					
Chunga Loop Roads		80.0			
Ngoma Loop Roads		159			
Lufupa Loop roads		16			
Lunga Cabins Loop Roads		60			
Kafwala Loop roads		50			
Busanga Loop roads		51.0			
Ntemwa Loop Roads		13.0			
<i>Firebreaks &amp; tracks</i>			724		
Totals	389	429	724	443	428.5

In the Prodoc for budgeting purposes, these roads were then lumped into the following categories; boundary roads; secondary access and connecting roads; seasonal and all weather game viewing roads and firebreaks. A breakdown of the original budget is set out in Table 5.9 below.

#### *5.1.4.1. Work Carried out to Date:*

Little progress has been achieved under this component output. Most of the proposed roadwork rehabilitation requires engineering input for the design phase and it was realised that this would have to be outsourced. Therefore no major road maintenance or rehabilitation works were undertaken. The rehabilitation works also require outside consultants and contractors for implementation as well as design.

Terms of Reference had to be prepared as part of the procurement process. As recorded elsewhere, a steep learning curve was involved and progress was slow. However some minor road maintenance works were undertaken or overseen by the Park AMUs in the period:

##### Spinal Road (Ngoma-Chunga):

The consultancy for the feasibility and design study of the South Spinal Road (Ngoma – Chunga – M9) was awarded in March 2006, and the Initial Report including the Feasibility Study has been submitted in Sep 2006. The engineering and construction costs of this road are being funded separately by the Nordic Development Fund. No time schedule for implementation has been proposed in this document, but it is assumed that construction work will not commence until at least the latter part of 2007. The report recommends that the road is constructed with gravel surfacing and 5.5m formation width (this includes shoulders), and that the terminal points are the M9 in the north and Musa Gate in the south. These recommendations are based on a number of key assumptions:

- i. Chunga HQ remains in its present location (already decided) and
- ii. The Dundumwezi – Itezhi Tezhi road is not constructed sooner (this is now unlikely).

It should also be noted that the economic feasibility of the proposed spinal road construction is based on the successful completion of the rehabilitation of the D769, and the implementation of the Park internal road infrastructure improvements planned under this Project.

The estimated construction cost of the gravel road option is \$13,807,508<sup>8</sup> for a total length of 180.3km.

A brief summary of the principal road activities carried out to date are set out in the following paragraphs: This information has been obtained from the annual reports for 2005 and 2006, and discussions with the Park managers and Plant and Maintenance Supervisors.

- 2005

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<sup>8</sup> It is noted that the pavement structure recommended consists of a base layer of 150mm and a subbase layer of 150mm. This is quite a high strength pavement considering the type and density of traffic anticipated and considering the generally good natural drainage conditions along the route. There may well be potential for cost savings on the pavement structure.

Minimal road maintenance in 2005 was carried out under the existing arrangements that had prevailed for many years i.e. the Lodge Operators taking the initiative, as Park Management had at that stage little capacity for such activities.

Maintenance programmes were formulated in 2005 for implementation in 2006. In the event they were not implemented due to the piecemeal arrival of the road maintenance plant.

#### Chunga AMU:

The M9-Lufupa road was graded. A contract was awarded under the auspices of ZAWA HQ for grading (described as light grading) of M9-Lufupa road (100km). It is reported that additional grading of access and game viewing roads beyond Lufupa was also carried out, presumably at the expense of the Operators in the area. The Chunga AMU took little part in this exercise other than confirming completion of the ZAWA HQ contract.

The Mukambi Lodge operator graded the Chunga Loop roads using a towed grader. Fuel was provided by the Chunga AMU from Project funds.

The Moshi-Kabanga road was not graded in 2006.

The Tatayoyo-Lushimba Boundary road was cleared and lightly graded by one of the safari operators.

#### Ngoma AMU:

It is reported that no work on road maintenance has been carried out in Ngoma AMU due to lack of machinery in the area.

- 2006,

#### Chunga AMU:

Contract Bidding Documents for the grading and spot gravelling of roads including the M9-Lufupa and Chunga Access and Loop roads were prepared by the Chunga PMS. Bids were received, evaluated and a contractor selected. It is reported that another contractor who had not bid was awarded the contract. This was carried out and some repairs to the M9-Chunga road were also carried out using milled material from the M9. It is not known who graded the Lufupa and Lunga Cabins area game viewing roads.

As for the previous year the Chunga game viewing loops and the access road to Mayukweyukwe Camp were graded - courtesy of Mukambi Lodge, with Chunga AMU supplying the fuels. In addition the Mayukweyukwe – Mukombo loop was cleared but not graded.

Repair work to the wooden decking on the two bridges on the Lufupa river at Moshi was also carried out late in the year.

#### Ngoma AMU:

A bridge on the Nkala river at Ngoma was built to replace the old vented causeway. There were serious design errors involved, resulting in the waterway area being inadequate. The approach embankment, which was lower than the bridge deck was consequently overtopped and a major breach occurred. Access to

Ngoma has in the meantime been secured and preparations are being made to undertake permanent remedial works.

The game viewing loops between Ngoma and Site 13 have been graded with the help of Howard Cook Safaris. Other minor road maintenance works involving the use of a rehabilitated tow grader and hired tractor, together with a drag grader made at the Ngoma AMU, have been undertaken on the Musa Gate-Ngoma access road and other local game viewing roads in the Ngoma area in 2006.

An engineering consultancy package was advertised in Mar 2006, with bids being received in January 2007. The consultancy involves the design of interventions for a package of internal access and secondary<sup>9</sup> roads and two airfields. A summary of the roads (the airfields are dealt with elsewhere) included is set out in Table 5.5 below.

Table 5.5: Access & Secondary Roads Scheduled for Construction 2007-2009<sup>10</sup>

	Category	Length (Kms)	Comments
Hook Bridge (M9) – Lufupa	Access	80	Part of the Spinal Road
Lufupa – Moshi	Access	30	Part of the Spinal Road
Moshi – Ntemwa	Access	15	
Ntemwa – Lushimba	Secondary	30	
Lunga – Lubungu <sup>11</sup>	Access	88	
Kasempa – Hippo <sup>12</sup>	Access	25	Lubungu – Hippo?
Spinal Road – Kanunga	Secondary	50	Kaunga is on the Western Boundary
Cordon Road – Dundumwezi	Access	112	
Total		430	

The original budget for this output was \$5,508,466 which has now been revised to \$8,102,100. A breakdown of the original and revised construction schedules is set out in Table 5.9 below.

<sup>9</sup> “secondary road” is not a term that has been used in the Project Document (Prodoc). Also the term “access road” is used here in a different sense to that used in the Prodoc. However the meanings here are quite unambiguous and access road in this context includes road sections which were considered part of the Spinal road, and roads which were termed boundary roads in the Prodoc.

<sup>10</sup> Included also are the upgrading of two airfields Ngoma and Chunga which are dealt with in Section 4.1.5

<sup>11</sup> It is difficult to reconcile the road length given here with the situation on the ground. The distance given here would indicate that the route to be followed would be Lubungu pontoon- Lupemba (along the D181- 49kms), then west across the Lunga river to Lunga Cabins Lodge– another 12 kms yielding 61 kms total. This is somewhat less than 88kms. A new pontoon would be required on the Lunga river at this crossing.

<sup>12</sup> This must be a misprint as neither the places or the distance can be reconciled on the map. Kasempa may be a misprint of Lupemba. However it is more likely that this is Lubungu-Hippo which is approx 25km. The road is not in any case included in the budget.

### 5.1.5. Output 5: Park airfields fully functional

It was planned to rehabilitate and/or upgrade nine airfields, five existing and four new (see Table 5.5). The budget provided for this component was \$40,300

#### 5.1.5.1. Work Carried out to Date

In 2005 it is reported that existing airfields at Ngoma, Chunga and Hippo have been “widened and maintained”. It is not clear who carried out these works. In the case of Hippo it is presumed that the work was done by the Hippo Lodge Operator.

Table 5.6: Airfields Scheduled for Improvement		
Airfield	Status	Comment
Dundumwezi	New	Would be mainly for management purposes
Ngoma	Existing	Already gravel surfaced. In good condition.
Between Kamano & Katobo	New	Would be mainly for management purposes
Chunga	Existing	On a good site. Suitable for upgrading to all weather. Graded last year.
Lufupa	New	This would duplicate Moshi to some extent. Only one should be made all weather.
Moshi	Existing	
Hippo	Existing	Existing airfield adequate for present purposes.
Lunga	Existing	Existing airfield adequate for present purposes.
Near Mutumbwe	New	Would be mainly for management purposes

In 2006, the same three airfields plus Moshi have been described as having been “cleared and maintained”. Apart from Ngoma which is reported as having received routine maintenance by hand, Moshi airfield has been graded using the ZAWA towed grader which has been used by the Lunga Cabins Operator for a number of years. Wilderness Safaris provided the labour and fuel for this operation, while Mukambi Lodge provided their tractor.

No work has been undertaken on the other airfields and no reports are available on the state of Lunga airfield. It is however expected that the new ownership of Lunga Cabins will have this in hand.

It is noted in the annual reports for Ngoma AMU that the plan to upgrade Ngoma to take larger planes is still active. No mention is made as to the new standard required. It has to be pointed out that this airfield catered for regular scheduled landings of commercial HS748 aircraft (44 passengers) for many years in the seventies and early eighties. It is probable that the airfield geometry is adequate but an additional layer of gravel only may be required. This appears to be appreciated in the Costab budget where funds are provided only for gravelling Ngoma (and Chunga) airfields. Gravelling of either Moshi or a new Lufupa airfield would also be advisable to serve the area along the Lufupa river.

It is noted that the upgrading of Ngoma and Chunga airfields are included in the engineering consultancy, that is expected to be awarded in the near future. Construction works are expected to commence late 2007.

The budget for this component was \$40,300 but it has now been increased to \$229,800.

### **5.1.6. Output 6: Park Equipped with Plant and Machinery necessary to maintain Infrastructure.**

The plant and equipment formerly held in the park for construction and infrastructure maintenance has long since been removed or scrapped. It is necessary to provide a complete new set of tools equipment and plant to equip the rehabilitated workshops at each AMU HQ to enable the staff of the maintenance units to carry out their tasks. The plant should be capable of carrying out a limited amount of road construction/rehabilitation as well as maintenance.

The major items of plant and equipment specified for the Project are set out in Table 5.7:

Table 5.7 Major items of plant and equipment

	Delivered	Ordered
2 no 4x4 pick-up trucks for supervisors	2	
2 no 7-ton lorries		2
2 no tractors (min 75hp)		2
2 no motor graders		1
2 no. tipping trailers		2
2 no 500lt water bowzers		2
2 no 4-wheel trailers	2	
2 no tow graders	2	
2 no heavy duty grass mowers	2	
2 no savannah tow graders		
2 no heavy duty harrows	2	
2 no hand compactors	2	
2 no front end loaders		
Pipe Moulds	1	
Brick Machine	2	

The budget provided for this component was \$1,147,500, but has now been reduced to \$733,800. It can be taken that the Front End Loaders will not be procured.

At the present time only a limited number of items have been delivered to the park. The lack of equipment has of course greatly hampered any road maintenance activities being undertaken by Park Staff. It is reported that only one motor grader will be provided. In the past, three motor graders were used for park management. It is unlikely that in the long term, one motor grader and two tow graders will be able to keep up with road infrastructure maintenance; particularly if additional roads are added for new tourist concessions. The front end loaders also appear to have been omitted. This is sensible as they would only be useful as part of a road construction unit with gravelling capability when combined with at least 3 ten-ton tippers. The only other items omitted are the savannah tow graders.

Due to the lack of activity, procurement of the heavier plant was put on hold until ZAWAs policy on carrying out road maintenance “in house” rather than outsourcing was reviewed. It is not known if this review was undertaken but in the meantime we are informed that a grader is about to be delivered.

New diesel fuel tanks are also being installed. A 22,000lt tank has already been installed at Chunga. Both Chunga and Ngoma have existing underground tanks whose condition is not known. These should be examined (by the oil companies if necessary) so that a decision on what to do with them can be made.

## 5.2. Revised plans

In retrospect the infrastructure programme may have been too ambitious. With hindsight this may be true but it would have been more accurate to describe it as challenging. If a judgement has to be based on the performance to date, then even a modest infrastructure programme would have been too ambitious. In the light of this realisation and as a result of the re-focussing exercise a revised infrastructure programme and budget was prepared.

### 5.2.1. *Staff Housing Offices and gates:*

A new plan for staff housing offices and gates was prepared which contained a greatly reduced number of new junior staff housing (55 as opposed to 130). Table 5.8 outlines a comparison of the activities and budgets for both the original and revised plans.

Table 5.8: Activities & Budgets Original And Revised Plans

	US\$	
	Original	Revised
Housing Needs Assessment	10,000	26,800
Water Supply		130,200
Rehab & Equip Work shops at Ngoma & Chunga		103,200
Feasibility Study Relocation of Chunga HQ		50,300
Architectural & Eng Design of Houses and gates		134,400
Construct New High Cost Houses	120,000	824,200
Construct New Medium Cost Houses	140,000	
Construct New Low Cost Houses	650,000	
Accommodation of PMs		24,400
Renovate offices		7,300
New Gates	45,500	
New Offices	100,000	
Rehabilitation of 174 Housing Offices and Gates	309,000	503,900
Rehabilitation of 10 Housing Offices and Gates	10,000	
Electricity Installation	200,000	71,300
Garbage Collection		5,000
Rehabilitation of Ngoma Basic School		20,000
Total	1,584,500	1,901,000

The revised plan includes a number of items which were omitted from the original while at the same time reducing the scope of new construction to a more realistic extent.

### 5.2.2. *Roads:*

A breakdown of the revised road infrastructure works compared with the original is set out in Table 5.9.



Table 5.9 Breakdown of Original and Revised Budgets for Park Roads

Item	Original (US\$)	Revised (US\$)
Engineering Roads & Airfields	100,000	696,600
Boundary Roads & Beacons	3,866,466	48,900
Game Viewing Loops	880,000	97,200
Firebreaks (grading)	180,000	30,400
Small bridges		87,400
Training maintenance team	14,000	2,000
Access and Secondary roads I		4,391,800
Access and Secondary roads II	448,000	2,700,500
Signage		47,300
Totals	5,508,466	8,102,100

It can be seen that the bulk of the expenditure has been removed from the boundary roads and shifted to Access and Secondary roads. This is a correct decision.

The reduction in the budget for game viewing (GV) roads is questionable. The revised budget allows only for annual grading of GV roads. This only serves to maintain the status quo i.e. accepting that the game viewing roads will be seasonal only, as is the case at present. In the original plan it is clear that a degree of improvement was allowed in the GV roads budget. The lack of game viewing opportunities deters tourists from visiting KNP outside the dry months of June –October. An extension of the season by improving game viewing roads would enhance the revenue earning capacity of the Park. In the recent past e.g. the past twenty five years, there has in effect only been a four month game viewing season in KNP due to the usually delayed grading of the M9-Lufupa road and the early closure of the same road which is highly susceptible to a few showers in October. In principle a decision should be made to improve the game viewing roads to all weather standard “where appropriate”<sup>13</sup> and if necessary reducing the budgets for other roads (see below).

Examination of the budget for individual roads or groups of roads, a breakdown of which is set out in Table 5.10. prompts a number of comments:

- A large amount of resources are being allocated to the rehabilitation of Lunga-Lubungu road – total length of 88kms. This existing road is a designated district road (D181) and RDA is the responsible Road Authority. The road follows the Park boundary along a watershed route for much of its length. The regravelling of the road as implied from the budget allocated to it will render it all weather without qualification. The inclusion of this as a priority road is difficult to understand.

<sup>13</sup> The inverted commas indicate that in general major drainage structures would not be built (for example a GV loop road could for the time being become two separate spur roads if a major drainage line intervenes) nor would there be any attempt to cross dambo or black cotton soil areas. Also in view of the fact that only light vehicles use the GV roads a considerably thinner layer of gravel (50 – 100mm) can provide all weather access except in areas of heavy clay soils. A modest increase therefore, in the budget for GV roads can have substantial benefits.

Table 5.10: Access and Secondary Roads Rehabilitation

	Kms	Budget (\$)	
Organise tenders		10,000	
South Spinal-Kaunga	50	868,600	
Cordon -Dundumwezi	112	1,945,700	
Lunga-Lubungu I	32	555,900	
Lunga-Lubungu II	56	972,800	
Hook Bridge (M9) –Lufupa	80	1,389,800	
Lufupa-Moshi-Ntemwa-Lushimba	75	1,302,900	
Total	405	7,045,700	

- A very generous length is provided for the South Spinal-Kaunga road, which even if it includes the game viewing road along the Nkala riverside should be no more than 40kms. The choice of road remains good however as it can fulfil the function of a management road, GV road and firebreak.
- The inclusion of the Cordon road and the link along the southern boundary is a good choice. It can be considered as an extension of the Spinal road and in time connecting roads to the southern Lodge sites can be constructed. It is a well drained route albeit with a number of stream crossings – none major. The location of suitable gravel materials may be a difficulty. The budget provided should be adequate.
- The Hook Bridge (M9) –Lufupa is a strategic road (part of the original “spinal Road” and is key to accessing the currently active areas along the Lufupa river, Busanga plain and the Kafwala area. A significant length of the existing road has stretches which are 200 to 300mm below surrounding ground level, due to poor grading practices and erosion over the years. Special attention needs to be given to dealing with this problem. There are numerous river crossings which will add considerably to the cost. It is expected that vented causeways will cater for most if not all of these. These will give rise to the risk of delays due to flooding during the rains. Elsewhere reshaping and gravelling will provide an all-weather standard (subject to occasional delays at drifts). It is probable that this road will be more costly than others in the group and a transfer of resources to this may later be required. It is also strongly recommended that this road is fast tracked and constructed in 2008 (all roads in this group appear to be scheduled for construction in 2009) so that the active tourist area in the north park can have an extended their tourist season as soon as possible.
- The route indicated for Lufupa-Moshi-Ntemwa-Lushimba road leads one to think that the Lufupa river has to be crossed. This would be a major structure if the route were to be classed as all-weather or nearly all-weather. A route that would avoid crossing the Lufupa would be Lufupa-Moshi Turn off-Treetops-Lushimba, and a separate access road of 13kms to Ntemwa. Whichever route is chosen, this should undoubtedly be considered a priority road.
- The average cost per km of the interventions proposed for these roads is \$17,372. This is a reasonable estimate and should be sufficient to allow reforming the existing road cross-section and the application of a 150mm layer of compacted gravel – in essence an all-weather road in most instances.

### **5.3. Assessment of issues in TOR**

#### ***5.3.1. Overall assessment of coordination and implementation of infrastructure component***

It is clear that there were problems initially with the preparation of TOR and which may to some extent remain. The slow and uncoordinated procurement process (e.g. some plant items have been on site for a few months but cannot be used until other items are delivered) has resulted in there being little chance of making any significant impact on the road infrastructure to date. In another example, the procurement process for the internal roads consultancy, begun on 28<sup>th</sup> Feb 06; has resulted in bids being opened almost one year later on 19<sup>th</sup> Jan 2007 (this is only one month later than planned in the procurement programme). If there are no further delays the consultant's final report, which will presumably include bidding documents and BOQs, will be submitted in mid Oct 2007. According to the works procurement plan construction would commence in mid March 2008<sup>14</sup>. There are 430kms of road involved so the final completion date of April 2009 seems optimistic.

It should be noted that for the example quoted the procurement is only one month behind time. This serves to emphasise that in a five year project, efficient procurement is paramount and where the larger works are concerned the whole Project can be thrown out of kilter by failure to handle procurement activities efficiently. This was not foreseen in this Project and the net result is that at the halfway stage the impact falls far short of expectations.

The Housing infrastructure activities have fared somewhat better due to the revision of the "shopping" thresholds and therefore procurement takes up a significantly shorter lead-in time. It is noticed that packaging of the housing rehabilitation contracts appears to have been deliberately tailored to fit the threshold. Further comment on the pros and cons of this practice has been included elsewhere, but there is no doubt that the practice has helped to speed up implementation and in providing opportunities for local small contractors. Larger housing construction projects would benefit from casting the net wider.

#### ***5.3.2. Adequacy and performance of infrastructure staff and equipment resources***

The key infrastructure staff are the Plant and Maintenance Supervisors. They got off to a bad start with the initial difficulties in preparing TORs and procurement procedures although perhaps only a minor portion of the blame for the latter may rest with the PMSs. Nevertheless the TOR for the new Housing Offices & Gates were turned down by WB and a Consulting Architect was recruited to prepare the TOR.

The PMS at Chunga never managed to get his housing sorted out. In Nov 2005 he was still living in Lusaka, and his family remained in Lusaka throughout his tenure on the job. This unsatisfactory state of affairs was pointed out by the Nov 2005 mission and instructions were issued to fast track the construction of senior staff houses at both AMUs. This does not appear to have been acted on. The Chunga PMS was provided accommodation at Chunga Safari Lodge with alternative accommodation at Mukambi Lodge about 30kms from Chunga HQ, when the Chunga Safari Lodge was full. During the 4-day period of the Mid Term Review mission, he was being accommodated at Mukambi Lodge although there were few if any visitors at the

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<sup>14</sup> As indicated above the budget anticipates disbursements for construction occurring only in 2009.

Chunga Safari Lodge (The lodge at the time appeared to be undergoing renovation). He left for Lusaka every Friday returning on the Monday or Tuesday. His effectiveness was therefore greatly reduced. The PMS at Ngoma got his housing sorted out earlier and is accommodated at Ngoma HQ.

There is evidence of poor supervision in at least two contracts namely i) that for the Tatayoyo housing where the Project is already past the original completion date with very little work done without any evidence of actions being taken by the supervising engineer to put the contract back on track,<sup>15</sup> and ii) the bridge at Ngoma, where major deviations from the contract drawings have been allowed and a poor standard of workmanship has been accepted.

In terms of outputs the adequacy of the Infrastructure Staff must be questioned. However there are extenuating circumstances when one considers the lamentable state of the procurement in the first year of the Project.

There was some difficulty in preparing TORs for the consultancies for these works. The fault for this must lie with the Park staff and ZAWA HQ. There was also a lack of capacity to handle the procurement programme as indicated in the minutes of the review mission of Nov 2005.

At the present time there is only a small force of road maintenance equipment on site. This has been there for some months but is unusable as the tractor, which is essential for its use is not yet on site. The prospects should however improve considerably with the arrival of the motor grader.

As at present structured there is justifiable doubt that the maintenance team are capable of undertaking the regular annual road maintenance efficiently. Further comments relevant to this issue are included in our conclusions below.

### ***5.3.3. How procurement has facilitated and/or hindered infrastructure rehabilitation and construction***

Procurement issues are dealt with in detail in section 3.3 above. It has to be recognized that formal procurement procedures are an essential element in the implementation of a Project of this nature. Each funding agency may have its own procurement rules. In this Project WB procurement guidelines have to be followed. When the procurement procedures are carried out correctly, the result is improved efficiency and enhanced transparency.

Appropriate thresholds are however necessary to facilitate simplification of the steps involved in procurement where the procurement involves relatively small amounts of money. The introduction of revised thresholds for 'shopping has helped the procurement process on this Project.

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<sup>15</sup> Information supplied by ZAWA after the submission of the Draft Report states that the this contract was in the process of being terminated at the time of the review mission. This contrasts with the statement of the PMS to the review mission in an interview on 15th Mar 07 that consideration was being given to extending the contract.

#### **5.3.4. *Assessment of quality of works and value for money***

Contract documents prepared by the PMSs are poor, and fall short of what should be considered a professional standard. This is in contrast to the generally high quality of documentation produced by the Park Managers.

A spot check on the supervision of Ngoma Bridge also revealed that contract administration in the construction phase was also poor. More detailed comments are set out in Appendix 4.

The tender documents for the Training school were examined and generally found to be arithmetically in order, although the item numbers were mixed up. One overpayment was noted in the first payment certificate and repeated again in the second, this should be rectified in the next payment. The quality of documentation in both the contract documents and the payment certificates is poor with numerous typing errors. In addition there are a number of alterations to the figures entered in the contract document BOQ. These need to be countersigned by the parties to the contract.<sup>16</sup>

There have been few infrastructure projects undertaken and completed to date.

The majority of projects consisted of housing rehabilitation/renovation. One bridge construction project was undertaken. Not all documents were available for examination

An inspection of the housing rehabilitation works at Chunga was undertaken in the company of the PMs and Contractor. At Tatayoyo the works were inspected in the company of the ranger. A brief unaccompanied viewing of the works at the training school was carried out. Nalusanga was not inspected.

A detailed inspection of the Bridge and housing under rehabilitation at Ngoma was undertaken with the PMS. Table 5.11 summarises our findings and comments with regard to these works.

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<sup>16</sup> The document examined may be an original. It may be possible that the alterations are countersigned in the original documents held by the contracting parties.

**Table 5.11: Summary of Observations made during Site Inspections**

AMU	Works	Quality	Value for Money
Chunga	Rehab of 37 Houses at Chunga	Acceptable	Average cost per house = K5,135,135 .which may be reasonable value for money.
	Rehab of 1 House at Tatayoyo	Too little work done to date to evaluate	On the basis of the contract price of K106m This seems expensive even though it includes a new office
	Rehab of Training School at Chunga	acceptable	Brief inspection indicated satisfactory standard of workmanship. <sup>17</sup>
	Rehab of House and gate at Nalusanga	Not visited	
Ngoma	2 contracts Rehab of 8 senior staff houses	Work only in early stages as yet.	Too early to judge
	Bridge at Ngoma	Poor	Poor

### ***5.3.5. Assessment of likely completion and measures to ensure full implementation***

The present plan will ensure full completion of the Project, but it is doubtful if this can be achieved by the planned completion date. According to the procurement plan most works will be completed in mid 2008. The exceptions are the two major infrastructure projects currently at the consultancy stage, namely the construction of staff housing and the access and secondary roads. Both are scheduled for completion in Apr 2009- just after the rains. The critical path is likely to lie with the road infrastructure activities. In the case of the roads; in order to achieve completion by Apr 2009, substantial completion has to be achieved before the rains commence in late 2008. This is very unlikely. A more likely completion date would therefore be late 2009.

In order to have a chance of completing the Project by the above estimated date, it will be necessary to split up the access and secondary road contracts into manageable packages so that each can be completed within the dry season of 2009.

### ***5.3.6. Assess the adequacy of infrastructures chosen to rehabilitate and improve given the objectives of conservation and economic development.***

The original planned infrastructure was more than sufficient to enable effective and efficient management of the Park. The outcome would have a positive effect on the quality of the experience being offered visitors to the park. In addition park revenues would be increased.

Notwithstanding the fact that the original scope of infrastructure works were probably beyond the capacity of staff to implement and would also probably have exceeded the

<sup>17</sup> It was noticed however that one wall plate which had been damaged by either ants or dry rot had not been replaced but was painted over.

budget, the revised scope of infrastructure now planned must be considered the minimum necessary to enable the Park to function as a viable entity.

The park will not develop its full potential until there are additional game viewing roads to serve the new tourist lodges which must in time be built along the banks of the Kafue between Chunga and Ngoma

The importance of the north Spinal Road cannot be overstressed and its early completion is paramount. This is vital to providing access to the northern sector Lodges throughout the rainy season. As stated above the implementation of this road should be fast tracked.

The team is concerned that there has not been enough emphasis on the improvement of game viewing loops, which in the case of individual lodges have a direct bearing on their revenue earning capacity. Only light grading is allowed for in the new budget. This will only maintain the status quo i.e. that the GV roads are dry season only and will not provide the full game viewing experience for more than a four or five month season (June-Oct inclusive). Even if the North Spinal Road is upgraded to all weather standard the full benefit of this improvement will not be realised unless the GV loops are also upgraded to provide an extended viewing season.

The TOR for the Road and airfield infrastructure design should be revisited. The requirement for roads to provide 10months access for sedan vehicles is vague. It should be clarified that the road pavement will be required to cater for light vehicles all year round while river and stream crossings should be designed to allow no more than a maximum 4-hour delay due to flooding. This will in effect result in a gravelled road with small bridges, drifts and vented causeways.

## **5.4. Conclusions**

To date the infrastructure at 16% completion in terms of disbursements, must be considered as very unsatisfactory. The reasons for this lack of progress are clear enough; lack of ability/capacity to deal with the overriding issue of procurement; also a lack of technical expertise in the preparation of TORs to the requisite standard.

Now that most of the major procurement items are in hand as confirmed by the updated procurement plans, the spotlight will fall on the field implementation of the infrastructure projects. While the new building works are either already outsourced or will be so in the coming months, there is a heavy programme of road grading work to be undertaken in the next three years. It is very doubtful that the maintenance teams as at present constituted are up to the task. Past performance indicates that they are not. Therefore a re-structuring of the road maintenance force is recommended.

A hands-on and energetic field oriented supervisor with relevant experience is essential to lead this operation. (See new organisation structure). Furthermore two experienced plant/road construction technician/foremen of ranger status should be recruited to replace the present PMSs, who so far have not shown the necessary skill and accuracy in preparing engineering contract documents nor in the supervision thereof. It is essential that these two Infrastructure Foremen as they shall be called, must be strong personalities and leaders of men with multitasking capabilities at technician level. Engineering work to cover the requirements of both AMUs can be undertaken at a higher level i.e Regional Level.

Although we would favour that ZAWA retain a strong “in house” road maintenance crew with some road gravelling capability,<sup>18</sup> because of the flexibility of this arrangement, as opposed to having to outsource a contractor for lightly gravelling short sections of road, a review should be undertaken to establish the feasibility of this option. In this review it should be taken into account that lightly gravelling selected sections of game viewing roads will need to be carried out in the near future and the alternative to “in house” implementation is to outsource to a contractor.

The Park will never become economically viable if the tourist season is not extended. It cannot be extended if the road infrastructure including a proportion of game viewing roads is not improved.

It is strikingly noticeable that the appearance of the two AMU HQs and their immediate environs hardly look any different, other than the presence of more vehicles, than they did in 2004 prior to the commencement of the Project. Two and a half years into the Project, the HQs still give a bad impression to visitors. It would not have required great resources to have tidied up the offices and particularly the immediate surroundings (grass mown/slashed neatly, hedges trimmed, roads, pathways and parking areas clearly defined and bordered etc) in that time. The Park Management is after all structured in a quasi military fashion and the least that can be expected is that the outward image of the HQs should reflect this discipline. It would also be good for morale to attend to this issue.

The economic viability of the Park is very much dependant on an adequate and well maintained road infrastructure. Successful completion of the Project will achieve a rehabilitated road infrastructure on which a viable tourism industry can be developed. With the further development of additional lodge sites, not only will an additional burden be placed on the road maintenance activities but also extension of the existing road network will be necessitated. The maintenance of the newly rehabilitated road network will be a stern test for the road maintenance unit and additional plant may in future be required in order to react rapidly to inevitable damage that will be sustained during the rains.

## **6. RESOURCE PROTECTION**

### **6.1. Original plans and current status**

The main thrust of this component is to fully equip and train the WPOs to undertake cost effective patrols of the Park and associated GMAs. This component is building on the investments and experiences made under the Extended Emergency Resource Protection Programme.

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<sup>18</sup> As at present constituted, the plant has only very limited gravelling capability. The tractor/tipping trailer units can be used for haulage, but gravel will have to be excavated and loaded by hand. This problem could be alleviated if the road rehab contracts are required to stockpile gravel material in pits for the later use of the maintenance unit. However the stockpiled gravel would still have to be loaded by hand. The acquisition of a front end loader with perhaps a back hoe attachment would attend to this problem and transform the existing unit into a viable gravelling unit.



The budget for this component has been reduced by approximately US\$3 million, probably as a result of moving the bulk of the training activities to Component 1, and reducing the procurement of patrol equipment.

Table 6.1 Budgets and disbursements

	<b>Prodoc Total US\$</b>	<b>Revised Total US\$</b>	<b>Planned 2005 – 2006 US\$</b>	<b>Disbursement 2005 – 2006 US\$</b>	<b>Utilisation to date %</b>	<b>Balance 2007 – 2009 US\$</b>
Comp 3	8,077,947	5,364,100	3,301,040	2,103,300	63,7 %	3,260,800

The disbursements have averaged approximately US\$1 million/year. If the WPO force is increased over the next two years as indicated in the AWP, the remaining budget may not be sufficient at this rate of expenditure.

Both AMUs have been able to deploy the WPOs to achieve near maximum patrol days in KNP and approximately 70% in the GMAs. Practically all equipment (vehicles, communications, and patrol gear) has been procured and as a result the patrol groups are now in the position to patrol extensively throughout the park. The resource protection data have been captured and analysed to show coverage, arrests and frequency of deployment. Only limited training and recruitment of WPOs, investigation and prosecution staff have taken place.

No progress has been made on boundary demarcation after it was established that this is the mandate of the Surveyor General.

## 6.2. Revised plans

Outputs related to training under this activity have been moved to Component 1: Park Management and Administration while the activities related to the implementation of the fire management plan have been moved to Component 4: Research

## 6.3. Assessment of issues in TOR

The Resource Protection component is now fully equipped to effectively deal with law enforcement in the KNP and its associated GMAs. All indicators suggest that illegal activities are declining in the face of the improved patrol coverage. This is demonstrated in the table below that shows that the number of serious offences/100 PMD has declined from 3.75 to 2.30 since 2005.

Tabled 6.2 Number of serious offencesIndicators of Patrol Effort in KNP and adjacent GMAs in 2005 and 2006

<b>Indicator</b>	<b>2005</b>	<b>2006</b>
Total Patrol Man Days (PMD)	34,029	36,395
Suspects arrested	349	141
Suspects convicted	162	138
Serious offences recorded	1279	865
No serious offence/100 PMD	3.75	2.30

\* Data extracted from 2005 and 2006 annual reports

Indirect indicators such as improved game sightings and less wary animals also point towards an improvement in the law enforcement efforts.

The reports and discussions at the AMU level also suggest that the investigation efforts have yielded good results. Prosecutions of suspects are still problematic and costly however, especially in the case of Ngoma that is required to transfer suspects to as far as Livingstone (Project Manager (Ngoma), pers. comm).

The vigour with which the three law enforcement units (Mumbwa, Chunga and Ngoma) together with their satellite outposts implement the Resource Protection Programme varies, and as a result one gets the impression that there is still room for improvement. The spatial maps of patrol coverage provided in the 2006 consolidated annual report shows the level of effort achieved at CAMU and NAMU respectively. CAMU have succeeded in covering most of their sector, with an emphasis on the Mumbwa GMA. There are areas in the northern sector that are poorly covered but this is likely to change once the road network is improved.

The spatial distribution of the patrol effort in the NAMU sector appears to be clumped and restricted to a small area around the patrol outposts. This may be an artefact of NAMU not having an experienced Ranger Operations for most of the year, to coordinate the patrol effort.

#### ***6.3.1. Appropriateness of procured equipment***

The Project has procured a large amount of patrol equipment for the WPOs.

**Vehicles:** The Project has purchased 13 14 Nissan Patrol 4 x 4 pick up vehicles for general use in the Park. Most of these vehicles have completed approximately 16,000km since their delivery in October 2006. The general opinion of the staff in the field is that these vehicles are not sufficiently robust for the field work, and that they are not economical on fuel (approximately 5km/litre).

**VHF communications:** The Project has installed new repeater links and extended aerials at several locations in the Park. This has greatly improved the ability of patrols in the field to communicate with each other and with the base stations. There are, however, some sectors of the Park, particularly in the northwest, where radio communications are poor. This, apparently, is a result of a poorly located repeater link at Lushimba.

The Project has purchased some hand held radios but not in sufficient numbers to equip all senior staff with radios (Park Manager, Area Warden, Rangers). It has also not yet purchased extra batteries for these radios or solar powered recharging units, which means that patrols in the field have to conserve their batteries and only report back to base twice a day. This is not the most efficient manner to manager the patrols in the field.

Each of the patrol vehicles is equipped with mobile VHF sets.

**General Patrol Gear and Uniforms:** Sufficient uniforms (shirts, trousers, boots etc.) and camping equipment (tents, ground sheets, back packs etc.) have been procured to

equip all the WPOs. The consensus amongst the WPOs and senior staff is that the uniforms have greatly improved their working environment but the quality of some of the uniforms is below standard. Similarly the back packs are too small to carry sufficient food and patrol gear for a 10-day patrol.

### **6.3.2. Recruitment and deployment of WPOs**

The existing patrol force consists of approximately 172 SWPOs and WPOs, but only approximately 112 are available for patrols. The consensus at ZAWA is that this effective patrol force is insufficient to cover the Park and GMAs. There are therefore plans to recruit an addition 85 former National Parks and Wildlife Service (NPWS) WPOs to augment the existing force in the KNP. So far only 14 additional WPOs have been transferred to the Project area.

While there is probably a need to increase the size of the WPO force, this action has serious implications for the long-term sustainability of the KNP. Additional staff means additional overheads in terms of salaries, housing and other benefits. It is understandable to bring back ex-NPWS WPOs because of their experience, but their overall age may be a disadvantage, especially in the next 2 – 5 years. It would be far more cost effective to recruit young men and women who do not have family commitments and are still agile enough to undertake the arduous law enforcement patrols.

Overloading the current establishment may be to the long term detriment of the Project. It may be prudent at this stage to review the law enforcement programme and examine ways and means to improve its efficiency and effectiveness now that it is fully operational. Above all the escalating cost of this component needs to be taken into consideration as the current scenario is not sustainable.

### **6.3.3. Training undertaken**

Apart from 12 officers who attended a 42-day refresher course, minimal training of WPOs has taken place. Rangers have received some training in GIS and data analysis, and have acquired general skills related to computers, global positioning systems and radio operations.

The Project has a considerable budget set aside for training, and has rehabilitated the Training School at Chunga. At present para-military training is undertaken at the Police facilities at Lilayi. Having made the investment in the Training School at Chunga, there is now some urgency to develop a cost effective training strategy for KNP and ZAWA as a whole. An in-house training curriculum that focuses on bush skills and general wildlife management topics, CBNRM and tourism is probably the way forward rather than a purely classical law enforcement regime.

### **6.3.4. Operating procedures (patrol days, reporting, control room, communication, procedures etc)**

The Project is expanding on the lessons learnt under the EERPP. Overall the law enforcement component has greatly improved its proficiency in planning and deploying patrol groups. The control rooms are now sufficiently equipped with the

data sheets, maps and computers to effectively monitor the patrol effort, and radio communications have improved (see above).

What is now lacking is the ability to lift the tempo of the patrol effort and put all this equipment, knowledge and experience to better use. There is a need to “work smarter” to improve the law enforcement effort and raise the reputation of the patrol force as a formidable team. Some options are:

- Use the results of the law enforcement study undertaken by the undergraduate students to reschedule the patrol effort. Test the hypothesis that 7-day patrols are more successful than 10-day patrols.
- Deploy a vehicle(s) with a patrol group to increase mobility during a 7-day patrol.
- With the excellent VSAT facilities available at the AMUs it is possible to use Google Earth satellite coverage to plan patrols more efficiently. With Google Earth it is possible to identify water sources, calculate distances between different features, plot routes and extract coordinates. This is a powerful tool that is available to the Project at no additional cost.
- The Project must make greater use of the aircraft time provided for in the budget. Well planned reconnaissance flights will provide a wealth of information on the distribution of wildlife, water, presence/absence of human activity etc. Planning patrols can therefore be made that more effective.

#### ***6.3.5. Assessment of fire management program***

This activity has been moved to Component 4: Research. No fire management programmes have been implemented. Some rudimentary kit has been purchased (fire beaters etc.) and distributed to outposts. A very small temporary labour gang has been employed to combat fires but in general nothing has been done in this regard.

#### ***6.3.6. Assessment of completion of boundary demarcation***

A limited number of boundary beacons have been manufactured and some have been installed along the western boundary of the Park. This activity however was stopped after it was learnt that ZAWA did not have authority to replace the beacons – this being the domain of the Survey General.

The western boundary road north of Tatayoyo was cleared and graded with the assistance of one of the safari operations (Wilderness Safaris).

#### ***6.3.7. Assessment of measures to control fishing in the park***

Minimal effort has been made to control fishing in the absence of the fishery management plan.

## 6.4. Conclusions

- Efficiency

There is no doubt that the Project has greatly improved the efficiency of KNP to plan and implement its law enforcement programme. Deployment of patrols in the dry season is now at near maximum capacity, and this effort will improve once the road network is established. Wet season deployment is still problematic.

Processing of apprehended poachers and other offenders is still an issue that needs to be resolved. Transporting suspects to courts as far away as Livingstone is a costly exercise, and needs to be resolved.

- Effectiveness

All indicators suggest that the Resource Protection programme is effective in reducing the incidences of illegal activity in the Park. The Prodoc offers a statement that “patrolling is expected to reduce poaching encounter levels to less than one serious incident (as defined in patrol statistics) for every 100 patrol-days.” The analysis above suggests that this index has dropped from 3.75 in 2005 to 2.3 in 2006.

The question that has to be asked is how to verify that patrol records are accurately reflecting the position in the field? In the short term this question can only be addressed by actively cross checking patrols in the field. This will require a greater effort and mobility on the part of the senior staff and a more astute patrolling regime. In the medium term the results of ad hoc surveys to determine trends in the distribution and status of indicator species and reports from tour operators will provide alternative indices on the effectiveness of the law enforcement programme. It is for these reasons that the ecological monitoring programmes under the research component need to be implemented.

- Impact

The Resource Protection component is having an impact on enhancing the status of the wildlife populations in the Park, but it is still too early to gauge the magnitude of this impact. The component has failed to make an impact in managing the fisheries within the Park as it is still waiting for the final report in this regard. However little faith can be placed in this given the poor quality of the draft report (see 7.3.3 below)..

- Relevance

The entire programme hinges on this component to raise the profile of KNP as a premier wildlife tourism destination. The international tourism industry will respond if the Park develops a reputation as being well managed and offers a quality tourism product.

- Sustainability

The cost of the resource protection component is far too high and is not sustainable.

- Particular concerns to be investigated

There are a number of issues that need to be investigated:

- The number of effective WPOs undertaking patrols needs to be verified. This data can then be used to determine whether it is necessary to increase the patrol force and if so by how much.
- The cost of providing patrol rations is escalating. This entire process needs to be reviewed.
- Alternative methods to verify patrol effort and coverage needs to be investigated e.g. The PMs undertake spot checks and visit patrols in the field to see reported evidence of illegal activities for themselves, use the aircraft to reconnoitre the Park, talk to tour operators, send in a second patrol to check on the reports of illegal activities etc.

## 7. WILDLIFE RESEARCH AND MONITORING

### 7.1. Original plans and current status

This component sets out to achieve three main objectives: undertake baseline research related to biodiversity conservation; monitor and maintain data bases on activities related to the six components in the Project and undertake specific research projects related to the management of fire and fisheries.

The overall budget for this component has been revised slightly downwards to US\$479,800, and it has disbursed approximately 52% of this budget (US\$251,100) by the end of 2006.

Table 7.1 Budgets and disbursements

	<b>Prodoc Total US\$</b>	<b>Revised Total US\$</b>	<b>Planned 2005 – 2006 US\$</b>	<b>Disbursement 2005 – 2006 US\$</b>	<b>Utilisation to date %</b>	<b>Balance 2007 – 2009 US\$</b>
Comp 4	512,054	479,800	305,763	251,100	82,1 %	228, 700

Expenditures have covered the procurement of specialised equipment (computers for the GIS, digital camera), consultancy studies (fire, fish, vegetation monitoring) and completing the aerial survey. Routine monitoring has taken place of the statistics from the Resource Protection component (including a useful analysis of these data by under graduates from the University of Zambia), tourism and sport hunting activities. However, the technical qualities of the fish management and fire management consultancies are sub-standard and have been rejected.

A major achievement under this component is the signing of the MoU with the University of Zambia. Draft MOUs have also been prepared for the University of Glasgow and the University of Hokkaido. The Project has also drafted the Ecological Research and Monitoring Program for the Park and GMAs and this has been presented to the ZAWA Board for approval. A road strip survey was undertaken in 2005.

## **7.2. Revised plans**

The Project has not revised any of the original plans with the exception that the responsibility of physically implementing the fire management programme has been moved from Resource Protection to this component.

## **7.3. Assessment of issues in TOR**

Ecologists are based at the respective AMU's, and through the Project have been provided with the necessary equipment and funding to undertake the majority of the research activities identified in this component. It is a concern however that these staff are the staff are not being given sufficient latitude to fully implement this component. The Project provides for two vehicles for the Research staff but these are now being shared with staff involved the CBNRM component. A cursory review of the COSTAB budgets shows that very few funds have been allocated to the Research component to undertake routine visits to the Park and surrounding GMAs. The impression one gets is that research and monitoring is regarded as a low priority office-bound activity and there is little need to travel in the field. Without guidance and mentorship, the morale amongst the staff is low, with the ecologist at Chunga showing little interest in the Project<sup>19</sup>.

Nonetheless, 52% of this component's budget has been spent with mixed results, which implies that the remaining budget will have to be carefully managed for the remainder of the Project if it is to achieve its overall objectives.

### ***7.3.1. Assessment of research and monitoring activities***

The Research staff has been engaged in various baseline research and monitoring activities, but with little supervision either at the AMU level or from ZAWA HQ. The Park Manager (Chunga) has taken the lead in preparing the ToR for the consultancy studies, and has coordinated the drafting of the MOU with the University of Zambia and preparing the Ecological Research and Monitoring Programme.

The Review Team were not provided with a copy of the MOU that has been signed with the University of Zambia, so are unable to comment on this document.

The draft Ecological Research and Monitoring Programme was prepared following a series of workshops. Apart from ZAWA staff, it is not known whether any independent resources persons or former scientists associated with the KNP attended these workshops. The draft document outlines the research policy for KNP and provides a foundation for engaging with local and international research foundations. The programme identifies research priorities and groups these under biological, socio-economic and socio-political dimensions. While this document identifies some implementation modalities, there is still a need to develop a proactive work programme and reporting structure to undertake research in KNP. Given the

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<sup>19</sup> The ecologist at Chunga was not on the station at the time of the Mid Term Review. According to the Park Manager he did not show any interest in the Project, failing to participate in the work programme or budget formulation. It is understood that this officer is also facing a tribunal for offences.

importance of the KNP in biodiversity conservation, there is ample scope to develop an internationally acclaimed research institute provided the commitment is there<sup>20</sup>.

In 2005 the Park Manager (Chunga), together with Research staff, conducted a road count survey in three different locations of the Park (Hippo Lodge, Ngoma and Nanzhila). The data provides some information on species distribution and sex ratios, but does not attempt to provide data on abundance or densities<sup>21</sup>. A rudimentary calculation of density using a mean strip width and distance travelled, or a simple abundance index of the number of animals seen/kilometre travelled would at least provide a baseline against which future trends could be measured<sup>22</sup>. This study is an example where the inexperienced ecologists based in KNP could have been mentored to provide a more meaningful report. It is a pity that the study was not repeated in 2006, especially now that the Research Component has its own vehicles – a factor that hampered the study in the first year.

### **7.3.2. Assessment of fire management program**

The tender to prepare the Fire Management Plan for KNP and the surrounding GMAs attracted several bids, but it appears that only one tender qualified. At evaluation this sole bid was rejected as being unsuitable to undertake the work. Given the poor response to the tenders, the respective AMUs suggested that the Project could develop a suitable Fire Management Plan in house. This was rejected by ZAWA HQ and the procurement process went ahead provided that the proposed Team Leader for the study was changed. The contract was then awarded to Robins Development Associates Limited.

The draft report was submitted to ZAWA in November 2006. This report has been reviewed by the Park Manager (Chunga) who has strongly recommended that the report be rejected on the grounds that it has not addressed the Terms of Reference.

This Review team fully supports these recommendations. The technical quality of the draft report is shoddy to say the least. It is obvious that the consultants have little understanding of fire management and its implications for the conservation of miombo woodland ecosystems. The report regurgitates data that have been gleaned from the literature without adding any value. The wealth of data on fire management that exists in the archives at Ngoma is overlooked, not to mention the wealth of data that one can extract from the internet. For example:

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<sup>20</sup> While visiting Ngoma the Review Team observed that a large number of files that contained historic data on the management and administration of the KNP were being processed. We were alarmed that these very important documents may be discarded. It is strongly recommended that these documents are scanned/photographed and stored electronically for future reference.

<sup>21</sup> The Road Strip Count data can be analysed using the software programme "DISTANCE" (Version 3.5 or Version 4.0) developed in 1993. These programmes can be freely downloaded from the internet together with the detailed instruction manual: Buckland, S.T., Anderson, D.R. Burnham, K.P. and Laake, J.L. 1993. Distance Sampling: estimating abundance of biological populations. Chapman and Hall, 2-6 Boundary Row, London, SE1 8HN, 446 pages.

<sup>22</sup> Besides providing an indicator of the general status of populations in the Park, this technique could also have been used to derive data for indicators 7,8,9 and 10 listed in Appendix 7 of the 2006 Annual Report.



Frost, P.G.H. 1992. *A Policy Framework for Fire Management in the Western Province of Zambia*. RDP Livestock Services, Wageningen, The Netherlands.

Godammer, J.G. and de Ronde, C. (eds) 2004. *Wildland Fire Management Handbook for Sub-Sahara Africa*. Global Fire Monitoring Center, Freiburg, Germany. 431 pages (hardback) ISBN 1-919833-65-X (Distributed by Oneworld Books: <http://www.oneworldbooks.com> or email at [orders@oneworldbook.com](mailto:orders@oneworldbook.com)).

At the very least this Fire Management Plan should have assisted the management of KNP to identify the objective of a fire management plan, the policy in managing fire in KNP and a strategy to implement the fire management plan (i.e. critical fire breaks, early burning programmes, protection of sensitive habitats, cost etc.).

The Project has recommended that the consultants address the shortcomings in their draft report. However, after reviewing this document, it is the opinion of the Review Team that this consultancy firm lacks the professional capability to produce the required output and that the contract should be terminated. It will be more cost effective to revert to a facilitated in-house workshop with technical guidance provided by experienced resource persons. This should be undertaken at no further cost to the Project.

### **7.3.3. *Assessment of fishery study***

The consultancy to assess the fishery potential of the KNP and adjacent GMAs was awarded to People Nature Partnership. It would appear that before the contract was awarded to this company, it was required to replace the experienced externally recruited Team Leader with a Zambian national. This issue has not been verified with the company.

Be that as it may, this consultancy has not in anyway delivered the required results. A critique of the (incomplete) draft by the Park Manager (Chunga) highlights its shortcomings, and the Review Team fully supports his decision to reject this report outright.

Not only was there a long delay in commencing this study (the contract was awarded in May 2006 but not started until October 2006), the consultant did not adhere to the terms of reference to the point where some sampling points were outside the study area. Furthermore, the draft report is incomprehensible and shows a lack of professionalism in its presentation.

The draft report adds no value to the management of the fishery in KNP. The Review Team has little confidence that the incumbent consultants are capable of producing the required output, and therefore recommend that this contract should be terminated. It is unclear whether the Project can recover any initial payments from this company for failure to deliver a professional product, and therefore whether it will be possible to salvage this very important study from the remaining budget.

#### **7.3.4. *Assessment of the Vegetation Study***

The consultancy to prepare the Kafue National Park Vegetation-Monitoring System (VMS) was awarded to Jastis Management and Consulting Services on 8<sup>th</sup> June 2006. The lead consultant, Dr Henry Mwima, is thoroughly familiar with KNP having worked in the Park for several years first as a Warden and later as an ecologist.

Dr Mwima has produced a vegetation monitoring system as required in his terms of reference. In addition the local staff (8 in all) has been trained in data collection and analysis. The monitoring system is comprehensive and if implemented diligently it will provide the indicators to assist the KNP management to determine various management interventions. But as pointed out in the draft report little will be gained from this VMS if data are not collected regularly and subjected to analysis.

The full range of sampling sites is still to be established. The test of the applicability of this VMS will be whether the incumbent Research staff is able to implement the programme, and whether it can be easily and consistently repeated over time.

As an alternative the report suggests that remote sensing and GIS offers a good complement to the VMS. Both AMUs have been equipped with GIS capabilities, and have been given sophisticated digital camera/videos. This provides the Research team in KNP with an opportunity to use the GIS to geo-reference digital photographs to monitor vegetation across a wide range of habitats. The GPS-Photo Link software (~US\$230) to facilitate this is readily available and can be downloaded from the internet.

#### **7.3.5. *Assessment of aerial survey***

A stratified aerial survey of the KNP and surrounding GMAs was undertaken in November 2006. The total area sampled was 59,160 km<sup>2</sup> representing 87.69% of the entire Kafue ecosystem. An average sampling intensity of 9.17% in KNP and 6.48% in the GMAs was obtained.

This survey was conducted following an intensive training programme for ZAWA staff in aerial survey techniques. Overall the planning, execution and analysis of the data was done satisfactorily. The methods used and precautions taken to avoid the well-documented pitfalls in aerial survey techniques instils a high degree of confidence in the final results.

The final report provides a comprehensive analysis of the procedures and analysis. A few minor but critical data summaries have been excluded from the report. These are:

- A table of the actual calibration data to determine the mean strip width should be included in the report. It should also be noted here that the calibration process should be repeated if the observers are changed during the course of the survey, or their seating arrangements are changed in order to determine a revised mean strip width.
- The report describes a target of 33 strata but only surveyed 26. There is no indication which strata were not surveyed and why these 7 strata could not be surveyed.

- The report should contain the transect summaries of each strata and the sightings, including data on the transect start and end points (degrees and decimal units, stratum WGS84). These data are important for future survey designs and modifications.
- Table of the overall survey flight summary (date, take off time, landing time, total flight time (hours) and stratum involved) is important for anyone who intends to plan and conduct a survey in the future and is unfamiliar with the KNP and GMAs.
- It is not clear from the report whether there was a break in the survey to allow the pilot(s) and observers a rest.
- A summary of the data analysis e.g. the calculation of N (the integer that is the total number of transects that could have been used in the survey of a stratum).

The survey team are to be congratulated on completing a difficult survey of a vast area.

## **7.4. Conclusions**

- Efficiency

The overall efficiency of this component has been compromised by the failures of the fire and fishery management consultancies to deliver acceptable results.

- Effectiveness

The effectiveness of this component could be greatly enhanced if the ecologists were encouraged to undertake more field work. The lack of enthusiasm of the one ecologist and the poor supervision/mentorship of the other also detracts from the accomplishments of this component.

- Relevance

The detailed research studies remain highly relevant to the overall management of the KNP. A considerable sum of money (several million US\$) is being invested in the KNP to re-establish its integrity “as a model of sustainable economic use and biodiversity conservation”. It is imperative that credible and professionally conducted studies are undertaken under the Research component to add credence to the overall management strategies for the KNP.

- Risk management

There is a substantial risk that KNP could loose its Research staff if they are not provided with more intellectual incentives to undertake practical research.

- Particular concerns to be investigated

The possibility of recovering the professional fees paid thus far for the fire and fishery management studies should be investigated.

With regard to the aerial survey report: The feasibility of undertaking a debrief to examine the entire process should be considered. Aerial surveys are expensive and time consuming activities and the results are critical in decision making processes at all levels. All efforts should be taken to improve the quality of the data and the reports so as to improve the confidence of the general public in these data.

## **8. COMMUNITY BASED NATURAL RESOURCES MANAGEMENT (CBNRM)**

### **8.1. Original plans and current status**

The Prodoc has three objectives, one to build capacity of CRBs, one to develop co-management with traditional fisher folk and one to enhance capacity of ZAWA GMA staff in CBNRM practices. The disbursement during the first two years is only 25,8 % of what was planned in the Prodoc. The revised budget is a reduction of 45 % compared to the original budget in the Prodoc.

Table 8.1 Budgets and disbursements

	<b>Prodoc Total</b>	<b>Revised Total</b>	<b>Planned 2005 - 2006</b>	<b>Disbursement 2005 - 2006</b>	<b>Utilisation to date %</b>	<b>Balance 2007 - 2009</b>
Comp 5	710 000	386 100	372 000	96 100	25,8 %	290 000

For one objective “To develop co-management agreements with traditional fisher folk in the Park and its surrounding GMAs” no activities were undertaken. The reason given for this was that the basis for starting these activities is the Fisheries Potential Study under Component 4, which is not finished (see section 7.3.3).

Regarding activities undertaken for the other two objectives with corresponding outputs, the Annual reports show that the Project is well under way in relation to most of the planned activities.

#### Objective 1 To build capacity of CRBs in selected GMAs in wildlife management

Four draft training manuals were formulated. These were used at a workshop that was held in Mumbwa for the newly-elected CRBs. The board members were trained in quota setting, project management, leadership, gender and development, and financial management. Realistic hunting quotas were set for the Namwala, Mumbwa, Nkala and Mulobezi GMAs. These were based on indigenous knowledge from CRBs, patrol statistics from field staff, scientific knowledge from research, and hunting performance from safari outfitters. The quotas were submitted to the Director-Research Information and Planning. Communities in three Village Action Groups of Iyanda, Basanga and Luubwe in Musungwa Chieftdom were sensitized on the importance of involving men and women in VAG governance as well as democratic elections. Following this, three VAG committees were democratically elected comprising at least 30% women.

Two studies planned under this objective have been merged – “Cost Assessment of Managing GMAs and Determine ZAWA/CRB Revenue Sharing” and “Livelihood Studies in Selected GMAs” have been merged and ToRs prepared.

Land use planning has been initiated under this objective. This is further addressed in the section below.

### Objective 3 To develop capacity of ZAWA GMA staff in CBNRM practices

The most important type of activity to meet this objective was some 50 meetings that ZAWA staff held with CRBs and VAGs. These meetings addressed a wide range of subjects such as the KNP Project, conditions of service of CRB employees, discipline of Village Scouts and review quarterly progress, issues related to land-use planning, set proposed quota for 2007, evaluate performance of safari outfitters, resolve conflicts relating to concession holders / outfitters, discuss concerns and problems with traditional fisher folks, select national and resident hunters; and to sensitize communities on importance of involving women in decision making and CRB and VAG governance.

In addition an activity to develop a Conservation Awareness Programme was initiated. AnA MoU was signed with the Baobab Trust, which runs the Tree Tops hostel for environmental education trips by school children.

Data on CBNRM activities were compiled so that they can be entered into a database. Coordinates of 90% of the projects in Musungwa, Shezongo, Moomba and Siachitema were taken so that the Project sites can be mapped using GIS.

Finally, a workshop was held where 17 x ZAWA and CRB officers were trained in effective safari-hunting monitoring, including meaningful data capturing. Consequent upon that workshop, ZAWA and CRB scouts were involved in monitoring safari hunting. Nine trips were made to monitor the activities.

Within each AMU there is usually one ranger who is also assigned to coordinate CBNRM activities. This is usually not the first priority compared to other activities, primarily law enforcement. Nevertheless, CBNRM is the only component that benefits from the technical support from the Regional Manager’s office where there is a specially qualified Extension Officer, who provides technical assistance to both AMUs on CBNRM matters, most recently on land use planning.

## **8.2. Revised plans**

The activities envisaged for the remaining period are in line with the Prodoc with a budget of US\$ 290.000 for the three years. The activities may be “lumped” together under the following headings:

Table 8.2 Revised plans per main areas

	US\$
“Traditional CBNRM” – training of CRBs, hunting quotas etc	54.000
Consultancy studies	38.500
GMA management (land use planning, zoning, workshops, databases)	157.100
Fishery co-management	14.100
Conservation awareness program	26.300

It is worthwhile to notice that under the Project ZAWA is taking up innovative activities related to comprehensive GMA management including land use planning, zoning, baseline studies and other databases.

The Review Team finds the activities and priorities for the remaining period to be in line with Project objectives. However, when it comes to the costing of certain items, it seems that some may be somewhat overestimated. This refers particularly to the estimated kilometres and per diems for activity 5.1.11 Stakeholder workshop for GMA management, 5.1.12 Preliminary visit to Kasongo – Busanga GMA and Land use plan Kasongo-Busanga GMA. 30.000 km, 26.000 km and 30.000 km seem to be on the high side.

### 8.3. Land use planning and associated activities

Under this component the Project is involved in important land use planning activities. In February 2006 a workshop involving stakeholders from all the GMAs adjacent to the park was held. During the workshop, it was resolved that land-use plans should be developed in selected GMAs. The present situation regarding land use planning in the nine adjacent GMAs is shown below

Table 8.3 Status of land use planning in GMAs

1. Mumbwa	Land use plan about to be finished. Funded by Danida
2. Namwala	Land use plan about to be finished. Funded by Danida
3. Nkala	Land use plan about to be finished.
4. Bilili	Project wishes to start land use planning
5. Sichifulo	Project wishes to start land use planning
6. Mulobezi	Next priority to start land use planning
7. Mufunta	New GMA. WWF will fund land use planning
8. Kasonso-Busanga	Land use planning not in Project budget
9. Lunga-Luswishi	Land use planning not in Project budget

The Land use planning is driven from ZAWA HQ where the overall methodology is prepared in the document “Guidelines for Developing Land-use Planning in Game Management Areas”. Actual land-use planning has been pioneered in cooperation with Danida funded project in the two GMAs Mumbwa and Namwala. The Project has, with the support of ZAWA HQ and based on the experience from the Danida project, prepared the Draft Management Plan for Nkala Game Management Area.

The “Danida approach” for Mumbwa and Namwala GMAs is slightly different from the approach for the Nkala GMA in as much that the former works through the District Council with heavy involvement of Government institutions at district level. The “Nkala approach” does not have the same wide institutional scope, being ZAWA driven with an institutionally more narrow scope.

In Mumbwa the Review Team, together with the ZAWA Extension Officer, met with the District Planner and the Danida project land-use planning experts. In Ngoma the Review Team, together with the ZAWA Extension Officer and the ranger in charge of extension, met with the two CRBs (??).

The Review Team is impressed with the technical quality of the methodology and the processes applied as well as the appreciation and comprehension expressed by the CRB members interviewed.

Notwithstanding these very important achievements and our clear recommendation that this type of land-use planning should be strengthened and continued in the Project, questions of enforcement and institutional anchoring remain to be issues to be addressed.

#### **8.4. Assessment of ZAWA's capacity to integrate in their work plan the agreements of previous supervision missions related to CBNRM**

In addition to the issues raised in the ToR and addressed above, the ToR also raises the question of to which extent ZAWA has been able to integrate in their work plan the agreements of previous supervision missions related to CBNRM.

There have been three supervision missions on the Project (November 2005, May 2006 and December 2006). In all these the CBNRM component was addressed. The main thrust of the recommendations was on land-use planning and the need to develop a coherent methodology commensurate with the buffer role and revenue making role of the GMA, to harmonize the approaches applied by different actors and to speed up the land-use planning process through a process of consultation and negotiation for zoning of 7 GMAs around KNP in 2007.

The Project has followed up the recommendations and the zoning of the 7 GMAs is included in the Revised Work Plan and Budget (AWPB).

#### **8.5. Conclusions**

The efficiency of this component is low in as much that only 25,8 % of the planned expenditure for the period has been disbursed. Furthermore, one of the objectives (“To develop co-management agreements with traditional fisher folk in the Park and its surrounding GMAs”) has not been addressed. However, with limited amount of funds used, it seems that they have been spent efficiently. With a view to the future, though, it seems that some of the budget items may be somewhat overestimated and should be monitored carefully to ensure efficient use of the funds.

It is too early to judge the effectiveness of the two outputs being addressed so far. The same applies to the impact. But nevertheless, judging from the meeting with the two CRBs and to the extent that they are representative, Project results within this component so far are encouraging, both regarding effectiveness and impact. The same observation applies to relevance, which for this component is unquestionable.

The sustainability of activities and achievements so far is highly uncertain and vulnerable. Regarding training CRBs, the capacities developed will only be with the incumbent members and hardly transferred to new members without renewed training by the Project. On land-use planning major issues related to enforcement mechanisms remain.

## **9. ECONOMIC POTENTIAL AND TOURISM DEVELOPMENT**

### **9.1. Original plans and current status**

Table 9.1 Budgets and disbursements

	<b>Prodoc Total</b>	<b>Revised Total</b>	<b>Planned 2005 - 2006</b>	<b>Disbursement 2005 - 2006</b>	<b>Utilisation to date %</b>	<b>Balance 2007 - 2009</b>
Comp 6	170 000	335 100	118 600	79 600	67,1 %	255 500

The planned output of this component is “To increase revenue generation from the Park and its surrounding GMAs”. This was to be achieved by increasing the number of beds available for visitors and developing a Business plan. The project “Opportunities for Developing KNP” identified a number of sites for development and advertised.

At the time of Project preparation there were six lodges operating inside the park totalling 104 beds – all in the northern sector. Only those operated by two operators namely Busanga Trails and African Experiences had significant occupancy rates. Hippo camp, one of those six lodges, is actually on private land. The potential income from these was \$31,000 in fixed fees and \$46,200 in variable fees (bed night fees) totalling \$77,200.

Outside the park there are three lodges catering principally to wildlife oriented clients and two at Itezhi Tezhi<sup>23</sup> that cater to the general public that include some water/fishing oriented clients that do not always enter the park. Occupancy in the latter two is adversely affected by the poor state of the D769. Only Mukambi Lodge has significant numbers of visitors entering the park.

An additional nine sites with a total capacity of 140 beds, had been advertised and let although none were operational at the time of the Project inception. Of these, Muyukweyukwe is at present operational for 12 months of the year, Hornbill dry

<sup>23</sup> Puku Pans and Kaingu Lodges on the east bank of the Kafue river, have both been operational for some time but do not at this stage have convenient access to the park for game viewing purposes.



season only and Mukambo is still being built. The potential revenue from these sites is \$50,000 annually. It was planned to have all these sites operational by Year 3.

An additional eleven sites with a total capacity of 546 beds, have been identified with a potential income of \$350,000. Many of these sites will not be viable unless the road infrastructure is developed and/or expanded. It should be noted that informal discussions at this stage indicate that the proposed 250 bed lodge included in the foregoing group is considered neither desirable nor feasible.

Sites 12 and 13, at the south west corner of Lake Itzhi Tezhi have been allocated. Five sites were advertised in 2005, but there were no takers – said to be due to the lack of road infrastructure in the Park. In fact during 2005 two TCAs were revoked because of poor roads to the sites.

It is recognised that the foregoing developments will not be sufficient to generate enough revenue to support the management of the Park in the long term. Therefore the Project has planned two strategies to improve the income generating capacity of the Park:

- **Block Tourism Concessions:**

This will involve developing a small number of exclusive tourism concessions (500-2000Ha) in selected areas of the park possibly on the left bank of the Kafue and north of the M9. This has been done in Kruger NP in RSA and in Botswana. The concessionaire would have responsibility for the management of the concession including law enforcement, infrastructure, fire control etc. At this stage a study has been commissioned and although there has been a considerable delay in mobilising, is currently ongoing.

- **Sport Hunting in the Park**

Inevitably this is a controversial issue. There are strong economic arguments in its favour and the concept is not new to Southern Africa. Areas of KNP might be particularly suitable. The principal objection is that hunting is not regarded as an acceptable tool in the management of national parks. The practical problems remain the status of current legislation and the practicalities of separating areas of the park for hunting activities.

It was planned to commission a study on the feasibility of this proposal.

It is also planned to prepare a Business Plan for the KNP. This is key to planning the long term sustainability of the park. To date no progress has been made on this. ToRs have been prepared for the Tourism Impact study, but further progress remains at a standstill.

## **9.2. Revised plans**

Other than the possibility that the 250 bed lodge may be reduced to one of about 50 beds, there are no changes to plans. The main problem with the existing plans at the moment is that activities, especially consultancies are behind schedule.

### **9.3. Assessment of issues in TOR**

#### ***9.3.1. Assessment of progress in establishing new tourism operations in and around the park with specific reference to the items listed in the Project document***

As described earlier, very little progress has been achieved to date. There are a small number of new camps and lodges either being built or in operation. Their impact to date is minimal.

#### ***9.3.2. Analysis of Tourism and Hunting and Other Revenues***

In 2005, the first year of the Project there was a significant rise in both local and foreign visitors to the Park in comparison to 2004. This probably had little to do with any activities of the Project. There was a slight drop in visitor numbers in 2006 compared to 2005 for which a number of reasons have been put forward i.e. strengthening of the Kwacha etc. The bulk of visitors come in the 3<sup>rd</sup> quarter<sup>24</sup> with only a token number in the 1<sup>st</sup> quarter. The greatly reduced numbers is a result of the restricted accessibility to game viewing routes in the wet season with visitors being confined to those lodges which are outside the park and accessible all year round.

A further interesting facet of the revenue breakdown is that in the southern sector, artisan fishing (presumably commercial fishing) is a greater contributor to Park revenues than tourism. It contributed 80.5% of the KNP South Kwacha revenues or 49.9% of total Park Kwacha revenue. In 2005 the contribution was 46.9% of total Kwacha revenues.

Enquiries at the ZAWA HQ Finance Directory has yielded the following figures related to hunting safaris as set out in Table 9.2

Although this income has to be shared 50/50 with the relevant CRBs, the revenue from these two GMAs greatly outstrips that from non-consumptive tourism in the whole of the KNP.

#### ***9.3.3. What has not been done***

The preparation of a Business Plan and a Tourism Impact study were originally programmed to be carried out in 2006 and 2005 respectively. The ToRs for the Tourism Impact Study have been prepared at Parl Management level and submitted to ZAWA HQ. No action has been taken to date. The Business Plan which is vital in assessing the future viability of the KNP, remains a major outstanding issue in this component.. As yet no progress has been made with regard to this issue. The further expansion of tourist concessions will depend on the outcome of this study and until this is done there is little further to comment on at this stage.

### **9.4. Conclusions**

Very little progress has been made on this component to date. The sale of tourism concessions is not proceeding as rapidly as hoped. It is probable that attraction of the investments is being affected by the lack of road infrastructure, together with the

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<sup>24</sup> Annual Reports: 2005 and 2006. The quarterly breakdown of visitors in the 2006 Consolidated Annual Report is given in Table 8: Trend in Revenue Generated from Tourists, KNP, Jan-Dec 2006.

uncertainty of future demands on the investors such as having to undertake road maintenance and possibly resource protection activities. These issues need to be made very clear to potential investors at the outset.

The revenues from the Park still remain pitifully low. The importance of the consumptive (hunting) revenues are obvious when the forgoing tables are compared, Little of the hunting revenue is invested in the Park. It should be repeated here that “commercial” fishing is the major revenue earner in the southern sector. No further concessions should be let until the findings from the Block Concession study and the Business Plan are to hand. It is also desirable that the feasibility of Sport Hunting in the Park is investigated.

Table 9.2: Hunting Licence Revenues KNP GMAs 2005 & 2005

		Kwacha			
		2005		2006	
code	Item	Mumbwa	Ngoma/Chunga	Mumbwa	Ngoma/Chunga
80-001	Animal Fees - Safari	826,489,560	744,819,895	750,822,500	702,293,175
80-002	Animal Fees - Local (GMA)	74,092,620	19,205,940	100,750,800	32,380,755
80-003	Concession Fees	299,009,185	313,929,300	320,295,960	613,790,000
80-011	Hunting Rights	652,500	4,082,950	15,060,250	3,347,750
80-012	Bird Licence - Safari	10,814,040	10,899,500	14,012,000	18,414,500
80-013	Bird Licence - Local		182,160	814,140	
80-014	Admin Fee -Safari				
80-015	Cites Tags/Stamps				
80-016	Import/Export Permits	4,251,660			425,160
80-017	Cert of Ownership		235,440	70,560	400,040
80-018	Sale of Trophies				
80-024	Outfitters Safari Licence	18,740,000	35,377,500		
	Totals	1,128,732,685	1,128,732,685	1,201,826,210	1,371,051,380
	Grand Total	2,257,465,370		2,572,877,590	
	US\$ @ 4,000	\$564,366.34		\$643,219.40	

## 10. COLLABORATION BETWEEN COOPERATING PARTNERS

### 10.1. Collaboration between Norway and the World Bank

The support to the Project is a joint effort between Norway and the World Bank. Table 10.1 shows the cost items and how these are being financed.

Table 10.1 Cost Items and Financiers

	ZAWA	Norway	IDA	GEF	Total
<b>Cost tab Febr. 2007</b>					
A. Civil Works		3,584,500	5,658,800	1,000,000	9,244,300
B. Equipment		1,597,600	1,091,100	168,100	2,856,800
C. Consultants			135,500	3,594,800	3,730,300
D. Training		122,700		12,900	135,600
E. Operating costs	934,700	6,669,300	207,100	322,700	8,133,800
	934,700	11,974,100	7,092,500	4,099,500	24,100,800
Excl Mosi oa Tunya	2,800	0	682,500	550,000	1,235,300
<b>Total Costtab figures</b>	<b>931,900</b>	<b>11,974,100</b>	<b>6,410,000</b>	<b>3,549,500</b>	<b>22,865,500</b>
<b>Prodoc</b>	<b>205,600</b>	<b>12,956,305</b>	<b>6,544,920</b>	<b>2,486,424</b>	<b>22,193,249</b>

The IDA and GEF support is within the framework of the World Bank project “Support for Economic Expansion and Diversification”, referred to as the SEED project. This is a major project of 29 million US\$ and four components (Tourism and Protected Areas, Agribusiness Sector Development, Gemstones Sector Development and Project Management). The tourism component is divided into two main areas, tourism and protected area management. Within tourism there are three subcomponents: (a) policy, regulatory and institutional support for MTENR and its agencies; (b) tourism investments and capacity building in the Livingstone area; (c) infrastructure for Livingstone and institutional support for Livingstone City Council. The protected area sub-component covers biodiversity restoration in Mosi-oa-Tunya and Kafue National Parks and capacity building for ZAWA.

The SEED project included an organisational set-up for the management of the protected area sub-component, which was decisive for the organisational structure for the KNP Project and the implementation of the Norwegian financed components and activities. Within this framework donor funds are deposited and disbursed on separate accounts, as described in section 3.2.1.

The KNP Project now has a total and all comprehensive budgeting, accounting and financial reporting system applying the World Bank Costtab software. This is a complicated system, but definitely to the benefit of the Project.

As Norway and The World Bank finance different budget items with different procedures for depositing of money, ZAWA has to report separately to each of these in order to obtain funds. Although this may be cumbersome, ZAWA staff does not see this as a major problem. The general feeling is that it is easier to deal with Norway, which is seen as more flexible and less rigid. But neither dealing with separate donors, nor the cooperation between these is seen as a major problem or constraint to Project implementation as seen by Zawa ZAWA staff at different levels.

World Bank staff and Norwegian Embassy staff do not see coordination between the two donors as problematic in this Project.

During 2006 the SEED project went through a refocusing with important consequences for the KNP Project.

Through 2005 and 2006 review missions of the SEED project came to qualify the implementation of the project as “moderately unsatisfactory” and a “Refocusing process” was initiated. A first step was to appoint a consultant and a “Core Refocusing Team” (mainly from the private sector) to help identify problems leading to low levels of procurement. This refocusing process was done in two phases:

- Diagnostic phase including a workshop with principal stakeholders
- Review and revision of the design and implementation arrangements to ensure that the SEED project is successfully implemented.

In January 2007 a “Refocusing Completion Mission” was undertaken. The minutes from this is still to be approved.

For the KNP Project the most important outcomes of the SEED Refocusing is that the Mosi-oa-Tunya Park subcomponent was ended and the remaining funds transferred to the KNP Project. This made it possible for the KNP Project to have the total budget given in table 10.1. This also meant that the existing organisational structure at ZAWA HQ set up to cater to the two park projects can now be modified to respond to the management needs of only the KNP Project.

Another important element in the SEED refocusing is the insistence that each subcomponent, such as the KNP Project, shall have one Project Manager, who is fully accountable for implementing the Project.

## **10.2. Collaboration with Danida**

Danida is presently executing a “Community Based Natural Resources Management Project” in the Mumbwa district to the east of the KNP, where they are working on land-use planning in Mumbwa GMA and Namwala, which includes the Mumbwa GMA. The project is working through the District Council with the participation of the ZAWA Extension Officer at RM Office. The preparation of the two land-use plans will be completed by the end of this year. Through this work ZAWA has acquired important knowledge and experience. Efforts should be made to encourage continued technical support from the Danida project in the land-use planning in the remaining GMAs.

## **10.3. Conclusion**

Donor coordination is not a major problem in this Project. Norway and The World Bank cooperate well. But there is scope for more joint efforts together with Denmark on land use planning. The Danida project “Community Based Natural Resources Management, Mumbwa District” possesses technical skills both on GIS methods, planning processes and stakeholder participation, which the Project could benefit more from if the Danish Embassy would participate more closely on this.

## **11. KNP IN THE CONTEXT OF ZAMBIAN WILDLIFE CONSERVATION**

### **11.1. KNP response to Draft 2008 – 2012 Strategic Plan**

The KNP Project was launched towards the closure of the 1<sup>st</sup> ZAWA Strategic Plan (2003 – 2007). Even at this stage it was realised that this strategic plan had served its purpose and ZAWA was in the process of reviewing its usefulness, and initiatives were in place to review the institutional capacity of ZAWA through a “change management” strategy. What were missing in this process were a review of the policy environment and consequently a review of the Wildlife Act. Overriding this entire process was ZAWA’s precarious financial situation and its debt to government (estimated at K10 billion in 2005).

A review of the performance of the 2002 – 2007 Strategic Plan recognises all these weaknesses, yet in preparing the draft 2008 – 2012 Strategic Plan, ZAWA has not faced up to the core issues that undermined the performance of the initial strategic plan. Nor has it identified a reliable mechanism to resolve its financial situation other than prevailing on government to write off this debt. Furthermore, contrary to the assumptions made in the ZAWA Business Plan, it is doubtful whether ZAWA would be in a position to service its statutory financial obligations and in all likelihood would incur debts of a similar magnitude over time.

The key over-riding issue in preparing the revised strategic plan is absence of a thorough review of the Wildlife Policy and subsequent amendments to the Wildlife Act. Currently ZAWA is mandated to manage the entire wildlife sector but does not have the human and financial resources to achieve this. The 2008 – 2012 Strategic Plan is advocating an increase in staff and promoting Public-Private Sector Partnerships to address this issue. What it fails to recognise is that there may not be the business case to justify this assumption. In particular, the heavy reliance on the GMAs as the primary source of income (through consumptive tourism) is being undermined through the rapid advance of alternative land use options. ZAWA’s continued role in attempting to manage these areas in the face of these challenges is therefore probably unsustainable.

Without there being put in place radical policy changes that transfers financial and management responsibility for these areas to local communities, and the recognition by central government that it has to play a role in meeting the cost of biodiversity conservation in its protected areas, it is unlikely that ZAWA will achieve financial self sustainability in the foreseeable future.

In its current form the KNP Project addresses the 2008 – 2012 Strategic Plan by supporting its objective to develop cost effective Resource Protection Programmes, improving the Park infrastructure and supporting initiatives to develop land use plans in the GMAs. It is not contributing to any policy, legal or regulatory reforms which in the long term are fundamental to the future sustainability of the Project.

## **11.2. KNP Project in the context of overall policies**

The current approach of donor support to ZAWA is through stand alone Projects such as SLAMU, Kasanka and KNP. In the case of SLAMU there has been considerable investment over a long period of time to reach a point where it can meet its recurrent costs. Under the current Project a similar scenario is envisaged for KNP.

The question one asks is whether this approach is the most optimal or whether donor support should focus on a sector-wide programme designed to strengthening the overall institutional capacity of ZAWA to effectively implement its mandate.

ZAWA is in a state of flux. It has not addressed the fundamental causes for its lack of performance under the existing policy environment, and through its latest Draft Strategic Plan it is attempting to maintain the status quo (some might say that it is actually reverting back to strategies that prevailed under the former NPWS regime). It still has to resolve organisational and management issues that were carried over from its transformation from a civil service structure to corporate body. Above all, ZAWA has to develop internal revenue strategies that would make it financially self-sustaining.

There is no clear answer to the future approach of donor support to ZAWA. The environment for a sector-wide support programme is probably premature at this stage. Government needs to take a proactive role in defining future policy, especially with respect to its Decentralisation Policy that is advocating empowering local communities to administer and manage natural resources.

A possible option is to adopt a three-pronged approach in which donor support focuses on policy reform at the central government level (this is to a large degree should have been covered by the UNDP reclassification programme), institutional support to ZAWA and development support at the Project level aimed at creating a conducive environment for private sector investment.

