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Strategic Environmental Assessment Of Developments Around Victoria Falls

Volume 2: Skeleton Management
Plan

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DRAFT

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**JOINT ZAMBIA/ZIMBABWE
STRATEGIC ENVIRONMENTAL ASSESSMENT
OF DEVELOPMENTS AROUND VICTORIA FALLS**

VOLUME 2 - SKELETON MANAGEMENT PLAN

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VOLUME 2 - SKELETON MANAGEMENT PLAN

1. INTRODUCTION

During 1995, a Strategic Environmental Assessment of developments around Victoria Falls was carried out by the World Conservation Union on behalf of the Governments of Zambia and Zimbabwe with the collaboration of the two lead agencies - the National Heritage Conservation Commission in Zambia and the Department of Natural Resources in Zimbabwe.

The purpose of the SEA was to make predictions about the level of tourism and other developments in an area of 30 km around the Victoria Falls over the next 10 years, i.e. to the year 2005. From these predictions, the likely impacts of hotel development and different tourist activities upon the social, economic and environmental resources were developed for four scenarios of growth in visitor numbers - low, medium, high and supergrowth. The cumulative impacts of each scenario were assessed.

The conclusions reached by the SEA were that under current conditions of planning control and resource management, the overall limits to growth and development which would not compromise the social and environmental situation, lie between the low and medium growth scenarios. In total visitor numbers this relates to a range between 563,000 and 825,000 staying visitors per year by the year 2005 in both Zambia and Zimbabwe. This represents 2 to 3 times the present number of visitors over the next ten years.

High and supergrowth scenarios would bring with them a number of economic benefits, but these would be severely offset by adverse impacts in the social and environmental spheres which would entail economic costs. At this stage, it is not clear whether these costs would outweigh the benefits, but there will certainly be a significant loss in Wilderness Value and hence revenue from tourists coming to enjoy the natural resources.

It further concluded that there was an urgent need to set up an institutional mechanism for co-ordination and collaboration between the planning and management agencies, the private sector and local communities in both Zambia and Zimbabwe to ensure that development proceeds in a sensitive and sustainable way. There was a strong emphasis on the need to address issues of poverty and equity in development of the tourism facilities. Because of the rapid rate of development, especially in Zimbabwe, the Governments requested that a Skeleton Management Plan for the whole area be prepared so that implementation of some of the management measures could be started immediately. This second volume of the SEA lays out the Skeleton Management Plan. It is stressed that as a "skeleton" it provides the bones for the full Management Plan, although there may be more "flesh" on some of the bones. Others remain in outline only due to lack of detailed information. These should be taken as pointers for future work.

The strategic recommendations of the SEA were as follows:

- 1. Take steps to limit the visitor accommodation facilities in line with the medium growth scenario as a maximum for the Victoria Falls area.** This does not mean that development should proceed as fast as possible up to that limit, but that until on-going monitoring of the situation shows otherwise, this should be regarded as the limits to growth for the whole area. The limits to growth on the Zimbabwean side are considered to be lower than the medium growth scenario, whilst they may be higher than medium growth on the Zambian side. At the same time increasing measures to protect the social and environmental conditions should be developed. Some of the measures to manage the growth of tourism for particular areas and activities are outlined in this volume. All major new

developments and the introduction of new tourism/adventure activities should require an independent EIA before being given permission or licence .

2. **Continue to promote the policies of low volume, high value tourism** in both countries, with emphasis on the continuing high Wilderness Value in the area.
3. **Provide facilities which cater for the low spending visitors**, but which limit their impact upon the resources and encourage a greater financial contribution from them.
4. **Consider the World Heritage Site as a shared resource** to be managed under agreed common policies. No further construction should be permitted within the World Heritage Site on either side, other than essential services and facilities for the management and education of visitors. The importance of the World Heritage Site should be promoted in tourist publicity, together with education facilities in the area which highlight conservation and management measures.
5. **Prepare a statutory Master Plan for Victoria Falls Town** as a matter of urgency. Finances to carry this out need to be sourced. No further developments other than essential infrastructural improvements should be considered within the Town boundary until the Plan has been approved. Mechanisms for planning out-of-town developments need to be strengthened in the meantime. Measures to discourage job seeker in-migration into Victoria Falls should be devised and implemented in an attempt to limit urban growth.
6. **Take steps towards granting Victoria Falls Town municipality status**, which would give it greater autonomy in raising finances and making planning and development decisions. This will necessarily involve strengthening the capacity of the Town Council to cope with the increased load of planning and management of the town's resources and infrastructure.
7. **Take steps to encourage the rehabilitation of the industrial sector in Livingstone**, through mechanisms such as the establishment of an Export Processing Zone.
8. **Promote hotel and lodge development in the Livingstone area**, especially within the town boundary, and within areas designated under the Development Plan. Such developments should comply with design standards and environmental guidelines set out under the Development Plan and the Livingstone Tourism Association.
9. **Strengthen the capacity of Livingstone Municipal Council** to cope with greater planning control and enforcement. Since the Council is very short of financial resources, attention to valuation of properties and services and financial management is important.
10. **Ensure compatibility of land use** between the upstream areas on each side of the River. At present there are complaints of poaching on the Zambian side, often at the expense of wildlife loss from the Zambezi National Park. Consideration should be given to designating the Zambian upstream areas as a Game Management Area with appropriate benefits to ensure wildlife protection shared with local communities.
11. **Encourage all tourist developments and activities to develop links with local communities**. This applies to both sides of the River and to both urban and rural communities. Mechanisms to allow an equitable sharing of the benefits of tourism need to be prepared and promoted. Preference should be given to proposals for new development which show a commitment to this.
12. **Set up institutional mechanisms for co-ordinating the planning and management of development in the area**. This applies to co-ordination between the different agencies within each country and across border. Such mechanisms should include participation of the public and private sectors and the local communities. Proposals for the setting up of the Victoria Falls Trust are outlined in this volume.

13. Both governments should insist that **all proposals for the river regulation and water abstraction** upstream of the Victoria Falls **should be subjected to Environmental Assessment** which include the impacts upon the flow regimes over the Falls, especially at times of low flow.

14. **Carry out a detailed study on the effects of water diversion for hydropower generation at Victoria Falls North Bank**, including the economic and environmental trade-offs incurred by the existing diversion and any mitigating measures suggested.

15. **Strengthen local cultural traditions.** Due respect and exclusive access where appropriate, should be given to the traditional sites and ceremonies of local communities. Where appropriate, and with permission of traditional leaders, such sites and ceremonies may be promoted as part of the tourist attractions.

2. SUSTAINABLE DEVELOPMENT OF VICTORIA FALLS

2.1. A Vision for the Future of Victoria Falls

The scenarios presented in volume 1 of the Strategic Environmental Assessment were based upon the assumptions of business as usual with similar levels of management and enforcement of planning controls. The picture which emerged was of progressive deterioration of the natural and social resources around Victoria Falls, as a result of steadily increasing visitor numbers over the next ten years, coupled with the developments necessary to accommodate them and keep them occupied. The threat of prolonged drought and upstream abstractions would add to the environmental degradation of a "Niagara Falls" type development.

These doomsday scenarios bring with them increasing polarisation of the rich tourist facilities and the poor, but rapidly expanding, populations in urban and rural communities. The losses in Wilderness Value would be exacerbated by increasing social problems and the inability of local institutions to cope with the provision of basic services. The unquantified threat of AIDS may deplete the capacities of both countries to manage the situation. The combination of loss of Wilderness Value with social unrest and threat of disease is a potent mixture which would put off even the most hardened visitors. If unbalanced development continues between Zambia and Zimbabwe, it is possible that local and national diplomatic relations could become strained, adding increased tension and conflict to the situation.

These scenarios of mainly adverse environmental and social changes are to some extent balanced by major positive economic changes, so that it may be argued that the extra income generated could be used to mitigate the adverse effects, to maintain the environment through stricter planning and management controls and standards, and to improve social conditions. However, this will mean a change in the present "free for all" attitude of developers and tour operators to a more responsible recognition of the limits to growth, a much more equitable sharing of benefits of tourism with local communities and indigenous business people, and a significant diversion of public sector funds into strengthening of institutions for planning and management of the natural and social resources. Because of the way in which most economic benefits of tourism flow to the private sector, it is probable that additional funds for public sector management of the resources would have to be raised from tourist levies etc.

This leads to the vision¹ of sustainable development for Victoria Falls. This is a vision in which the economic benefits of responsible tourism development are realised and shared equitably between private sector, public sector and communities. Environmental conditions may be maintained or even improved; there is no loss of biodiversity and the Wilderness Value is not changed substantially. Social conditions improve and the quality of life for urban and rural populations gets better. Society and the economy is able to cope more readily with the problems arising from climate change and epidemics.

Sustainable development involves adapting planning and management measures to the changing situation; it means limiting growth of all the different activities to the perceived carrying capacity of the natural and social resources. The perceptions of carrying capacity may change with time, with the environmental conditions, and with available resources and technology. Sustainable development thus depends upon the capacity of companies, institutions and communities to agree and adapt the strategies and management measures. Adaptive management means monitoring the economic, social and environmental conditions, so that a much clearer idea of trends can be developed. Knowing when and where to stop or change direction becomes an easier task with more reliable information.

¹ This discussion of the vision of sustainable development is based upon a paper by Barry Dalal-Clayton entitled "Environment and Ecology in Southern Africa: Current trends and scenarios to 2015" a report prepared for SIDA (Swedish International Development Cooperation Agency) by IIED (International Institute for Environment and Development). 1995.

One of the keys to sustainable development is seen as the participatory process at every level. Increasing collaboration between the governments of Zambia and Zimbabwe, improved partnerships between the private sector and communities, greater co-operation between government and the communities all contribute towards increasing trust. Stakeholders will be able to talk to each other more and more easily, negotiating their differences to build a "common future". Commitment to agreed policies and trade-offs leads to reduced disputes and conflicts over resources.

Effective participatory processes help to develop human resources, to improve living standards and reduce poverty. Traditional knowledge and culture will become more respected and will play an increasing role in influencing the direction of development and the adoption of a more holistic approach to environmental management. The success of sustainable economic growth and raised standards of living are the key means to stabilising population growth rates. It has been predicted that this would be possible by the second quarter of the 21st century if effective National Sustainable Development Strategy processes are initiated and maintained. (Dalal-Clayton, 1995)

Other components of sustainable development focus upon the means of reducing poverty and improving living standards. The key to this is the creation of wealth; the Victoria Falls area has a powerful, but finite, source of wealth through tourism. However, that wealth also needs to be distributed equitably and used to increase access to essential services. Mechanisms need to be put in place to ensure that not only does the wealth created stay in the respective countries, but that part of it stays within the locality.

Significant progress in solving environmental problems will come from increasing investment in education and training at all levels. This will include educating the visitor what to expect and how to behave to minimise his or her impact; educating the tour operators in both environmental and visitor management; educating and training government agencies in adaptive planning and management; and educating and training communities in sustainable agricultural techniques, joint management of forests, wildlife and other natural resources.

The World Heritage Site, its Wilderness Value and the biodiversity of the area must be seen as the prime resources which have to be maintained. These are the key to the creation of wealth both for the area and for the two nations. These provide the attraction for tourists; if they are not degraded by tourism activities and if adequate financial resources are allocated to conservation, they should provide a sustainable basis for development. Improved standards of living will help to reduce the need for poaching which can be eliminated through collaboration between authorities and communities.

This vision for the future may be seen as idealistic. The reality for the Victoria Falls by the year 2005 probably lies between the two extremes. The sustainable development vision is, however, proposed as the only way forward. It must be seen as a succession of learning and adaptive steps - the sooner that all the people involved in the development of Victoria Falls embark on the process, the quicker the results will begin to show. The establishment of the Victoria Falls Trust provides the forum for embarking on the process. The recommendations put forward for discussion start to define the currently perceived limits to growth and measures towards sustainable development of the area.

2.2. Principles and Objectives

In formulating policies for planning and management of the Victoria Falls several principles have been used:

- **The national priorities and policies of Zambia and Zimbabwe** have been considered, especially the spirit of commitment and co-operation with which this study has been designed and carried out. Tourism and the Environment are seen as closely linked policy areas in both countries; the environment, the wildlife and the natural resources are recognised as the most important tourist attractions needing to be managed sustainably, with the Victoria Falls being the "flagship" site. Both countries have policies on tourism which emphasise low volume/high value tourism. Both countries are putting in place measures for environmental impact assessments of developments, and indeed a number have been carried out by both lead agencies.

The study team have also been aware of the policies of indigenisation in Zimbabwe and of privatisation in Zambia. Whilst the implications of these are outside the remit of this study, the underlying social and economic necessities for these policies have been considered.

- **The Precautionary Principle** which holds that it is better to be on the side of caution in deciding upon developments in situations where insufficient social or environmental evidence may be available. This study has highlighted a number of areas in which there is insufficient evidence, and it is considered that strict policies should be proposed to cover these uncertainties and policy erosion from development pressure. Where there is any doubt about environmental or social impacts, it is better to hold back development.
- **The Principle of Interdependency** which holds that long-term healthy economy in an area can only be achieved if the environment and natural resources of the area, and the social and human resources are also healthy. In an area so dependent upon eco- and adventure tourism as the Victoria Falls, the linkage between the stocks of the economy, the environment and the community are especially strong. There is also the interdependency between present and future uses of the resources which demands careful management to preserve these uses and future options for posterity.
- **Stakeholder participation.** The implications of the above principle are that all stakeholders, - agencies, communities and commercial operators using the natural resources - must be included in the decision making process through appropriate representation and participation at the different stages.
- **The World Heritage benefits and responsibilities.** The international implications of the World Heritage Site at Victoria Falls require management agencies and developers to take particular care to ensure that the area remains intact and accessible for both the local and world communities. Zambia and Zimbabwe hold the Victoria Falls in trust for the whole world. By the same token much more kudos and benefit can be derived from the fact that it is a World Heritage Site, both indirectly through advertising the fact, and through direct grants or loans from UN and other agencies to help manage the site.
- **External influences.** Whilst the World Heritage Site is the focus for this skeleton management plan, it is a small area which can not be considered in isolation. Events and developments happening outside the boundary may affect the situation inside. Planning and management policies need to cover a much wider area - in this instance, a radius of 30 km. However, developments outside even this area, particularly those upstream and downstream may also be significant.
- **Ecosystem integrity.** The natural environment does not respect man-made boundaries. The international boundary between Zambia and Zimbabwe along the deepest channel of the Zambezi River is an artificial boundary; common planning and management measures need to be agreed and respected on both sides of the border, which reflect the integrity of the ecosystem.
- **Maintaining the Wilderness Value.** One of the principle attractions of the area to visitors is its perceived "wilderness value" and the juxtaposition of natural wild areas with modern visitor amenities. This underlies the policy on both sides of encouraging high value, low volume tourism. If this wilderness value is seen to be lost due to over-development, then the visitors will not come and the economy and social structures will suffer.

3. THE VICTORIA FALLS TRUST

3.1. Institutional issues

One of the principal strategic recommendations is that a cross-border co-ordinating institution be set up to ensure sustainable planning and management of development in the whole Victoria Falls area. The Strategic Environmental Assessment team, anticipating this recommendation, conducted interviews with a number of the key agencies in both countries on this subject. A document outlining various institutional options was presented to the Steering Committee, which deliberated on the preferred structure in separate country sub-Committees. The team then produced a second paper attempting to synthesise the two viewpoints. This was discussed at a full Steering Committee. The outline for the institution agreed upon at that meeting is presented below. It was decided to call it "The Victoria Falls Trust".

Now there already exist a variety of organisations in the area which have different functions and areas of authority; one of the issues is where and how such a cross-border institution would fit in with these organisations. Would it, for example, take over the responsibility for planning control in the whole area, or would it act more as an advisory group and watchdog over the existing planning bodies. One of the main requests of people interviewed was that the new institution should have "teeth" - it should have the power to stop particular developments which are considered to be detrimental to the area as a whole. The issue here is how to create a body, which has teeth, but which does not undermine the well-established institutions. There was no evidence to show that these existing organisations were fundamentally flawed and needed to be replaced. It was, therefore, decided to work within the framework of these existing organisations and create a complementary organisation which can facilitate the co-ordination between agencies within each country and across the border.

Another issue was the process required to set up such an organisation. It was realised that there is an urgent need for such an institution and that long drawn out processes involving acts of Parliament on both sides to set it up would be counter-productive. This tended to rule out the creation of management authorities, although it did not rule out the idea of "housing" the institution within existing cross-border agencies, such as the Zambezi River Authority (ZRA) by expanding their mandate. With regard to the latter it was felt, that although ZRA will be taking on environmental responsibilities, the Victoria Falls area is but a small part of its overall responsibility and its focus on the area might be lost. It is also possible that there might be conflict of interest between the ZRA's principal hydro-power mandate and the sustainable development of the Victoria Falls area. A description of the ZRA's functions is given in Appendix 1.

A second set of possibilities were the institutions charged with the implementation of the ZACPLAN (Action Plan for the Environmentally Sound Management of the Common Zambezi River System), the Convention on the Common Utilisation and Management of the Resources of the Zambezi Drainage Basin and the proposed protocol on Shared Watercourse Systems in the SADC region (see Appendix 1 for brief details). These all have environment and sound management of the water and natural resources as principles, but they involve other countries as well as Zambia and Zimbabwe. Again it was felt that, whilst these international conventions and agreements are a useful reference framework within which to base the institution, they do not serve the unique, and essentially very local, needs around Victoria Falls.

The other principal cross-border mechanism is the Joint Permanent Commission (JPC), under whose Joint Technical Committee on Tourism and Natural Resources, this Strategic Environmental Assessment was prepared. The JPC remains the most likely inter-governmental mechanism under whose responsibility the Victoria Falls Trust would fall. Constraints are the infrequency of JPC meetings and the long and very different agendas which they have to deal with; the difficulty of getting sufficient attention to issues of Victoria Falls in meetings ranging from trade to defence would remain. Nevertheless it is felt that the JPC is the quickest and best institutional framework within which to site the Victoria Falls Trust.

It is important in view of the functions of the Trust (see below) that it has a strong, but independent, connection with decision making bodies. In the event of disagreements with and between such bodies, the Trust should have clear access to the highest level of Ministers in both Governments. The responsibility of the Trust to the JPC would ensure this.

However, it was also clear, from discussions which the team had with many people in the private and non-governmental sectors on both sides, that there is a level of distrust about the planning and licensing agencies. On too many occasions they have felt that the opinions of local businesses and communities have not been taken into account, and that decisions are taken which disregard environmental and social constraints. It is important that one of the functions of the Trust is to provide a mechanism for such local concerns to be considered and to encourage a greater transparency of decision making. To do this it is critical that local stakeholders have confidence in the Trust and feel that it is their organisation just as much as it has strong links with government. Active participation of all the stakeholding interests is very important.

What emerges is a hybrid organisation representing the major landowning/land managing agencies, the planning authorities, the private sector and the local communities on both sides of the border. It should be an independent body whose principal role is one of advocacy, monitoring of developments, the society and the environment, and acting as a watchdog to ensure that damaging developments do not take place. On the other hand, it should have a clear route to bring its most serious concerns to the highest authorities in each country.

3.2. Structure

It is proposed that the institution set up to co-ordinate and ensure sound social and environmental development in the area be called the "Victoria Falls Trust" (afterwards called the Trust). The Trust would be set up as an independent advisory body under the auspices of the Joint Permanent Commission. Under normal circumstances, it would report through the Ministries in each country directly involved with the Joint Technical Committee on Tourism and Natural Resources. The Trust would be set up under an inter-governmental protocol for which a draft is enclosed in Appendix 2. This is considered necessary in order to establish the official links between the Trust and the JPC.

The Trust would have a Governing Board with a fixed membership of 16 persons - 8 representatives of government agencies, local authorities, the private sector and traditional leaders from both sides. The Board would be responsible for the policies and management of the Trust and its affairs.

The Trust would also have an Advisory Panel which would include representatives of all the different stakeholders and whose purpose is to provide an informed forum for the discussion of issues and activities related to the work of the Trust, and to provide a mechanism for communities and other stakeholders to make representations to the Board. The Advisory Panel basically represent the Trust membership entitled to vote at the Annual General Meeting. A draft Constitution for the Victoria Falls Trust is shown in Appendix 3 which includes the roles and functions of the Governing Board and Advisory Panel.

The Trust would have a Director and a Deputy Director, responsible for the day-to-day operation of the Trust and a small Secretariat appropriate to its agreed functions and activities. It is anticipated that since social, economic and environmental monitoring will form part of the functions, there will be a significant proportion of technical staff. Also since the encouragement of stakeholder participation is a key feature, it should have skilled social facilitators on the staff.

3.3. Objectives and Functions

The overall objective of the Trust would be:-

"To ensure the integrity and long-term survival of the physical, natural and cultural resources of the Victoria Falls World Heritage Site, and the wider area around it, for the enjoyment and benefit of the nations of Zambia and Zimbabwe, the local urban and rural communities, and the national and international visitors."

In this case, the wider Victoria Falls area is taken to mean the area enclosed within a 30 km radius of Victoria Falls, accepting the reality that this will cut across a number of land-use boundaries, so that compatibility of management policies inside and outside the area should be sought.

The recommended functions of the Trust would be as follows:

- To provide co-ordination of planning and management of integrated development and natural resource use activities by:
 - Reviewing existing policies and developing common policies
 - Initiating these policies within the legal framework of each country
 - Monitoring, evaluating and adapting these policies as necessary
 - Carrying out environmental, social and economic research within the Victoria Falls area and publicising the results.
- To take special responsibility for the co-ordinating the management of the Victoria Falls World Heritage Site through the agreement of common policies and activities with the Zambian and Zimbabwean agencies charged with management of the site under the UNESCO World Heritage Convention nomination.
- To provide a mechanism for participation of all stakeholders in the sustainable development and management of the wider Victoria Falls area.
- To increase public awareness about development issues and concerns in the Victoria Falls area.
- To act as an advocate to decision makers for action to address the various issues and concerns.
- To carry out activities aimed at poverty alleviation and equitable distribution of benefits arising from the resources of the Victoria Falls area.
- To source and manage financial resources on a transboundary basis

3.4 Powers

The powers of the Governing Board of the Trust would include undertaking programmes and projects which promote the involvement of stakeholders and surrounding populations in the conservation and wise management of the natural resources of the wider Victoria Falls area. They would be empowered to commission or conduct research into any of the activities listed above and to publish books and leaflets, audio-visual information which promote the area and its wise management.

The Trust would be an independent body with the full powers to develop its own policies and to advise the institutions directly planning and managing the natural resources on each side on common management policies and programmes. This would involve the development of a full Management Plan for the area as a whole - namely an expansion of this Skeleton Management Plan. Through a process of consultation the Trust would seek to establish this Management Plan as the accepted plan for the whole area and to link it closely to the on-going Master Planning process in Livingstone and the proposed Master Plan for Victoria Falls.

The Trust would have links with the Joint Permanent Commission through the Technical Sub-Committee on Tourism and Natural Resources. On a day to day basis it would deal with the ministries within each country responsible for this Technical Sub-Committee, although in the event of disagreement it could appeal directly to the Joint Permanent Commission.

The Board would be empowered to establish its own secretariat, with general and specialist staff, and to appoint any sub-committees necessary to advise it. These sub-committees would be drawn from the Advisory Panel and would include specific aspects such as management of the World Heritage Site, Monitoring, and Poverty alleviation etc..

The Board would be able to raise funds on a transboundary basis; it is recommended that annual government subventions be made to ensure minimal operation of the Trust, supplemented by fund raising from the private sector and donor community for specific programmes and projects. The Board would be able to use these funds for the management of the Trust and its activities.

3.5. Board membership

It is proposed that the following bodies should be represented on the main board of the Trust:

- | Zambia | Zimbabwe |
|---|--|
| <ul style="list-style-type: none">• Livingstone Municipality• National Parks and Wildlife Service | <ul style="list-style-type: none">• Victoria Falls Town Council• Department of National Parks and Wildlife Management |
| <ul style="list-style-type: none">• Kalomo District Council• Traditional Leaders• Private Sector (Tourism)• Zambia National Tourist Board• National Heritage Conservation Commission• Eminent Person in Conservation | <ul style="list-style-type: none">• Hwange Rural District Council• Traditional Leaders• Private Sector (Tourism)• Zimbabwe Tourism Development Corporation• Department of Natural Resources• Eminent Person in Conservation |

Details of the selection/election process are given in Appendix 3. The Director of the Trust should act as Secretary to the Governing Board.

3.6. Staffing

The Trust would have a revolving secretariat with a permanent base within the area. This permanent base would be sited in either Livingstone or Victoria Falls Town. The staff of the Secretariat would be drawn from both Zambia and Zimbabwe and would include its own permanent staff as well as staff on secondment from government agencies or from private sector organisations.

The Trust would be managed on a day-to-day basis by a Director who would act as Secretary to the Board. The Director would be assisted by Deputy Director; it would be a rule that these two positions could not be given to persons of the same nationality.

The Trust would have a minimum core staff necessary to administer and carry out its main programme. Special programmes and projects would be staffed by temporarily appointed or seconded staff whose appointment would depend upon the duration of the activity. Where possible the Trust should adopt a policy of equivalent numbers of staff from both Zambia and Zimbabwe.

3.7. Financing

The financing of the Trust requires a specialist study, both in the estimates of establishment and operational costs and the mechanisms for raising the necessary funds. At this stage it is envisaged that the finances will be raised as follows:

- Matching government subventions from both Zambia and Zimbabwe to cover the minimum establishment and operational costs. These could be valued in kind, e.g. in the provision of office space and the secondment of staff from appropriate organisations.
- Visitor levy - a small proportion of entrance fees or hotel accommodation could be set aside for financing the Trust. (At 1% of the average visitor spend per day, this could amount to over US\$ 400,000 per year).

- Donations from individuals, the private sector, in kind or cash, for specific projects. The Trust would provide an independent mechanism for the private sector to be associated with conservation and wise use initiatives.
- Aid from multilateral and bilateral donor agencies and conservation organisations for specific projects.
- "Debt-for-nature swaps" and bilateral debt reduction agreements with creditor countries.
- Sales of publications and audio-visual productions.

3.8. Recommendations

It is recommended that:

- An *ad hoc* proto-Trust be set up to develop the structure, policies and operational mechanisms for the Trust, which would be formally established upon the signature of the Protocol agreement between the two Governments. This proto-Trust should be established as soon as possible, for example, immediately following the Sustainable Development Workshop scheduled for late March 1996.
- A feasibility study be commissioned to investigate the staffing, and the costs of establishment and operation of the Trust. Estimates of the minimum costs to be covered by the two governments should be included, as should the practicability of other financing mechanisms. This study should include consultation and final drafting of the constitution of the Trust.

4. PLANNING AND MANAGEMENT OF BIOPHYSICAL RESOURCES

4.1. Victoria Falls and the Rainforest

4.1.1 Policies:

The Falls themselves and the Rainforest from which they are most often viewed, are the core feature of the area. The Rainforest is the most heavily used/visited resource of the area, as well as being one of the most sensitive.

As a longer term goal, it is envisioned that the World Heritage Site as a whole might be managed and visited as a single unit, rather than as two halves.

Moving towards this, it is recommended that the two sides of the rainforest be managed under common rules, visitor facilities and information etc. Ideally this might extend to the design of a mechanism to enable visitors to view both sides of the rainforest without exiting the park/enclosed area.

It is recommended that to ensure compatibility, a similar entrance fee be charged on the Zambian side as on the Zimbabwean side, with mechanisms devised for a single entrance fee covering both sides and for appropriate sharing of the proceeds between the two management agencies.

It is considered that, in principle, local residents should have a right to free access to the Falls. It is appreciated that there are considerable difficulties in implementing such a principle, since such a right would be exploited by those wishing to harass tourists. It is recommended that the Victoria Falls Trust consider appropriate measures to implement such a principle.

As an adjunct to this, local communities wishing to use sacred traditional sites within the Rainforest/Boiling Pot area for rain-making and other celebrations should be facilitated, either by use of their own special gate or by some other arrangement satisfactory to both the communities and the park managers.

Agree common rules facilities and information for the rain forest areas

Entrance charges to Zambian rain forest

Free access for local residents

Use of traditional sacred sites

4.1.2 Visitor management measures:

As tourist numbers grow, protection will have to be increased by the following measures:-

The maximum number of visitors allowed inside the rainforest area on each side of the border should be limited to 250 at any one time. A scheme should be devised for regulating this number, e.g. returnable tokens issued at the entrance and reclaimed at the exit.

Large groups of 30 persons or more should confirm their visiting time in advance with the managing agency, adjusting their time of arrival according to other bookings if necessary.

There is considerable damage to the vegetation and ground to the sides of the pathways where people have had to walk off the path to cut corners or when numbers of visitors force them to do so. Attention will have to be given to rehabilitating the sides of the concrete pathways, e.g. backfilling with earth, covering the sides with brushwood or widening the concrete path where this has occurred. Limiting the numbers of visitors and re-emphasising one-way systems will also prevent excessive erosion.

Maximum number of visitors in rainforest area

Rules for large groups

Rehabilitate pathways & sides to prevent erosion

The safety of visitors is a concern, particularly where the paths are narrow, unfenced and made slippery by the spray, and where people have purposely climbed over the fences to go closer to the edge. A common environmentally sensitive design of fencing needs to be agreed and put in place where necessary. The dangers need to be advertised more, and liability for accidents disclaimed.

Agree common safety measures

There is concern about the lack of safety information about fires during the dry season. A bush fire could easily wipe out the rainforest on either side, as has already happened in parts of both sides. The rainforest should be designated as a "no smoking" area.

**Fire prevention
- No smoking in rainforest**

Visitor facilities inside the rainforest area, in terms of seats, waterpoints and toilet facilities need to be improved to cater for increased numbers of visitors. These should be sensitively designed to common standards.

Standards for visitor facilities

The entrances to both sides of the rainforest, are becoming inadequate and visually unattractive. On the Zambian side it is recommended that the car parking area and the curio shops be relocated to outside the rainforest entrance. This would have the added benefit that money changers and casual curio sellers who often harass tourists in the rainforest will be excluded from the area. On the Zimbabwean side the car park is already becoming too small at peak times and will need all weather surfacing.

Improve rainforest entrance and car parks

On both Zimbabwean and Zambian sides much better visitor facilities should be provided in terms of sitting and refreshment space outside of the park area. This could also be combined with limited, officially recognised curio dealing.

Visitor facilities outside rainforest

In view of the increased demand for eco-tourism, improved environmental education and interpretative facilities should be provided on both sides. The Victoria Falls deserve the most modern resources to explain the physical, natural and cultural resources in the area and to emphasise why it is a World Heritage Site and how it is managed. Charges for such centres on each side would add value to the simple entrance fee.

Improve environmental interpretation for World Heritage Site

4.1.3 Water Flows over the Falls

Considerable concern is expressed about the ZESCO offtake during the dry season which deplete the flows over the Eastern Cataract for about six months of the year. This has two main effects, an ecological effect upon the Zambian rainforest, which suffers from drying out more than the Zimbabwean side and is endangered, especially if the drought persists over several more years. It is more seriously infested with *Lantana* than the Zimbabwean side, since this plant outcompetes the more moisture dependent indigenous plants. There is also significant visual impact of empty falls on the eastern side, leading to visitor disappointment.

It is recommended that discussions take place between the Victoria Falls Trust and ZESCO/ZRA to assess the full impact of water diversion for power generation. Water sharing rights between power generation and tourism should be discussed.

Water sharing between hydropower and tourism

This should lead to the terms of reference for a study and hydrological trials for mitigation measures, including:-

- Topography of the river bed to determine low flow channels, capacities and proportions of flows to both eastern and western sides.

- Detailed analysis of past river flows, water offtake and generated power compared to flows over the Eastern Cataract and periods of drying up,
- Trials during the 1996 dry season for altering flows/power generated to maintain a flow over the Eastern Cataract
- Development of a water flow management plan, including measures for rehabilitation of the rain forest on the Zambian side (such as returned flows during the day, spray irrigation of the rain forest area during the dry season).

It is also recommended that a register of small-scale abstractions for water supply to hotels and lodges, agriculture, and communities be maintained in order to monitor upstream abstractions.

Because of the plans for major abstraction schemes upstream of the Victoria Falls area, watch should be kept for upcoming proposals. Steps should be taken through SADC, or other appropriate intergovernmental channels, to ensure that the cumulative impact upon low flows over the Victoria Falls are included in any EIA.

Commission study into water flow management

Register of small-scale water abstracters

Ensure EIA on upstream abstraction includes impact on Falls

4.1.4 *Ecosystem management measures*

A programme of research to investigate the best means of controlling *Lantana* and rehabilitating the cleared areas with indigenous vegetation should be undertaken. Herbicides should only be used with extreme caution. The planting of *Lantana* for ornamental purposes outside the World Heritage Site should be prohibited.

The findings of this programme should be followed by a serious campaign to eradicate the species coupled with a replanting programme for those areas where *Lantana* has prohibited regrowth of the natural vegetation or where the rainforest has been damaged by fire.

Replanting programmes should be designed using the lists of species recorded in the rainforest (see Appendix 4)

Carry out research into *Lantana* eradication

Implement programme for *Lantana* eradication

Rehabilitation of rainforest

4.2. Upstream Riverine areas

The upstream riverine areas consist of the river banks and riparian forest, the islands and the open stretches of water. The upstream riverine areas are amongst the most attractive landscapes and sources of biodiversity in the whole area, offering considerable potential for both recreation and as a wildlife refuge. It is possible for the two functions to coexist although care should be taken not to impair the river wilderness experience. It is also possible, especially at times of higher flow, for the braided channels to hold significant numbers of canoes and boats without impinging on each others visual impressions.

4.2.1 *Riverbanks and Riparian Forest*

4.2.1.1 *Hotels and Lodges*

The riverbanks in the past have offered prime sites for hotel and lodge accommodation. Within the immediate vicinity of the Falls themselves, sites are extremely restricted and should, in any case, not be erected within the World Heritage Site boundaries.

In constricted areas, a buffer zone of at least 100 m should be allowed between the World Heritage Site Boundary and any new permanent construction. In other areas, buffer zones applicable to National Parks should apply to the World Heritage Site (see later)

No further construction within the World Heritage Site

World Heritage Site buffer zone

The planning authorities and land-owning agencies should strongly resist any proposals for new or further expanded tourist accommodation on river bank sites adjacent to the World Heritage Site, although proposals for sensitive redevelopment of existing sites may be considered. N.B. The proposed expansion of the A'Zambezi River Lodge by the Rainbow group is considered as a new development rather than a sensitive redevelopment.

Outside of the World Heritage Site, potential riverbank sites should be subject to strict planning controls which aim to minimise the impact of development covering the following:-

- Developments should not break the existing tree line of the riparian forest at the site.
- Development should be set back from the water edge by 50 metres from the high water mark.
- No mature trees are to be felled and no exotic species should be planted as part of landscaping proposals. Indigenous plant species should be used wherever possible.
- Developers would be expected to follow the detailed design guidelines adapted from the Livingstone Development Plan by the Victoria Falls Trust.
- Respect for animal movements along the river bank or across the river. No fences will be allowed other than the minimum needed to protect property.

In the absence of natural and physical constraints, there should be a minimum distance of 500m between developments. This recognises the following considerations;

- Visual and noise impact of one development on existing facilities in the area
- Access of wildlife to the riverbank and animal crossing points
- Access to river for local communities for ritual purposes, water supplies, watering livestock and fishing.

However, distances less than 500 m may be considered where these constraints are less important and there is sufficient natural vegetation to mask the developments.

Resist further proposals for hotels and lodges on river banks adjacent to the World Heritage Site

Guidelines for riverbank development outside the World Heritage Site

Minimum distance between tourist development on riverbank

4.2.1.2 Jetties

The Department of National Parks and Wildlife Management who have the jurisdiction over licences for boats and jetties on the Zimbabwean bank specify the minimum distance between jetties to be 100 m. The space allocated for these jetties lies between the Victoria Falls town water pumping station and the boundary to the Zambezi National Park. This is a distance of 1500 metres. 16 jetty sites have been allocated of which 7 are commercially operational with a total of 19 boats; 7 have not yet been constructed. Using this minimum distance as a criterion, although many sites are considerably closer to each other, no further jetty sites should be allocated. The National Park regulations also stipulate not more than two boats per jetty.

On the Zambian side two jetty sites are in existence. However, the area available for jetties which is not within the Mosi-oa-Tunya National Park is much more restricted. There is in fact 1000 metres of waterfront within Town Council jurisdiction.

The Livingstone Development Plan stipulates that:
"The Council will not allow new jetty/landing sites closer than 100 metres to any existing jetty/landing site. New jetties will be no longer than 10 metres. Where possible the Council will encourage sharing of facilities".

It is concluded that these guidelines should be agreed for both sides of the Zambezi.

However, since the carrying capacity of the number of boats on the river would be exceeded, it is recommended that steps should be taken to revoke 5 of the unbuilt commercial boat and jetty licences on the Zimbabwean side and to institute an auction system for licences for jetties and boats based upon technical qualification as well as price (see later).

A maximum of 9 jetty sites could be constructed on the Zambian side, but the physical conditions may constrain the actual number allowed

With this number of jetties the following design criteria should be applied to address concerns about visual impact and degradation of the riparian forest and erosion of the river bank.

- The design and colour of jetties should be sympathetic to the environment.
- No permanent structures should be erected on the site - where permanent structures have been erected without planning permission, these should be demolished and the ground rehabilitated.
- No mature trees should be removed
- Minimal removal of reeds and riparian vegetation
- Access roads wherever possible should use existing roads
- No licences for jetties will be granted unless permission for access has also been approved, e.g. from Victoria Falls Town Council.
- Where vegetation has been removed, the banks should be stabilised in a manner agreed by the Victoria Falls Trust.

The Livingstone Council will also not consider the development of a marina. On the Zimbabwean side, a study could be carried out to investigate the abolition of all jetties with the construction of a marina instead. However, it is suspected that the impact of this would be considerably greater than that of nine commercial sites.

4.2.1.3. Temporary Camp sites on the river bank

Temporary camp sites should not be permitted within the boundary of the World Heritage Site.

Outside the World Heritage Site, e.g. in the Zambezi National Park, 5 temporary camp sites have been agreed with tour operators in addition to the public fishing camps along the river. No further licences for temporary camps are envisaged by the Zambezi National Park. Licences are granted based upon the following criteria:

- The camp site should be removed during the rainy season
- It should be capable of being dismantled within 24 hours
- In some instances, septic tanks and soakaways have been allowed and constructed.

**Guidelines for
jetty
construction**

**Restrictions on
the number of
jetties**

**Jetty design
criteria**

**Study on
riverbank
marina on the
Zimbabwean
side**

**No camp sites
within World
Heritage Site**

**Guidelines for
temporary camp
sites**

4.2.2 Open Water and Boats on the River

The open water accessible to the cruise boats using the jetties is a part of the World Heritage Site. The cruise boats have a number of impacts which cause concern:-

- Visual impact upon other river users
- Additional erosion of banks caused by boat traffic, especially when venturing close to islands and mainland
- Harassment of wildlife and disturbance of nesting birds

Using the criteria of two boats per jetty, the maximum number of boats on the river which could be accommodated at any one time would be 36 assuming 9 jetties on each side

It is recommended that a mechanism for limiting the number of boats be put in place. This will mean phasing down some of the numbers of boats and jetties on the Zimbabwean side; the introduction of a five-year auctionable licence to pre-qualified bidders. Consideration should also be given to encouraging boats which can carry larger numbers of tourists up to an agreed maximum size of boat. As with all licensed facilities, persistent disregard for guidelines could result in the licence being revoked.

Pre-qualifications for boat and jetty auctions might include:

- The previous record of maintaining operational standards of both jetties and boats. (NB This should not preclude new operators)
- Details of proposed design and management
- Involvement of indigenous owners and/or managers
- Commitment to environmental tour guidelines

With this number of boats, guidelines for operators should be drawn up, which would specify:

- Speed limits for all craft on the river
- Recommended set routes,
- Regulated starting times,
- Minimum distances of approach to islands and wildlife
- Maximum number of boats approaching wildlife
- The design and colour schemes of boats would have to be approved; muted colours which blend with the environment should be chosen.
- Toilet facilities on boats should not discharge to the river; toilet contents should be discharged to the main sewer or septic tank on arrival at the jetty.
- Maintenance of engines should be carried out away from the river where possible, and no oil or fuel should be disposed of to the river.

It is recommended that the Victoria Falls Trust convene a working group of boat operators, and National Parks officers and ecologists and other river users to work out and implement such mechanisms and guidelines.

Permitted numbers of boats

Licensing mechanisms for boats and jetties

Pre-qualification criteria for boats and jetty licences

Agree guidelines for boat operation

Victoria Falls Trust to convene a working group on boat and jetty guidelines

4.2.3. Islands on the River

The islands in the river represent important wildlife refuges and areas of high biodiversity. As a general rule they should be considered as Specially Protected Areas.

No development will be allowed on the islands within the World Heritage Site, including Livingstone Island. This applies to temporary and permanent developments with the exception of environmental research and National Park management.

Outside of the World Heritage Site area, no permanent camps will be permitted but exceptional proposals may be considered for temporary camp sites. These would follow the same rules for river bank developments, but particular attention would have to be paid to landing sites and the minimal removal of reeds and riparian vegetation to prevent erosion of the banks of alluvial islands.

Access of day visitors to most islands will generally be allowed, but subject to further investigations certain islands may be declared as restricted access at specific times of year to minimise disturbance of wildlife and breeding populations of birds and fish.

Siloka Island (otherwise known as Lwando, Long Island or Chief's Island) should be designated as a "specially protected area", on account of its unique ecosystem, vegetation and birdlife. Specially protected islands would allow no access apart from research activities.

The sandy beaches on the islands downstream of Siloka Island should be declared "no access" during the breeding season of African Skimmers. Further research is needed to identify these islands and the times of year for peak protection.

In order to protect certain fish species (eg. large-mouth bream, *Serranochromis spp*) which nest along the island fringes, research is needed to identify several permanent or seasonal fish reserves around specific islands.

Consideration could be given to a scheme for island conservation by tour operators - e.g. Adopt an Island scheme run in collaboration with National Parks under the auspices of the Victoria Falls Trust. This would not entail any exclusivity of use or ownership of the island, but would carry with it an agreed responsibility for care for the island, including keeping it free from litter, removal of unwanted plants such as *Lantana*, and snare removal.

4.2.4 Canoe safaris

At present the levels of activity of canoe safaris are considered acceptable. Concern about the impacts of vehicles used to move the canoes to and from landing points, litter and the use of unauthorised campfires at landing points. However if the levels of activity increase, the impacts to be considered include:-

- Visitor and operator pressure upon landing points, in terms of creation of unnecessary access tracks, erosion of banks, litter, fires etc.

**No
developments on
islands within
the World
Heritage Site**

**Temporary
camp sites may
be permitted on
islands outside
the World
Heritage Site**

**Access of day
visitors to most
islands
permitted**

**Restricted
access to Siloka
Island**

**Other
designated "no
access" islands**

**Fish breeding
reserves**

**"Adopt an
island" scheme
for tour
operators**

**Points of
concern to
monitor for
canoe safaris**

- Disturbance of wildlife, which has human safety implications as well as ecological ones.
- Disturbance of sensitive species of birds, especially night herons, Pel's Fishing Owl and African skimmers which nest in the area.
- The visual experience of visitors to other groups using the river.

Monitoring of the impacts of normal-sized canoe safaris should be carried out and operational guidelines should be developed through the Victoria Falls Trust.

One area of concern is large groups being taken all together on short canoe safaris. Groups of up to about 150 people have been catered for over the past year. Although the duration of these canoe trips is relatively short, e.g. a morning or afternoon, the impact of such large numbers raises a number of issues:

- Time/intensity of wildlife disturbance (it may take the best part of an hour for 75 canoes to pass a sensitive spot)
- Client safety, since the normal levels of up to 10 persons per trained guide may be exceeded
- Landing place erosion,
- Visual impact upon other normal canoe groups, riverside lodges and other safari tours.

Large groups are considered to be intrusive and disturbing. If the practice increases significantly (e.g. more than once a month), very strict guidelines about the maximum sizes of group to be allowed on which stretches of river and detailing mechanisms for informing other river users should be drawn up by a working group of the Victoria Falls Trust.

Licences to operate canoe safaris should be conditional upon observance of guidelines.

4.3 The Gorges

The Zambezi Gorges are also sensitive areas ecologically and culturally. The gorges consist of three main ecological zones, the gorge bottom containing the river itself and the rocky banks with some riparian vegetation, the cliffs, and the cliff tops on both sides. The confluences with some of the seasonal streams are also important ecologically, providing access points for animals and humans, e.g. the Songwe gorge and the Masuwe river. The gorges are important refuges and breeding sites for a number of birds of prey, and they contain sites which are both archaeologically and culturally significant.

Developments and tourist activities which are increasing in the area, include lodge development on both sides of the gorge and white water rafting down the river. The development of hydropower through the construction of the Batoka Dam would also change the character of gorges significantly.

In recognition of its significance as a breeding area for birds of prey, the Batoka Gorge system should be designated as an International Birds of Prey Sanctuary, which itself could become a specialised tourist attraction.

Similarly, the archaeological sites receive special protection on the Zambian side, and far more information is available on their location. However, the area is rich in these sites and a full inventory on both Zambian and Zimbabwean sides is required in order to provide adequate protection.

Victoria Falls Trust to develop canoe safari guidelines

Concern over large canoe safari groups

Victoria Falls Trust working group to agree strict guidelines for large groups

Declare the Batoka Gorges an International Birds of Prey Sanctuary

Prepare a full inventory of archaeological sites on both sides

The location of cultural sites is a closely guarded secret by most rural communities who require that celebrations are carried out in private, without disturbance. Some mechanism must be found for respecting and protecting these sites without disclosing their exact locations or celebration times. (see later)

Any impact assessments for future proposals for the Batoka dam should include the loss of that part of the World Heritage Site demonstrating an exceptional example of significant on-going geological processes; and the major loss of revenue and multiplier effects of the rafting sector.

4.3.1. Lodge and hotel developments

The strip of land along the gorge sides is recognised as being very desirable for lodge and hotel development. However, no developments should be allowed within the boundaries of the World Heritage Site.

Outside the World Heritage Site, appropriate sites may be developed for low impact lodges and environmentally sensitive hotels. It is recommended that the planning authorities on both sides carry out a pre-emptive survey of the gorges and cliff tops with the aim of identifying sites which could be developed with least impact, and which areas should be left undisturbed.

Alternatively, this could be carried out under the auspices of the Victoria Falls Trust. Criteria for leaving areas undisturbed might include:-

- Proximity to established nests of birds of prey
- Proximity to areas of cultural significance
- Proximity to areas of archaeological significance
- Important viewpoints and landscapes.

Developments should observe the following planning guidelines:-

- Buildings should not break the existing tree line of the woodland at the site.
- Buildings should be set back by at least 30 m from the cliff top. A criterion for this would be that they should not be seen from the river below. This however, would not preclude viewing platforms etc.
- No mature trees should be felled and no exotic species should be planted as part of landscaping proposals. Indigenous plant species should be used wherever possible.
- Developers would be expected to follow detailed design guidelines adapted from the Livingstone Development Plan by the Victoria Falls Trust.

Develop a mechanism for safeguarding cultural sites

Future Batoka Dam EIA requirements

No developments permitted within the World Heritage Site

Planning authorities to identify areas which should not be disturbed

Criteria for avoiding certain areas

Planning guidelines for hotels and lodges along the gorges

A minimum distances of 500 m between developments is suggested, but sites should be selected and designed to minimise the visual and noise impacts upon existing developments both on the same and the opposite cliff tops.

Consultation between planning authorities on both sides of the gorges concerning specific development proposals is essential, and mechanisms should be developed to facilitate this.

Since the Gorges on both sides pass through Communal or Trust Lands, the opportunity for strong involvement of rural communities as both beneficiaries and employees of such developments. It is recommended that all gorge top hotel and lodge developments have formal links with local communities through CAMPFIRE type programmes.

Minimum distances between developments

Consultation between planning authorities on both sides

Links between developments and local communities

4.3.2. White water rafting

Rafting in the gorges is a growth activity for adventure tourism in the area, bringing with it not only the excitement element, but several other aspects as well.

- It introduces visitors to a spectacular part of the whole geological and natural formation making up the Victoria Falls, to which they would otherwise have very limited access
- Rafting has potential for supplementing incomes in those rural communities adjacent to the gorges and the exit points for rafting, providing a mechanism for spreading the benefits of this form of tourism, whilst at the same time helping the young men to remain in their rural communities instead of being attracted into towns.
- Rafting is becoming a significant money earner for both countries which encourages visitors to stay longer in the area.

Rafting at the present levels is not considered to be very damaging from an environmental point of view. However, there are a number of environmental pressure points concerned with rafting which need to be carefully monitored. These include:-

- Entry and exit points to the gorges. With several hundred people on average walking down into the gorge and out again each day, the dangers of erosion of the pathways and cliffs will become severe, particularly during the rains. Entry and exit pathways must be well maintained on a regular basis to minimise erosion.
- Lunch and camp sites down the gorges, e.g. at Songwe Gorge and the Masuwe River confluence, are sensitive sites. Pressure on vegetation, disturbance of wildlife, and disturbance of cultural sites, as well as litter and inadequate toilet facilities may give cause for concern as numbers grow.
- Relocate the car parking arrangements at Songwe Gorge to reduce impact upon archaeological sites
- Tree cutting around the exit sites has also been observed and should be prohibited. Firewood, if used, should be brought in specially from outside.

Monitor rafting pressure points

Maintain entry and exit paths

Minimise pressure on sensitive sites

Songwe gorge car parking

No tree cutting around lunch and exit points

- The disturbance of wildlife, particularly the birds of prey needs to be monitored. Whilst it is probable that the scale of the gorges minimises the disturbance, increasing numbers of rafts may begin to reduce breeding success.

Some local communities have complained that traditional celebration sites have been disturbed by rafters and that they are not able to perform celebrations because of the frequency of rafting.

If, due to reduced high water flows, rafting continues throughout the year without the usual high-water break (April/May), it may be necessary to designate certain days each month when rafting would be curtailed to facilitate traditional celebrations.

Discussions with traditional religious leaders from local communities on both sides of the gorges should be held to clarify the requirements for traditional celebrations and mechanisms developed to allow the privacy needed.

The dirt roads from the exit points on both Zimbabwean and Zambian sides suffer from the heavy use by rafting traffic. This is particularly acute on the Zimbabwean side. It may be necessary to set up special levies for maintenance of these roads, rather than rely upon the funds payable to the general funds of the District Councils.

Environmental guidelines for rafting operators need to be agreed, covering these aspects. It is understood that some are in the process of being developed by the rafting companies and, when agreed with the Victoria Falls Trust, these should be complied with by all companies as a condition of their licence.

It is recommended that these be similar to guidelines developed for mountain regions in other parts of the world, e.g. all supplies are brought into the gorges, including firewood, and all equipment, surplus food and waste materials, including toilet waste, are removed on a regular basis. This is especially true for the multi-day trips.

4.4. National Parks and Wildlife areas

Protected areas should not be viewed as potential development areas either for tourism or for agriculture. Degazetting of protected area land should be avoided.

A buffer zone of up to 500 metres between both commercial and domestic developments and National Park boundaries should be maintained if no fence exists demarcating the boundary. If a fence exists or is erected, the buffer zone can be reduced to 200 metres.

Electric fences should not be used, and diamond mesh fences are preferred. The buffer zone is required for the protection of both the vegetation inside the park, animal movements, property and human safety.

Monitor birds of prey breeding

Disturbance of traditional sacred sites

Consider arrangements to minimise disturbance to traditional celebrations

Damage to dirt roads by rafting traffic

Environmental guidelines for rafting companies to be developed

Protected areas are not for development

Maintain a buffer zone around National Parks

Fences

The construction of artificial water holes by developers could have serious effects upon animal movement and pressure upon the vegetation in an area. Such water holes shall be subject to special permission and advice from National Parks authorities

There is a need for compatibility of land use on both sides of the river upstream. Concern has been expressed about the level of poaching for both food and ivory from the Zambian side which affects the animals in the Zambezi National Park. Whilst it is appreciated that the northern bank of the Zambezi can not be designated as a national park, compatibility of land use could be achieved by active game management by and for the benefit of local communities. It is recommended that the Zambian north bank between the Mosi-oa-Tunya National Park and Kazangula be designated as a Game Management Area with ADMADE and CAMPFIRE type projects between riverbank developments and local communities.

Poaching pressures can only be reduced by improving the financial and technical support to wildlife agencies; by establishing joint management mechanisms and by encouraging community wildlife programmes

Concern has been expressed about the damage to mopane and riverine woodland, both within the National Parks and on the Zambezi islands, caused by elephants during drought conditions. Should drought conditions persist through 1996 and on, contingency measures for controlling elephant populations through culling, translocations to other protected areas and CAMPFIRE districts etc. should be prepared and implemented by the Parks authorities when deemed necessary.

At present visitor numbers in both parks are not considered a problem. However, with the growth of visitor numbers, especially from South Africa, the limited lengths of road, loops and river viewing points may become congested. Dirt roads may suffer especially if not well maintained, and unwanted tracks may develop away from the road. Speed limits should be respected and enforced; canoe tour operators on the Zimbabwean side have been particularly identified as driving faster than the speed limits, which causes the roads to deteriorate faster than necessary.

The management of the Parks and wildlife areas on both sides has been criticised by a number of observers. It is apparent that there is a shortfall in both operational funds and staff motivation. The quality of management suffers, resulting in degradation of facilities and sites, and reduction in control of poaching and of visitor. Whilst it is noted that steps are being taken to change the financial and management structure of Parks on the Zimbabwean side, this will take some time to become fully effective.

**Artificial
waterholes**

**Pursue policies
of compatibility
of land use on
both sides of the
river, especially
upstream**

**Measures to
reduce poaching
pressure**

**Prepare
elephant
population
control plans to
reduce pressure
on vegetation**

**Vehicle
numbers,
damage to
roads, speed
limits in Parks**

**Strengthen the
institutions of
National Parks
through training
and financial
resources**

It is considered that the management of Parks could benefit from a much greater involvement and co-operation with the tour operators. Tour operator expertise and their responsibilities for conserving the natural resources which they exploit can be harnessed constructively. It is recommended that schemes, e.g. honorary ranger programmes, be developed for activities such as custodianship of specified areas, islands, water holes etc., litter clean-up, visitor control, and snare and poaching control.

Involvement and co-operation of tour operators in Park & wildlife management

4.5. Forest areas and the curio trade

By and large the forest areas in both Zambia and Zimbabwe are considered to be in reasonable shape. Pressure, particularly at the edges of these areas where they come into contact with urban areas or communal/trust lands are being exerted by:-

- Clearance for agricultural land, especially in Zimbabwe
- Fuelwood collectors and charcoal burners. Charcoal production is specially prevalent in Zambia.
- Selective cutting of trees for curio wood carving, especially in Zimbabwe.

These pressures are expected to increase as the population increases, and with it the demand for fuelwood and the increased entry of carvers and traders into the curio business. Already the areas of free access to wood are becoming seriously deforested, and poaching of wood in National Parks and Forest Reserves is becoming common.

In order to protect the forests on both communal and forest lands a combination of woodcutting regulation and enforcement, together with the provision of alternatives for both fuelwood and employment is required. This should include:

- Tree planting programmes for fuelwood and timber, especially around urban areas, especially around Livingstone; fuelwood lots should be introduced in part of Dambwa forest.
- Promotion of agroforestry in the rural areas where suitable trees can provide both fuelwood and fodder for animals.
- Promotion of fuel efficient stoves amongst wood and charcoal users.
- Increased electricity supply to both urban and rural communities.

It is recommended that a detailed study on curio wood management is carried out and its findings implemented. This should be developed with the involvement of wood-cutters, carvers, finishers and traders, together with professional foresters. Management schemes should consider:

- The need for regulation of the curio trade
- Joint management of the resources with wood carving communities
- Research into fast-growing varieties of curio wood trees, e.g. *Baikiaea plurijuga* and irrigated curio wood plantations (e.g. using sewage effluent)
- The development of alternative craft products
- The development of alternative employment opportunities for local people so that the curio trade is not their only source of income.

Measures to reduce deforestation pressure

Commission an urgent study on curio wood management

4.6. Tribal Trust and Communal Lands - Land-use policies

Serious overgrazing in parts of the communal lands has been noted with a shift in domestic animal numbers toward goats in Zimbabwe. With prolonged drought this would be expected to increase as the human population in the rural areas and their livestock requirements increases. It is recommended that livestock management programmes be introduced which examine the stocking rates and establish sustainable grazing schemes.

It is recognised that much of the communal and trust land has very low productivity, especially alongside the gorges, and this limits the opportunities for rural communities subsistence and income generating activities. Land use plans for the Hwange District need to be completed as a matter of urgency. These should identify the most suitable land for different types of use in order to maximise the productivity.

In particular, those areas which would be suitable for small-scale irrigation projects for horticulture and fruit production to supply the hotel and restaurant trade around Victoria Falls need to be identified. Programmes supported by hotels for rural communities to supply vegetable produce should be encouraged.

The rate of cutting of wood for fuelwood both for the rural and urban communities is a major cause for concern in the rural areas on both sides of the border. It is recommended that reforestation programmes and fuelwood plantations be set up to provide for both the fuelwood supply and maintenance of the tree cover. Agro-forestry should be promoted and effective joint management of the remaining forest resources in the communal and trust lands established.

All cultivated land needs appropriate soil erosion protection measures. Degraded lands need to be rehabilitated and reclaimed.

Alternative sources of energy for rural and high and medium density urban housing in the area need to be explored and promoted where appropriate, e.g. rural electrification, solar panels, Tsotso stoves, use of low grade coal from Wankie colliery.

Grazing management

Land-use Plans for communal areas

Identify areas suitable for horticulture to supply the hotels with vegetables

Reforestation and joint forest management in the communal and trust lands

Soil erosion protection

Alternative sources of energy

4.7. Archaeological, Historic and Cultural sites

The archaeological and cultural heritage of the area must be recognised and respected. Certain aspects may become in themselves additional points of interest for visitors and hence of economic benefit to local people. The National Heritage Conservation Commission (NHCC) in Zambia and the Department of National Museums and Monuments (NMMZ) in Zimbabwe are the officially recognised bodies concerned with archaeological and cultural heritage.

A register of all archaeological historic and cultural sites in the area should be maintained by these bodies. In the case of Zambia, much information is already available and the task will consist of filling in the gaps, but in the case of Zimbabwe a comprehensive survey is required. It is suggested that this be done in collaboration with the Zambian experts who are already experienced in the local artefacts.

Develop a register of all archaeological and cultural sites

In the case of traditional sacred sites and associated ceremonies, this might have to be a confidential register in order to maintain the privacy and secrecy of the sites. The two departments should develop the trust of local communities to record the locations and purposes of such sites. Proposed developments would have to be screened to ensure that such sacred sites are not compromised

Confidential register of traditional sites

Developers, including government departments, should be required to produce a report on the archaeological status of the proposed site prepared by an approved archaeologist and endorsed by the appropriate agency in each country. This approval may imply that either there is no cultural or archaeological material or that the evidence has been thoroughly documented and retrieved. Only then should development be sanctioned by the Planning Authorities.

Archaeological & cultural impact assessment

Continued existence of archaeological sites depends upon collaboration with local communities and landowners. Awareness of the existence of such sites, of measures which can be taken to protect them from natural and human damage, and of the benefits which can be generated from appropriate presentation to visitors all should be promoted to develop this collaboration. Tax concessions for preservation of archaeological sites should be considered.

Promote awareness of the importance and benefits of archaeological sites

The siting of facilities for tourists visiting archaeological sites needs to be considered with care. In particular the car parks at the Songwe Gorge site are in the centre of the site and should be moved. Since these parks are used by rafting companies for access to the gorge, collaboration with these companies is required.

Care with visitor facilities for archaeological sites

On the Zambian side, access to the Boiling Pot and on the Zimbabwean side, to the Big Tree and other sacred sites in the National Park, should be re-opened to the relevant local communities so that rain-making and other ceremonies may be held. After consultation with local leaders, consideration may be given to incorporating them into the tourist calendar, so that visitors might be allowed to witness or participate in the less sacred phases of such ceremonies.

Reopening of traditional cultural sites

The authorities giving licences to canoeing and rafting companies and the NHCC and NMMZ should make them aware of the ritual artefacts on river banks and islands, identifying them where possible. Operators should ensure that clients do not meddle with or otherwise desecrate such sites. Persistent violation should result in loss of rafting or canoeing licences.

Canoeing and rafting companies to respect cultural sites

Educational programmes and specialised tours should assist tourists to respect and understand the archaeology and the way of life, culture, history and religion of local communities.

Interpretive programmes for archaeology and culture

In Victoria Falls Town, a museum is proposed interpreting the pre-history of the area, its development as a tourist resort, the natural environment and the ethnography of the local people. Such initiatives would add to the diversity of activities available to the visitor.

The looting of archaeological artefacts and the sale of authentic traditional relics and regalia should be discouraged, by enforcement of regulations and through collaboration between NHCC and NMMZ.

Historic sites should be respected, with attention to maintenance of paths, litter and graffiti removal and car parking facilities.

Livingstone town has a much higher proportion of historic buildings and sites than Victoria Falls Town. On both sides the buildings which are protected and those which are worthy of protection have been identified, but proper survey and documentation is required.

Before a historic building is altered or demolished, the owners and planning authorities should liaise with NHCC or NMMZ to ensure that the building is adequately documented. Cemeteries should not be disturbed, but fenced and maintained as areas of peace and beauty.

Guidelines for protection and improvement of such buildings should be prepared and zones of special historic interest declared, especially within Livingstone. The identification and protection of a "Historic Livingstone" zone should be declared because any changes to the town without adequate historic conservation laws will destroy its intrinsic historic character. This is an aspect which Livingstone can promote as part of its claim to be Zambia's "Tourist Capital".

Set up a museum in Victoria Falls Town

Looting of archaeological artefacts & traditional relics

Respect for historic sites

Survey of historic buildings and sites

Ensure adequate documentation of historic buildings before alteration.

Identify "Historic Livingstone" zone and prepare guidelines for its protection

5. PLANNING AND MANAGEMENT POLICIES FOR SOCIO-ECONOMIC DEVELOPMENT

5.1. Livingstone Municipal Area

Livingstone is a large urban area, which does not rely upon tourism as a principal industry. However, Livingstone is faced with an unemployment crisis of such proportions that economic development policies are needed to promote industrial growth as well as tourism in order to improve the quality of life for the residents. Tourism development will at best only account for 20% of employment in the town.

5.1.1 *Planning controls and enforcement*

Previous lax planning controls have led to significant problems for example the uncontrolled growth of the ZESCO compound has happened largely without planning controls and this has affected the immediate environment around the Falls; a significant expansion to Rainbow Lodge was carried out without planning permission, despite policies within the development plans which suggest no growth of existing developments within the World Heritage Site; the microlight airfield operated by Batoka Sky was allowed to be built with no consent and no planning conditions.

No further building should be allowed in the ZESCO compound. This area should be phased out over the next ten years apart from housing for essential staff. A new compound area should be developed in Livingstone and transport arrangements for staff to the ZESCO site provided.

There is a need for much stronger control over development in the vicinity of the Falls. The Municipal Council Planning Section needs to be strengthened to be able to execute its duties competently and to implement the Master Plan currently under preparation for Livingstone. It is appreciated that LMC suffers from serious financial and staff shortages which inhibit its effectiveness. These need to be addressed. A study should be carried out to make recommendations for institutional strengthening of the Town Planning section.

The Council should separate out its land development functions and finance, possibly by the creation of a land development agency which would provide serviced land for development at realistic prices.

Many problems have been caused by lack of co-ordination between the various tourism authorising and planning agencies, e.g. ZNTB are not supposed to issue licences for tourist enterprises without the planning authority first issuing planning consent. Lack of co-ordination has resulted in tourism companies being granted licences and assuming they have permission to build structures from which to operate.

The setting up of the Victoria Falls Trust will focus co-ordination between agencies and strengthen the enforcement of planning decisions through the application of joint guidelines.

**ZESCO
compound**

**Institutional
strengthening of
Livingstone
Municipal
Council**

**Provision of
serviced land**

**Improved co-
ordination
between
licensing and
planning
agencies**

There is a need for improved urban design standards to be applied in Livingstone covering tourism developments, housing and urban facilities. The Development Plan puts forward a number of proposals. These should be further improved and enforced.

Urban design standards

The Livingstone Council should develop policies on street lighting design to minimise the visual impact of the town at night.

Street lighting design

The advertisements and signage at the southern entrance to Livingstone have an adverse visual impact. Strict guidelines on signage need to be developed and enforced.

Advertisements and signage

5.1.2. *Planning for tourism developments*

New developments along the River Bank should follow the design guidelines for the tourism industry, outlined in the Draft Outline Development Plan for Livingstone and agreed with the Victoria Falls Trust. No further sites between the Maramba River and the Victoria Falls should be permitted.

Guidelines for tourism developments

In the absence of natural and physical constraints between developments there should be a minimum distance of 500 m between developments. This recognises the needs of other river bank uses including:-

Distance between developments

- Retention of the riverine forest
- Animal movements
- Local community access to the river for water supply, watering animals etc.
- Privacy and quality of existing tourist developments.

Controls on expansion of ancillary facilities

Strict controls should be applied on the expansion of ancillary facilities for hotels and lodges.

Hotels larger than 50 beds should not be sited on the riverbank

Larger hotels of more than 50 beds should not be sited on the river bank. These should either be sited within the urban area, and designed to enhance the urban environment, or on the higher land outside of Livingstone. Considerations of landscape impact, especially from critical viewing points, e.g. the rainforest, other hotels etc. must be taken into consideration.

The areas identified for tourism development include:

Possible zones for tourism developments in Livingstone Municipal Area

- Six sites fronting Zambezi and Maramba Rivers, currently out to tender.
- Other water front sites not yet identified
- Town centre locations
- High ground on road to Chief Mukuni's Village
- Sites overlooking the gorges in Chief Mukuni's area

Special facilities for low spending visitors to minimise their environmental and social impacts and to encourage higher contributions to the local economy should be designed. It is recommended that a special study be carried out with the Zimbabwean Authorities to develop a common approach

Accommodating low spending visitors

5.1.3 Industrial rehabilitation

The industrial base of Livingstone needs to be rehabilitated urgently in order to provide the employment for the growing population. Recommendations for this have been put forward as part of the Livingstone Development Plan.

These include the establishment of an Export Processing Zone to take advantage of the proximity of Livingstone to regional transport links. This might also involve improvement of road connections to Botswana and Namibia and the construction of a new bridge across the Zambezi. This should be sited as far west as possible from the Victoria Falls.

Any plans for rehabilitation of industries in Livingstone should include compliance with air and waste water discharge standards and appropriate pollution control measures.

Urgent need for industrial rehabilitation

Export Processing Zone and improved road transport links

Pollution Control Standards

5.1.4 Population growth and urban facilities

There will be a demand for an extra 530 hectares of land in Livingstone to cater for housing needs and attendant social services by the year 2010. This has been identified in the Development Plan for Livingstone. It is unlikely that tourism development will significantly increase the demand for different types of housing in the town.

Water supply, sewerage and sewage treatment are considered to be adequate to cater for the growth of population in the town. However, the water distribution network fails frequently and is in serious need of repair.

Electricity supply should be extended to low cost areas in the town to minimise fuelwood consumption and deforestation.

Solid waste management facilities are also unsuitable and there will be a need for a new landfill site of about 8 hectares for the population to 2005.

Medical facilities in the town are currently insufficient to cater for tourist expectations and would need upgrading with improved clinics and out-of-hours access to the Victoria Falls Town Hospital.

Housing

Water supply and sewerage

Electricity supply

Solid waste

Medical facilities

5.1.5 Historic buildings

There is a risk of continued demolition and alteration of buildings of historic interest. This would alter the character and attractiveness of Livingstone.

A "Historic Livingstone" zone should be designated with the appropriate conservation and protection policies. This could be a promotional point for the town.

High rise buildings in Livingstone should be discouraged, especially in the Historic zone.

Establish a "Historic Livingstone" zone

Discourage high rise buildings

5.2. Victoria Falls Town

Considering the current very rapid rate of population growth in the town coupled with the serious situation of water supply and distribution, housing and access to land for urban expansion, and the shortage of other urban facilities especially adequate solid waste disposal sites, the town should be allowed to consolidate on the existing developments which have already taken place and those now under construction. The preparation of a new statutory Master Plan for Victoria Falls Town has been recommended as an urgent strategic action, which together with the upgrading of Victoria Falls Town to Municipality status would give it direct control of planning decisions in the area. It would put it on an equal footing with the Livingstone Municipal Council in the Victoria Falls Trust.

5.2.1 Master Plan and Tourism developments

No further proposals for hotels and lodges in the town should be considered for at least two years, i.e. until 1998. This would allow for the preparation of the Master Plan and its official acceptance, the consolidation and improvement of existing facilities as well as on-going assessment of the carrying capacity of the town and adjacent areas and the management measures proposed in this study.

Future developers of hotels and lodges should be encouraged to locate outside the immediate vicinity of Victoria Falls Town, but within a day's visit of the Falls. Areas which can be considered include the Gorges and in the hinterland. It is understood that the areas for development are necessarily constrained by existing land use designations (Forest Reserves, National Parks and communal lands). However, no further development should be allowed in the World Heritage Site, nor along the river bank outside the National Parks areas.

The siting of the proposed Rainbow Group hotel/conference centre is considered to be too large and inappropriate for a river front development, adjacent to the World Heritage Site, especially as proposed with a three-storey building which would protrude above the existing tree height and which would curtail animal movement along the river bank.

Special facilities for low spending visitors to minimise their environmental and social impacts and to encourage higher contributions to the local economy should be designed. It is recommended that a special study be carried out with the Zambian authorities to develop a common approach

**No further
tourist
developments in
Victoria Falls
Town until
Master Plan is
complete**

**Areas for hotel
and lodge
development
outside the
Town boundary**

**Inappropriate
riverfront
developments
adjacent to
World Heritage
Site**

**Accommodating
low spending
visitors**

5.2.2 Housing and urban facilities

Rather than create any more land for housing within Victoria Falls Town consideration should be given to the creation of a satellite town out towards the airport together with a light industrial area especially for tourism service industries. If also sited near the railway line, a commuter service could be developed to bring people into the main town for work etc. In the siting of such a new town, consideration should be given to the probable increased air traffic around the airport.

The dependence upon tourism of the town has been highlighted as a potential liability. Light industry should be encouraged, possibly located adjacent to satellite communities rather than in Victoria Falls Town itself.

**New housing for
Victoria Falls
Town -
proposed
satellite town**

**Promotion of
light industry in
the area**

Urban design standards need to be drawn up to maintain the quality and attractiveness of the built environment. These should include urban lighting design to minimise the night-time visual impact.

Buildings in the town should not be greater than tree-height or an appropriate fixed level.

The approach to Victoria Falls Town is in danger of becoming spoilt by informal curio selling stands. Guidelines and their enforcement for controlling the visual impact of curio selling are required.

The water supply situation needs urgent attention, especially the distribution network.

The sewage treatment system would need to be upgraded if the town's population exceeds 50,000. The present works may not be suitable for expansion and an additional site may have to be identified.

A new solid waste disposal site needs to be identified as a matter of urgency. One such site is a disused sand pit to the east of the airport road, however, the current refuse truck and equipment would be inadequate to deal with increased haulage distances.

Recreational facilities for the people of Victoria Falls Town and Chinotimba are very inadequate and there is a need for additional sports and club grounds.

5.3. Aircraft operation over the Falls and Victoria Falls Town

The currently agreed height restriction of 4,000 ft AMSL (or about 1,000 ft above the Falls) should be enforced and consideration given to raising the height restriction to at least 4,500 ft AMSL (about 1,500 ft above the Falls) or even 5,000 ft AMSL at a later date.

All flights from Sprayview airfield should be curtailed. If the airfield is closed down, adequate provision for emergency landing should be found elsewhere.

The numbers of aircraft flying around the Falls on both sides at any one time should be limited to no more than three fixed wing and helicopters, and four Ultralights/microlights.

Any additional aircraft brought into operate over the Falls should comply with stringent ICAO noise regulations or equivalent. Existing aircraft should be made to comply with these regulations at their next airworthiness test.

Aircraft operators, should change their arrangements from flying on demand to strict flying hours. There should be agreed no-flying times, e.g. before 8.00 am and after 4.30 p.m. and with at least one Sunday afternoon off each month.

Urban design standards

Building height restrictions

Guidelines for curio selling stands

Water supply

Sewage treatment

New landfill site required

Recreational facilities

Height restrictions

Restrict flights from Sprayview

Restrictions on the numbers of aircraft

All aircraft should comply with ICAO noise regulations

Strict flying times should be observed

Joint national noise control policies should be implemented for aircraft and other transport. Appropriate personnel from each country should be trained for noise control measurements and measures.

National noise control policies

Formal land use policies, e.g. Victoria Falls Master Plan should take future airport expansion into account in the siting of residential areas.

Take noise from airports into account in future plans

5.4. Addressing Issues of Poverty and Equity

The tourist facilities present a vision of luxury and wealth which many visitors expect and are willing to pay for. This contrasts with the living conditions and expectations of the majority of people living in the area. The contrast is even more marked in Zambia where unemployment and poverty are undermining the stability of society, but even on the Zimbabwean side, there is expressed discontent about the inequality of access to resources and distribution of the benefits from tourism. The recent events of civil unrest on both sides are forerunners of what could happen if issues of poverty and equity are not addressed.

If they are not, the sustainability of tourism in the area in both Zambia and Zimbabwe is threatened. If civil unrest grows in either country, the impact upon tourism will be felt through decreased visitor numbers, loss in income and even greater unemployment and dissatisfaction.

All existing tourism-related companies should develop active policies and programmes for the involvement of local communities, both urban and/or rural. The scale of involvement will depend upon the size and resources of the company, but such programmes should go beyond a mere commitment to employ local people and charitable support for schools and hospitals. It is important to build a sense of partnership and responsibility so that both company and community have a stake in the ongoing viability of tourism.

Programmes for involving local communities in tourism

This can be done through: -

- Encouraging small businesses which complement the mainstream activity of the company, contracting out rather than doing all subsidiary activities in-house. These side companies can be owned and operated by local businessmen. Examples are transport and tour services, dry cleaning and laundry services, furniture making and repair, printers and sign painters etc.
- Providing capital, training and other support for community based initiatives, such as vegetable production and supply to local hotels, alternative craft production and marketing, cultural tours, village visits etc. The emphasis should be on facilitating these initiatives through consultation about needs, ideas and expectations, rather than imposing or directing them.

Complementary small businesses

Facilitating local initiatives

Proposals for all incoming companies should include similar policies and programmes. Planning authorities and licensing agencies should demand details of such policies and programmes in advance. Preference will be given to such proposals. It is not sufficient for new companies to say that they will do this, only to "forget" this commitment when they win their licence or lease. The Trust should monitor such commitments.

In Victoria Falls Town, there is considerable feeling that many of the jobs, even the least skilled, go to people from outside the area. Companies should develop employment policies which can be seen to be fair.

Central and Local Governments should collaborate with the tourism industry in the setting up of training colleges and centres in both Victoria Falls and Livingstone to provide opportunities for local people wishing to enter the hotel trade, safari guiding, and in technical skills for the trades and service industries. This would enable local people to improve their qualifications and opportunities for better jobs. Such centres could collaborate closely, even to the extent of sharing trainers and resources.

Communities, which are approached for leases for hotel and lodge developments should be encouraged to form partnerships with developers which guarantee them a say in the business operations and a share of benefits/profits, as well as employment. Local traditional leaders and District Councils should negotiate such arrangements on behalf of their communities and appoint representatives to manage the community shareholding.

The Victoria Falls Trust should encourage such activities by investigating similar collaborative arrangements used in other places and developing a model for local communities entering into such partnerships around Victoria Falls.

The Trust should also consider engendering the spirit of such collaborations through the setting up of an annual award for the greatest contribution to sustainable development in the area by any company, agency, community or individual.

Incoming companies to have community programmes

Equitable local employment policies

Tourism training centres

Community partnerships with developers

Model local community partnership agreements

Annual sustainable development award

6. ZONING AND GUIDELINES FOR DEVELOPMENT

From an analysis of the different environmental conditions and constraints upon development the following zones are put forward:

- Protected zones
- Strictly protected zones
- Tourism development zones
- Urban development zones

The proposed delineation of these zones and guidelines for permitted developments are described below.

6.1. Protected zones - no permanent development, controlled access

The protected zones include the areas currently bounded by the National Parks and the World Heritage Site. These are the areas in which no permanent development should be allowed. Existing enclosures and buildings should be limited to their present extent and only sensitive rehabilitation should be allowed. Facilities for National Park and visitor management may be allowed subject to appropriate consultation and planning processes. It is suggested that any changes in existing facilities are discussed within the Victoria Falls Trust.

Around the protected areas there should be a buffer zone in which no permanent developments are constructed. This buffer zone is set for a distance of 500 m around unfenced protected area boundaries, and 200 metres from fenced protected area boundaries. In areas where there is constraint upon land e.g. in certain areas close to the World Heritage Site, this may be reduced to 100 metres but only with special permission.

The areas for future development where this rule would be overturned is around the confluence of the Maramba River with the Zambezi where five plots have been put out for tender. This area lies within the Mosi-oa-Tunya National Park but outside the World Heritage Site. The Fairyland site also lies within the Mosi-oa-Tunya National Park and on the edge of the World Heritage Site. On the Zimbabwean side, the riverbank hotels - the A'Zambezi River Lodge, its extension by the Rainbow Group and the caravan park, lie within the Victoria Falls Town Council area, but right on the boundary of the National Park and the World Heritage Site. These do not allow any buffer zone for the riparian areas.

Temporary camp sites and picnic sites are permitted within these areas and these should follow the rules as laid out as for the Zambezi National Park, namely that all structures should be removed during the rainy season; that all structures, with the exception of septic tanks and soakaways which are permitted, should be removable within 24 hours. No mature trees or riparian vegetation should be cut down or removed without permission. Fuelwood should be brought in from outside and all wastes should be removed from the site on a regular basis.

Jetties should be considered as temporary developments with the same conditions as above. Jetties should conform to design standards agreed by the Victoria Falls Trust. Where riparian vegetation has to be cleared, approved bank stabilisation measures should be installed.

Access to these protected zones is controlled but readily available. In the future maximum numbers of people and vehicles at any one time may be set and in the event of reaching this maximum, access may be restricted.

6.2. Strictly protected zones - no development, limited access

Within the protected zones certain areas may require special protection. The areas identified at present include the islands in the river within the World Heritage Site. These islands should have no permanent or temporary camp sites. The existing facilities on Kandahar Island may be continued and maintained. The only exception to this rule are facilities for National Park management or research purposes, and these should be subject to agreement within the Victoria Falls Trust.

Access by day visitors to most of these islands is allowable at their own risk, and subject to the environmental guidelines for tour operators with regard to litter, wildlife disturbance etc. It is suggested that tour operators be encouraged to adopt responsibility for maintenance of certain islands.

Specifically named islands and the open water around them may be designated as no access zones at certain times of year. This would be aimed at protecting breeding species of birds and fish. Islands which have been particularly identified include Siloka Island, and the islands where the African Skimmers breed.

6.3. Tourism development zones

Tourism development zones are those areas outside the urban boundaries where proposals for hotels and lodges will be considered. They include:-

- Riverbank sites upstream of the Mosi-oa-Tunya National Park
- Sites along the Gorges on both sides, lying outside the National Parks and the World Heritage Site and their buffer zones
- Sites inland from the river and gorges on both sides, but not within the National Parks.

One such site has been identified on the higher ground on the road to Chief Mukuni's village. This is indicated on Map 8 in Volume 1. Other sites may lie within Forest Areas and Communal/Tribal Trust lands. Special permission would be required for such sites from the relevant authorities.

Developments should observe the following planning guidelines:-

- Buildings should not break the existing tree line of the woodland at the site;
- For Riverbank sites, buildings should be set back by at least 50 metres from the high water mark;
- For the Gorges, buildings should be set back by at least 30 m from the cliff top. A criterion for this would be that they should not be seen from the river below. This however, would not preclude viewing platforms etc.;
- Respect for animal movements towards and along the river bank or across the river. No fences will be allowed other than the minimum needed to protect property;
- Respect for archaeological, historic and cultural sites;
- No mature trees should be felled and no exotic species should be planted as part of landscaping proposals. Indigenous plant species should be used wherever possible;
- Waste water treatment should be adequate for achieving water quality discharge standards;
- Developers would be expected to follow detailed design guidelines adapted from the Livingstone Development Plan by the Victoria Falls Trust. The visual impact of developments during both day and night will be of prime consideration, and sensitivity of design to the local environment will be expected;
- In the absence of natural and physical constraints, there should be a minimum distance of 500m between developments. This recognises the following considerations:
 - Visual and noise impact of one development on existing facilities in the area
 - Access of wildlife to the riverbank and animal crossing points
 - Access to river for local communities for ritual purposes, water supplies, watering livestock and fishing.

6.4. Urban development zones

The Urban zones for Livingstone are shown on Map 8 of the SEA in Volume 1. These include proposed major residential subdivisions, the Industrial/Export Processing zone, areas for community woodlands and for agricultural smallholdings. The urban areas of Livingstone are also available for tourism developments. Certain parts of Livingstone should be designated as conservation areas for protection of historic buildings. An area along the bank of the Maramba River, but outside the Municipal boundary has been identified for agriculture.

The planning criteria for these areas are laid out in the Development Plan for Livingstone.

The urban zones for Victoria Falls Town are shown on Map 9 of the SEA in Volume 1. This shows the expansion of the town since the 1960s and the 1973 Development Plan. It shows areas designated for hotel and tourism development, industrial development, commercial development residential areas and community facilities. The areas proposed for expansion in 1995 include Sprayview airfield, and the State land to the South West of the town between the Kazungula and Bulawayo roads.

Future expansion of the town is constrained by the National Park boundaries and the minefields. Further areas for residential development have also been identified on the State Land on the south bank of the Masuie River and around the Victoria Falls airport.

The preparation of the Master Plan for Victoria Falls Town is urgently required to designate such areas which can be used for development and to prepare a rationalisation of the town centre and the surrounding rural areas. Planning controls and policies would be agreed during the preparation of this plan. Building height controls, urban design and lighting are key issues to be determined.

7. MONITORING AND ADAPTIVE MANAGEMENT

7.1. Identification of indicators

Monitoring and adaptive management have been identified as critical for moving towards sustainable development. It is only when adequate up-to-date information about the economic, social and environmental conditions are available that rational management decisions can be made. However, it is also important not to be smothered by vast quantities of interesting, but not very helpful information. Not only is this a waste of effort and resources, but too much information can get in the way of management decision making. The identification of the best indicators for sustainable development of Victoria Falls is therefore a critical part of the process.

A list of possible indicators is proposed for discussion in the forum of the Victoria Falls Trust. The actual choice of indicator will depend upon the relevance to the situation, the ease of measurement and costs. It is also important that indicators be clearly understandable. There is a growing trend to incorporate indicators identified and monitored by local communities.

7.1.1 Economic Indicators

- Numbers of staying visitors per year in hotels and campsites
- Numbers of day visitors per year
- Numbers of rooms/beds available and % occupancy
- Numbers of people taking part in the different activities especially rafting, canoeing, safaris, river cruises flights, entrance to National Parks etc.
- Curio sales/stock turnover
- Employment in tourism and related sectors as % of total employment
- Wages by sector and skill
- Prices of basic foodstuffs and utilities
- Land prices/rents
- Availability of serviced land
- Industrial activity - numbers of active companies and employees
- Local agricultural production sold to markets, hotels and lodges
- Budgets of local government and other agencies

7.1.2 Social Indicators

- Population and other standard demographic indicators
- Rural to urban migration
- Employment - unemployment, % of local employees to total employees
- Poverty indicators
- Housing - availability, numbers of shacks/informal housing per stand, numbers of people per stand, housing standards
- Electricity connections
- Fuelwood use - numbers of families using fuelwood, costs, areas of collection
- Water supply and sewerage connections - adequacy of water supply, frequency of breakdown
- Facilities per head of population - clinics, hospitals, doctors, schools, churches, recreation etc.
- Health indicators - incidence of diseases (especially STDs and AIDS), child mortality
- Education and training indicators - literacy, numbers of children per school place, training facilities available and utilised
- Crime and prostitution indicators - numbers and types of crime reported, solved
- Cultural erosion - community attitude/opinion survey
- Indicators of participation of different sectors and communities in planning and management

7.1.3 *Environmental Indicators*

- Water flows in the river, especially mean monthly flows, onset and length of drying of Eastern Cataract
- Climate - Rainfall and temperature, spray fall in the rainforest
- Deforestation - % forest cover, species composition especially curio wood trees, areas deforested
- Land take by urban and tourism developments
- Loss of key habitats, especially riparian forest and rainforest
- Loss of biodiversity - key species include rainforest plants, birds such as African Skimmer, Pels Fishing Owl, Black Cheeked Lovebird, Taita and Peregrine Falcons, Black Eagle as well as annual waterbird and warbler counts
- Invasion by exotic plants, especially *Lantana*
- Animal numbers, especially of elephant and other key species
- Litter and uncontrolled solid waste dumping
- Water pollution measurements - BOD, coliforms, nutrient status
- Visual impacts of developments
- Noise levels, especially of aircraft
- Incidents between animals and humans - numbers, fatalities

7.1.4 *Sustainable Development Indicators*

The indicators of sustainability may be derived from many of the above. One definition of sustainability is the maintenance or improvement in the quality of life for present and future generations. Previous analysis of the situation in Victoria Falls indicated four categories for the quality of life - Wildlife and the General Environment, Tourism, Urban Life and Rural Life. The composite indicators may be built up within these categories around the following statements:

Quality of Wildlife and General Environment

- The forest cover and health in the different woodland types is maintained, especially in sensitive areas such as the Rainforest, the riparian forest and woodland around urban and rural communities.
- The variety and health of different habitat types in the area is maintained
- There is no loss of species living, breeding or visiting the area
- Animal populations are maintained within the normal variations expected for seasonal and climatic changes and within the carrying capacity of the area
- Incidents between animals and humans, deaths on the road, animal attacks etc. do not increase
- Poaching of animals, plants and fuelwood is minimised.

Quality of Tourism

- Visitors perception of Wilderness Value is maintained
- The visual spectacle of the Falls and its surrounding area is maintained
- The noise levels are reduced
- The quality of interpretation and guidance around the Falls is improved and maintained
- Visitor safety is maintained with regard to rainforest walks, safaris, animal incidents and adventure sports
- The standard and appropriate mix of visitor accommodation and activities is improved and maintained
- Security of visitors in terms of crime, prostitution and health facilities is improved and maintained

Quality of Urban Life

- The provision and diversity of employment opportunities is improved in both Livingstone and Victoria Falls
- The communities becomes more diverse in terms of skills and enterprises, and yet remain coherent as communities
- There is a growing body of commonly held knowledge and available technology for maintaining a good quality of life through sustainable activities
- The costs and benefits of tourism development are more equitably distributed
- Urban populations stabilise at levels which do not exceed the carrying capacity of the urban environment and employment opportunities
- The provision and conditions of housing, especially low cost housing, is improved and maintained
- The provision of basic utilities, water supply, energy/electricity, sewerage, solid waste disposal is improved
- The capacity of urban institutions to plan, supply and manage the urban environment is strengthened financially and technically
- Crime and prostitution are controlled at acceptable levels
- Cultural diversity is respected and residents do not feel threatened by tourist culture
- There is an increasing involvement of local people in planning and management of the natural and social resources

Quality of Rural Life

- The provision and diversity of income generating opportunities is improved in the rural areas, especially from agriculture and tourism
- The rural communities become more diverse in terms of skills and enterprises, and yet remain coherent as a communities
- There is a growing body of commonly held knowledge and available technology for maintaining a good quality of life through sustainable activities
- The costs and benefits of tourism development are more equitably distributed
- The provision of rural facilities, water storage an supply, electricity, schools, clinics, roads etc. is improved
- Agriculture and animal husbandry use more sustainable techniques to minimise deforestation, overgrazing and soil erosion, and to increase long-term productivity and energy supply.
- The capacity for rural populations to cope with extremes of climatic changes increases
- Rural to urban migration trends reduce, and the population stabilises
- The cultural integrity of rural communities is respected and the rates of cultural change do not lead to community disintegration
- Traditional sacred sites and celebrations are respected and become a significant feature in the local culture once again
- There is an increasing involvement of local people in planning and management of the natural and social resources.

7.2. Regularity of monitoring

Monitoring of the selected indicators needs to be an ongoing process. Some of the data which contributes to these indicators needs to be collected on a regular or frequent basis, even every day - examples of this are the visitor numbers. These should be part of the statistics kept by all the hotels and tour operators.

However, some trends only become obvious after longer periods of time when compared to a baseline - demographic changes, habitat changes and animal numbers etc. may be monitored on an annual or in the case of population censuses even once every ten years.

The regularity of monitoring thus depends upon the indicators which are chosen. Nevertheless the regularity of analysis of all the information should be on a yearly basis, so that a combination of

trends and seasonal differences can be highlighted and brought to the attention of the resource managers.

7.3. Administration of monitoring

One of the key roles of the Victoria Falls Trust is the impartial monitoring and evaluation of trends towards sustainable development around Victoria Falls.

After selection of the key indicators, the Trust should draw up a monitoring programme identifying how often the information should be collected, who should collect it and how much financial resources can be allocated to this activity. In making this selection, emphasis should be placed upon using data which is already collected by different organisations; the role of the Trust would therefore be the co-ordination and collation of data on indicators collected by other private and public sector organisations. It might also have to verify and agree means for improving the quality of information collected.

However, it is likely that there will be gaps in the information collected and the Trust may have to commission other agencies to collect it, or do the job itself whichever is appropriate. The Trust, for example, might take responsibility for data on attitudes and opinions of visitors and communities.

7.4. Adapting management practices based upon experience

After the information is collected each year, the Trust would be expected to produce an annual report which would be made available to all stakeholders for decisions to be made about common management practices. This information could also be used by the stakeholder groups in their own particular management decisions.

Particular attention would be paid in the annual report to assessing the effectiveness of management practices. Thus the state of each plan - urban, land-use, tourism or industrial development, wildlife management etc. - should be assessed each year in the light of these indicators. If adjustment in the management practices is required, it can be recommended at this time. Changes in policy and institutions would require a longer assessment period.

The important feature is that management practices can and should be changed in the light of changing conditions. Only the collation of all the relevant data, its assessment and its open discussion within the framework of the Trust can lead to the commitment necessary to implement such changes.

The monitoring system itself is only a management tool and should also be open to assessment. The effectiveness of the selected indicators and the data collected to build up these indicators, should be considered at least every three years, or whenever shortcomings become obvious. If the indicator can be improved or substituted easily, then the system should be changed. If it can not, it may be dropped altogether or accepted as it is with all its limitations.

8. COMMUNICATION AND CO-ORDINATION

8.1. Reporting

The main published report of the Victoria Falls Trust should be its Annual State of the Environment report. Using the SEA as a baseline the Trust's annual report should summarise changes which have occurred during the year in tourism, in urban life, in rural life, and in wildlife and the general environment. It should highlight the management practices adopted or changed during the year, and the results of particular monitoring exercises. It should also report on the participation of and interaction with the different stakeholder groups. In addition the usual annual report features, such as annual accounts and internal management should be presented.

The annual report should be produced in the most important local languages and circulated to the different stakeholders including all the communities within the area. If necessary it should be presented to communities in special meetings to discuss its implications.

In addition to the annual report, there may be reports on specific activities, studies or management practices. These might be generated by the small working groups to look into particular issues. These reports should be open for public discussion if appropriate. Translation into local languages may be necessary, but not obligatory.

8.2. Cross-border co-ordination

Cross-border communication and co-ordination are very important in order to agree common approaches to the development of the area. With increasing development pressure upon the more rural areas such as the Riverbank and Gorges on both sides, it is important that cross-border collaboration extends to agreements to consult on all major planning and licensing decisions. This need not be done through the Victoria Falls Trust, although the Trust should be kept informed.

It is suggested that mechanisms such as regular planning meetings be arranged between the Livingstone Municipal Council and Victoria Falls Town Council, and the Rural District Councils on both sides. These should be held at least once a quarter.

Similarly there should be meetings between the different sectoral agencies such as between the National Heritage Conservation Commission and the National Museums and Monuments of Zimbabwe, and between the two National Parks and Wildlife agencies on both sides. These should collaborate on conservation and resource management measures, and research and education needs.

The model of monthly co-ordination meetings provided by the Victoria Falls branch of the Zimbabwe Council for Tourism is considered to be particularly useful. The Livingstone Tourism Association holds similar meetings, but both need strengthening and the encouragement of the different public and private sector bodies to attend on a regular basis. These provide the forum for regular cross-border co-ordination; representatives of each should attend the meetings of the opposite organisation and report back.

8.3. Inter-agency co-ordination

One of the main criticisms about developments in both countries has been the apparent lack of co-ordination between agencies involved with planning control and the granting of licences. The result of this has been the issue of permissions and licences which do not bear a relationship to the state of the environment. Confusion amongst developers and mistrust amongst the residents has been created

It is recommended that licensing and planning authorities in each country put in place a standing consultation process which must be completed before the issuing of any licences or planning permissions. If such processes already exist they should be reviewed to improve them. In such a review, each of the agencies to be consulted before the granting of licences or permissions should be clearly identified along with the appropriate contact point. If such permissions or licences have a cross-border implication, then the mechanisms for this should also be identified.

However, co-ordination should not be restricted to formal inter-agency consultation processes, there may be necessity for management co-ordination, for example when resources are shared or when a resource managed by one agency lies within the boundary of another agency, e.g. as typically happens when a cultural heritage site lies within a National Park. Regular co-ordination is needed to ensure adequate common management practice.

8.4. Participation of stakeholders

The formal mechanism for the participation of all stakeholders is through representation on the Advisory Panel and election of the Governing Board of the Victoria Falls Trust. The Annual General Meeting would be open to the general public, but voting can only be by the representatives on the Advisory Panel. Each stakeholder group should develop its own mechanisms for selecting its representatives, and for reporting back the results of the meetings - both AGM, and Advisory Panel and Board Meetings. For communities which may need greater assistance with participation in the affairs of the Trust, it may be necessary to arrange special community meetings before or after the AGM. The Trust should make arrangements for community integration into the process.

This is especially important when trying to encourage the use of local knowledge in management practices, and the development of Primary Environmental Care initiatives and links with tourism developments such as CAMPFIRE or ADMAD type projects. For the latter, it is recommended that the Trust draws up model agreements to help both communities and developers.

The success of Primary Environmental Care - the management of natural resources and the environment by local communities (such as joint-management agreements on forest management in the communal areas for curio wood or fuelwood, or sustainable use of wildlife in game management areas) depends upon a combination of environmental education and drawing upon local knowledge. It is also dependent upon the handing over of sufficient management authority to the users of the resources - the local communities. The Trust should develop the capacity to promote and advise such arrangements.

Monitoring of the social and environmental conditions is another aspect in which the participation of all stakeholders is very important. The Trust should develop mechanisms in collaboration with local communities (both rural and urban) for the residents themselves to provide much of the information. This may be both objective measurements or observations and subjective opinions about the state of the environment within those communities. The use of participatory techniques to encourage this, needs to be explored. Mechanisms of internal monitoring by communities provides them with information and arguments which can be put forward for negotiations of planning and resource management.

All major new development proposals and new adventure sports activities will need specific site-oriented Environmental and Social Impact Assessments. Consultation with stakeholders should be a required part of this process. The Victoria Falls Trust is seen as playing a critical role in this process. Similarly, being an independent body made up of all the stakeholders in the area, it will have a role to play in conflict resolution and negotiation of trade-offs. Its ability to take and present the views of the different interests so that equitable decisions are made will be very important for the future sustainable development of the Victoria Falls area.

9. CONCLUSION

The emphasis of this second volume has been upon the presentation of recommendations for an institutional framework for the co-ordination of sustainable development of the Victoria Falls area - the Victoria Falls Trust. Without such a framework, it is considered that it will be impossible to maintain the collaboration between the two countries and between the different agencies and sectors and to ensure control of development such that it does not destroy or change the natural and cultural resources upon which the prosperity of this area depends.

The Victoria Falls Trust needs to be set up as soon as possible, initially as an ad hoc body after the workshop on Sustainable Development to be held at the end of March 1996, and then subsequently as a formally approved independent body reporting to the Joint Permanent Commission, once the intergovernmental agreements have been put in place.

The first substantive task of the Trust should be to elaborate this skeleton management plan for the whole area, drawing upon the parallel processes of development planning in Livingstone and Victoria Falls Town. It is important that the management plan should include inputs from all the stakeholders making up the Trust. It should concentrate upon setting the limits to use of the different developments and activities and developing the guidelines for these. It should set in place monitoring and co-ordination arrangements to ensure that informed decisions can be taken on planning and management measures. It should also develop its capacity in encouraging participation of all stakeholders, especially the rural and urban communities, so that they can share in the benefits of tourism.

Without sustainable development, it is feared that the Victoria Falls area will lose its current attractiveness and its Wilderness Value. No doubt, the private sector would try to compensate to protect its investment by creating different and more artificial attractions to draw in its clientele. However, by that time, the damage to the natural environment, the loss of the uniqueness of the Falls area and the World Heritage Site, and the damage to the cultural fabric of the society will have been done.

APPENDIX 1

**BRIEF DESCRIPTION OF EXISTING OR PROPOSED
CROSS-BORDER AND INTERNATIONAL AGREEMENTS
AFFECTING THE ZAMBEZI RIVER**

(quoted from Kimberley, M. *The next step - a Zambezi Basin Convention.*
in Matiza, T, et al, 1995, Water resource use in the Zambezi Basin. IUCN)

ZACPLAN

In May 1987, an agreement was reached on an Action Plan for the Environmentally Sound Management of the Common Zambezi River System (ZACPLAN) at a conference convened by the United Nations Environment Programme (UNEP, 1987). ZACPLAN was adopted by Botswana, Mozambique, Tanzania, Zambia and Zimbabwe who requested that the Plan be endorsed by the Council of Ministers of SADCC (Southern African Development Coordination Conference - the precursor of SADC) as a programme. At the same time, the states concerned recorded their intention to take all appropriate measures for the expeditions and effective implementation of ZACPLAN as a regional activity of SADCC.

The main purpose of ZACPLAN is to develop regional cooperation on environmentally sound management of water resources of the common Zambezi River system and to strengthen regional cooperation for sustainable development. ZACPLAN includes options for institutional and financial arrangements and proposes the establishment of high-level offices in each country to harmonise, at the national level, all matters concerning the Plan in order to achieve efficient and well coordinated cooperation. Each office would be the official channel of communication for national organisations participating in the Plan, would coordinate the participation of national institutions and agencies in the Plan, and would consult with all relevant organisations in their national governments on the activities and progress achieved in implementing the Plan.

The main elements of ZACPLAN are environmental assessment, environmental management, environmental legislation, and supporting measures. Of ZACPLAN's first eight projects, ZACPRO 2 is directly related to the scope of this paper. The objectives of ZACPRO 2 are:

- To compile national and international laws of the basin states related to the utilisation and protection of water and the environment.
- Prioritise requirements for the development and adoption of a regional convention on the environmentally sound management on the common Zambezi River system and to promote the further development and implementation of ZACPLAN.
- To provide technical assistance and advice on the drafting of national legislation for the effective implementation of regional conventions and their protocols.

The Zambezi River Authority

The utilisation of the Zambezi River, as it passes through Zambia and Zimbabwe, is the subject of an Agreement between the Republic of Zambia and the Republic of Zimbabwe, which was signed between the two states on 28 July 1987. The Zambezi River Authority Act (1987) was passed simultaneously in Zambia and Zimbabwe and came into operation on 1 October 1987 in both countries.

The expressed purpose of the Agreement is:

- to obtain for the economic, industrial and social development of Zimbabwe and Zambia the greatest possible benefit from the natural advantages offered by the waters of the Zambezi River; and
- to improve and intensify the utilisation of the waters for the production of energy and for any other purpose beneficial to Zimbabwe and Zambia.

Zimbabwe and Zambia agree to utilise, operate and maintain the existing Zambezi complex (dam, reservoir, all telemetering stations and other existing installations) as well as any additional dams, reservoirs and installations that may be constructed or installed on the Zambezi River.

The Act, which gives effect to the Agreement, established the Zambezi River Authority (ZRA) as well as a Council of Ministers (two Ministers each from the Governments of Zimbabwe and Zambia) whose functions are:

- to be responsible to Zimbabwe and Zambia for all matters of policy relating to the use of the Zambezi River and any installations thereon;
- to give directions to the ZRA to ensure the most efficient use of the Zambezi River and its installations;
- to supervise the operations of the ZRA;
- to discuss and approve the ZRA's development plans, annual budgets and appropriations as well as the raising and investment of funds by the ZRA;
- to advise Zimbabwe and Zambia on any matter relating to the use of the Zambezi River and its installations.

The ZRA may contract, acquire property and institute legal proceedings. The Board of Directors is, subject to the overall direction of the Council of Ministers, responsible for the policy, control and management of the ZRA.

The functions of the ZRA are as follows:

- to operate, monitor and maintain the Kariba complex;
- in consultation with ZESA (Zimbabwe Electricity Supply Authority) and ZESCO (Zambia Electricity Supply Company), to investigate the desirability of constructing new dams on the Zambezi River;
- with the approval of the Council, construct, operate monitor and maintain any other dams on the Zambezi River;
- to collect, accumulate and process hydrological and environmental data;
- in consultation with ZESA and ZESCO to regulate the water level in the Kariba reservoir;
- to liaise with ZESA and ZESCO in the performance of its functions that may affect the generation and transmission of electricity to Zimbabwe and Zambia;
- to submit development plans and programmes to the Council for approval.

The ZRA is empowered to make by-laws to regulate certain matters concerning the waters of the Zambezi River from Kazungula to Kanyenba.

The costs of running the ZRA are shared equally by Zambia and Zimbabwe. The Authority generates funds from moneys paid to the ZRA by Zimbabwe and Zambia; tariffs, fees and charges for services rendered or facilities provided; grants, donations or loans from sources approved by the Council and interest from investments and loans. Under the Act, Zimbabwe and Zambia agreed to share equally all the available energy from Kariba Dam and any future dams that may be constructed on the River. The sharing of energy from future dams is determined by each government's share of construction costs. There are provisions under the Act for the settlement of disputes by a board of arbitrators.

Convention on the Common Utilisation and Management of the Resources of the Zambezi Drainage Basin

Through ZACPRO 2 activities, SADC is addressing legal issues in the utilisation and management of the shared resources of the Zambezi Basin. A Convention on the Common Utilisation and Management of the Resources of the Zambezi Drainage Basin has been proposed (Maluwa, 1992). The draft convention envisaged that the parties to the Convention would be Angola, Botswana, Malawi, Mozambique, Namibia, Tanzania, Zambia and Zimbabwe. The convention highlights the need to develop close cooperation for the judicious exploitation of the resources of the Zambezi Basin and ensures equality of treatment for those who use the River and its tributaries.

The aims of the convention are to:

- promote cooperation amongst member states and to ensure integrated development of the Zambezi Basin in energy, water resources, agriculture, animal husbandry, fisheries, forestry, transport, communications and industry;
- harmonise national development policies in the Basin through the implementation of integrated development projects and programmes as well as the harmonisation of all relevant national laws currently in force in the member states;
- formulate general policy in the development of the Basin, consistent with the international status of the Basin;
- elaborate and execute an integrated development plan for the Basin

Articles 1 to 4 set out the general principles as follows:

Article 1

The utilization of the Zambezi River, its tributaries and sub-tributaries is open to each riparian or basin State in respect of the portion of the Zambezi River Basin lying in its territory and without prejudice to its sovereign rights in accordance with the principles defined in the present Convention and in the manner that may be set forth in special subsequent agreements. The utilization of the resources of the Zambezi River Basin shall be taken in wide sense, to refer, inter alia, to navigation, agricultural, economic and industrial uses, including the exploitation of its fauna and flora.

Article 2

The riparian and basin States undertake to establish close co-operation with regard to the study and execution of any project likely to have an appreciable effect on certain features of the regime of the River, its tributaries and sub-tributaries, their conditions of navigability, agricultural and industrial exploitation, the sanitary conditions of their waters, and the biological characteristics of their fauna and flora.

Article 3

The riparian and basin States undertake to respect and apply the existing rules of customary international law relating to the utilization and management of the resources of international watercourses and, in particular, to respect the principles of community of interest in international drainage basins and equitable apportionment as the bases for their mutual riparian relations. The riparian and basin States further undertake to abide by the general obligation to maintain a proper balance between resource development for a higher standard of living for their peoples and preservation and enhancement of the environment. The riparian and basin States shall elaborate Protocols prescribing agreed measures, procedures and standards to prevent, reduce and control pollution from all sources.

Article 4

In order to further their cooperation for the attainment of the objectives of this Convention, the riparian and basin States hereby establish an inter-governmental organization, as stipulated in the Harare Agreement of 28 May 1987, which will be entrusted with the task of promoting and coordinating the studies, programmes and projects concerning the exploitation of the resources of the Zambezi River Basin.

Draft protocol on the Zambezi River Basin and other shared river basins in SADC

In addition to the above convention, SADC has prepared a draft protocol on the utilisation of the Zambezi River Basin; this protocol is can be applied to other shared river basins (Mvalo, 1992).

The general principles are set out in Article 2 and include the following:

1. The utilisation of shared watercourses within the SADC region shall be open to each riparian or Basin State in respect of the portion of the watercourse lying within its territory and without prejudice to its sovereign rights, in accordance with the principles contained in this Protocol. The utilization of the resources of the shared watercourses shall include, inter alia, domestic, industrial, agricultural, navigational and other economic and social uses.
2. Member States which are riparian to or which lie within the basin of shared watercourses undertake to establish close co-operation with regard to the study and execution of all projects likely to have a detrimental effect on the regimes of the watercourses.
3. Member States shall require any person intending to use the waters of a shared watercourse lying within their respective territories for purposes other than domestic or who intends to discharge wastes into such waters to first obtain a permit from the relevant authority within the State concerned.
4. Member States undertake to respect and apply the existing rules of customary international law relating to the utilization and management of the resources of international watercourses and, in particular, to respect and abide by the principles of community interest in international drainage basins and equitable apportionment of water and related resources.
5. Member States riparian to or lying within the basin of a shared watercourse undertake to abide by the obligation to maintain a proper balance between resource development for a higher standard of living for their peoples on the one hand and preservation and enhancement of the environment on the other hand.
6. Member States lying within the basin of a shared watercourse shall exchange available information and data regarding the hydrological, hydrogeological, water quality, meteorological and ecological condition of such a watercourse.
7. Member States shall utilise a shared watercourse in an equitable and reasonable manner. In particular a shared watercourse shall be used and developed by Member States with a view to attaining optimum utilization thereof and benefits therefrom consistent with adequate protection of the watercourse."
8. Utilization of a shared watercourse in an equitable and reasonable manner within the meaning of paragraph 7 requires taking into account all relevant factors and circumstances, including
 - a) geographic, hydrographic, hydrological, climatic and other factors of a natural character;
 - b) the social and economic needs of the watercourse States concerned;
 - c) the effects of the use of a shared watercourse system in one watercourse State on other watercourse States;
 - d) existing and potential uses of the shared watercourse system.

A monitoring unit is to be established within SADC to monitor implementation of the Protocol with the following objectives:

- The harmonisation and coordination of national water resource development policies, in order to ensure an equitable utilisation of such resources among the member states.
- The formulation, in consultation with the basin states, of the general policy of the development of the Basin which shall be consistent with the international status of the River.
- The elaboration and execution of an integrated development plan for the Basin.
- The initiating and monitoring of an orderly and rational regional policy for the utilization of both surface and underground waters of the Basin.

Provision is made for the settlement of disputes by a tribunal established under the Treaty.

APPENDIX 2

FIRST DRAFT FOR CONSULTATION
January 1996

**PROTOCOL ON CO-OPERATION
BETWEEN
THE GOVERNMENT OF THE REPUBLIC OF ZAMBIA
AND
THE GOVERNMENT OF THE REPUBLIC OF ZIMBABWE
ON THE SUSTAINABLE DEVELOPMENT OF THE VICTORIA FALLS
AND ITS SURROUNDING AREA**

PREAMBLE

The Governments of the Republic of Zambia and the Government of the Republic of Zimbabwe (hereinafter called the "Contracting Parties"):

MINDFUL of the Joint Commission of Co-operation Agreement entered into between them in Lusaka on January 19, 1981:

RECALLING the joint submission by the Governments of Zambia and Zimbabwe to UNESCO for the recognition of the Victoria Falls/Mosi-oa-Tunya as a World Heritage Site and its nomination as such in 1989.

FURTHER RECALLING the co-operation to carry out a joint study on the Strategic Environmental Assessment of Developments around Victoria Falls under the auspices of the Joint Technical Committee of Tourism and Natural Resources of the Joint Permanent Commission, with assistance from the Government of Canada and co-ordinated with the assistance of IUCN - The World Conservation Union during May to December 1995;

FURTHER RECALLING the Agreement concerning the utilisation of the Zambezi River which was signed on 28 July 1987, leading to the formation of the Zambezi River Authority;

FURTHER RECALLING the agreement on an Action Plan for the Environmentally Sound Management of the Common Zambezi River System (ZACPLAN) adopted in May 1987 by the Governments of Botswana, Mozambique, Tanzania, Zambia and Zimbabwe to develop sound management of the water resources of the common Zambezi River and to strengthen regional co-operation for sustainable development;

APPRECIATING the exceptional political, social and economic relations between the two countries;

RECOGNISING the shared nature of the Victoria Falls and the Zambezi River above and below the Falls;

CONSIDERING the common concern for the rational management, conservation and sustainable development of the socio-cultural, economic and environmental resources in the area around the Victoria Falls;

ACKNOWLEDGING the need to incorporate precautionary approaches to the management of tourism development and ensuring that these resources are maintained for present and future generations;

DESIROUS of enhancing the management of the natural resources for the conservation of Biodiversity and of obtaining for the economic benefit and social development of the two countries the greatest possible benefit from the natural advantages offered by the Victoria Falls and its surrounding area;

IN OBSERVANCE of full respect for national dignity and sovereignty of both countries:

The Contracting Parties have agreed as follows:

* Draft adapted from the Protocol on Economic and Technical Co-operation concerning Fisheries Management and Development on Lake Kariba and the Waters of the Zambezi River, revised draft on May 2 1995.

ARTICLE 1

The Contracting Parties shall set up the Victoria Falls Trust (hereinafter called the Trust) as an independent advisory body to the Joint Permanent Commission for the purposes of:

- 1) providing co-ordination of planning and management of integrated development and natural resource use activities by:
 - Reviewing existing policies and developing common policies
 - Initiating these policies within the legal framework of each country
 - Monitoring, evaluating and adapting these policies as necessary
 - Carrying out environmental, social and economic research within the Victoria Falls area and publicising the results;
- 2) to take special responsibility for the co-ordination of the management of the Victoria Falls World Heritage Site through the agreement of common policies and activities with the Zambian and Zimbabwean agencies charged with management of the site under the UNESCO World Heritage Convention nomination;
- 3) to provide a mechanism for participation of all stakeholders in the sustainable development and management of the wider Victoria Falls area;
- 4) to increase public awareness about development issues and concerns in the Victoria Falls area;
- 5) to act as an advocate to decision makers for action to address the various issues and concerns;
- 6) to carry out activities aimed at poverty alleviation and equitable distribution of benefits arising from the resources of the Victoria Falls area;
- 7) to source and manage financial resources to carry out the above activities on a transboundary basis.

ARTICLE 2

The Victoria Falls Trust set up in Article 1 shall:

- 1) be governed by a Governing Board comprising no less than 8 members each from Zambia and Zimbabwe, with representatives of the major stakeholders in the Victoria Falls area (as outlined in the Constitution of the Victoria Falls Trust attached). The Governing Board meet at least twice a year on dates convenient to the Board and may hold extraordinary sessions as and when it deems necessary;
- 2) be advised by an Advisory Panel comprising representatives of all the stakeholders in the area (as outlined in the Constitution of the Victoria Falls Trust attached). The Advisory Panel will meet at least once a year on dates convenient to the Board and may hold extraordinary sessions as and when it deems necessary;
- 3) be managed on a day-to-day basis by a Director and Secretariat who will be responsible to the Governing Board. The Secretariat will be permanently housed in offices either in Livingstone or Victoria Falls Town, but meetings of the Board and Panel will be held on each side by rotation;
- 4) be further advised by ad hoc sub-committees of the Advisory Panel set up to deliberate specific issues which may arise from time to time;

ARTICLE 3

The Trust will provide advice on issues of sustainable development around Victoria Falls to the Joint Permanent Commission and to the ministries and agencies in each country empowered to take planning and resource management decisions. These will take the advice given into account in coming to such decisions and will give their reasons for these decisions in written response to the advice given.

ARTICLE 4

The Victoria Falls World Heritage Site shall be considered a shared resource between the Contracting Parties and the overall level of use of these resources should be determined on the mutually agreed carrying capacity of the different activities (tourism related and other). The share of rights of access to these resources up to the carrying capacity shall be agreed as equitably as possible between the two Contracting Parties.

ARTICLE 5

For the purpose of optimising the management, conservation and development of the socio-cultural and natural resources of the area, the Trust may from time to time undertake programmes and projects which are of mutual benefit to the society and economies of both sides, or advise the Joint Permanent Commission to do so.

ARTICLE 6

In view of the provisions of Article 5 of this Protocol, the Governments of the Contracting Parties through their relevant tourism, planning and natural resource management institutions shall, as appropriate, seek the adoption of programmes and projects covering, inter alia, the following areas:

- 1) general exchange of scientific information and services relating to the natural environment, and social and cultural conditions;
- 2) collaboration in research and monitoring;
- 3) review and revision of common planning and management policies and regulations;
- 4) co-operation in planning control and enforcement of regulations.

ARTICLE 7

In pursuance of work programmes identified under this Protocol, the Contracting Parties shall undertake to attach relevant personnel to the staff of the Trust. Unless specifically determined, such attachments shall normally be for short periods to be mutually agreed upon at the time of such exchanges.

ARTICLE 8

The Contracting Parties shall contribute towards the finances of the Trust by covering the costs of:

- 1) Minimum operational costs - key secretariat staff, office space and equipment and running costs;
- 2) Meetings of the Governing Board, and the Advisory Panel.

The Trust would be entitled to source additional funds from the private sector and donor agencies and NGOs to engage in specified programmes and projects which may from time to time be put forward by the Trust.

ARTICLE 9

The Contracting Parties shall ensure the ease of movement of personnel, vehicles and boats of the Trust on cross-border operations to enable effective implementation of operations.

ARTICLE 10

The Trust shall, where appropriate, ensure the confidentiality of documentation, information and other data exchanged between it and the two Contracting Parties during the implementation of this Protocol. Such documents, information and other data shall not be divulged to any other persons or organisations without the consent of the Contracting Parties. However, in the interests of greater transparency promoted by the Trust, such consent shall not be withheld without reasonable justification.

ARTICLE 11

Nothing in this Protocol shall be construed to prejudice any current or future negotiations on development of the Victoria Falls area between the Contracting Parties nor shall it affect either bilateral or multilateral agreements to which either government is a party.

ARTICLE 12

Any dispute concerning the interpretation or application of the provisions of this Protocol shall be settled through negotiations within the Joint Technical Committee on Tourism and Natural Resources, failing which the matter shall be referred to the Joint permanent Commission.

ARTICLE 13

This Protocol may be amended with the mutual consent of both Contracting Parties, and such amendments shall be in writing. Amendments shall come into effect after being signed by authorised representatives of both Contracting Parties.

ARTICLE 14

Any communication concerning the implementation of this Protocol shall be addressed to the following:-

- (1) For the Government of the Republic of Zambia:
- (2) The Permanent Secretary for Environment
- (3) For the Government of the Republic of Zimbabwe:
- (4) The Permanent Secretary for Environment and Tourism

ARTICLE 15

This Protocol shall enter into force on the day of its signature and shall remain valid for a period of four years. Thereafter it shall be renewed for an indefinite period unless terminated by either Party duly giving six months written notice to the other of its intention to terminate the Protocol prior to its expiry.

Done at, on this day of 1996 in two originals, in English, both texts being equally authentic.

.....
For the Government of the Republic of Zambia

.....
For the Government of the Republic of Zimbabwe

APPENDIX 3

DRAFT CONSTITUTION OF THE VICTORIA FALLS TRUST

1. NAME

The name of the Trust shall be VICTORIA FALLS TRUST (hereinafter referred to as "the Trust").

2. ADDRESS

The Trust shall be registered in both Zambia and Zimbabwe. The registered offices of the Trust shall be at its headquarters in either Livingstone or Victoria Falls Town (whichever is selected), and an appropriate site in the other country as the Trust may decide.

3. INTERPRETATION

In this constitution,

- a) "Victoria Falls" refers to the area within the UNESCO World Heritage Site boundary.
- b) The "wider Victoria Falls" refers to an area within a circle of 30 km radius of the Victoria Falls themselves in both Zambia and Zimbabwe or any such areas as the Governing Board may from time to time determine.
- c) Words importing the singular number shall include the plural and vice versa
- d) Words importing the masculine gender include the feminine.

4. AIMS AND FUNCTIONS OF THE TRUST

The overall objective of the Trust shall be:

"To ensure the long-term integrity and survival of the physical, natural and cultural resources of the Victoria Falls and the wider area around it for the enjoyment and benefit of the nations of Zambia and Zimbabwe, the local urban and rural communities therein, and the national and international visitors who come to view the Falls.

The aims and functions of the Trust shall be as follows:

- 1) providing co-ordination of planning and management of integrated development and natural resource use activities by:
Reviewing existing policies and developing common policies
 - Initiating these policies within the legal framework of each country
 - Monitoring, evaluating and adapting these policies as necessary
 - Carrying out environmental, social and economic research within the Victoria Falls area and publicising the results
- 2) to take special responsibility for the co-ordination of the management of the Victoria Falls World Heritage Site through the agreement of common policies and activities with the Zambian and Zimbabwean agencies charged with management of the site under the UNESCO World Heritage Convention nomination
- 3) to provide a mechanism for participation of all stakeholders in the sustainable development and management of the wider Victoria Falls area
- 4) to increase public awareness about development issues and concerns in the Victoria Falls area
- 5) to act as an advocate to decision makers for action to address the various issues and concerns

- 6) to carry out activities aimed at poverty alleviation and equitable distribution of benefits arising from the resources of the Victoria Falls area.
- 7) to source and manage financial resources to carry out the above activities on a transboundary basis.

5. THE GOVERNING BOARD AND ITS MEMBERSHIP

- 1) There shall be a Governing Board which shall consist of the following:

From Zambia:

- One representative from Livingstone Municipal Council (appointed)
- One representative from the National Parks and Wildlife Service (appointed)
- One representative from Kalomo District Council (appointed)
- One representative chosen from the traditional leaders - Chiefs Mukuni, Sekute and Musokotwane
- One representative of the tourism industry in Livingstone elected under clause 6 of this constitution
- One representative from the Zambia National Tourist Board (appointed)
- One representative of the National Heritage Conservation Commission (appointed)
- One eminent person in conservation elected under clause 6 of this constitution

From Zimbabwe:

- One representative from Victoria Falls Town Council (appointed)
- One representative from the National Parks and Wildlife Management Department (appointed)
- One representative from Hwange Rural District Council (appointed)
- One representative chosen from the traditional leaders - Chiefs Shana and Mvuthu
- One representative of the tourism industry in Victoria Falls elected under clause 6 of this constitution
- One representative from the Zimbabwe Tourism Development Corporation (appointed)
- One representative of the Department of Natural Resources (appointed)
- One eminent person in conservation elected under clause 6 of this constitution

- 2) The Chairman and Vice-Chairman of the Governing Board shall be elected by the Board at the Annual General Meeting and shall serve for a term of three years and shall be eligible for re-election to these offices. It shall be a condition that the Chairman and Vice-Chairman shall not come from the same country.
- 3) The Board may invite or co-opt any person to attend any meeting of the Board, but such persons shall not have power to vote.

6. ELECTED MEMBERS OF THE GOVERNING BOARD

- 1) There shall be two elected members of the Board from each country, one representing the interests of the tourism sector and one representing conservation interests.
- 2) The ones representing the tourism sector will be elected from the members of the recognised trade associations on each side of the border. The tourism representatives will serve for a period of three years and will be eligible for re-election.
- 3) The ones representing conservation interests on each side will be elected from nominations put forward at the Annual General Meeting. The conservation representatives will serve for a period of three years and will be eligible for re-election.
- 4) The ones chosen from the traditional leadership, representing their communities, will be chosen by agreement between themselves.

7. VACANCIES IN THE GOVERNING BOARD

Any vacancy occurring in the Governing Board shall be filled by a person appointed or elected in accordance with the provisions under which the former member was appointed or elected.

8. THE GENERAL FUND

The members of the Governing Board shall hold all subventions, donations, subscriptions, legacies, grants and other monies which may at any time belong to the Trust (all of which said monies are hereinafter included in the expression the "General Fund") upon the following trusts:

- 1) To invest all or such part (if any) of the General Fund and all or such part (if any) of the income produced by any investments at any time forming part of the General Fund as the Board shall from time to time think fit, in such investments as may be authorised by the Board:
- 2) As and when the Board shall think fit, to sell all or any of the investments at any time representing the General Fund, and to permit the proceeds of every such sale and any monies, income or capital then forming part of the General Fund to be applied to the activities of the Trust in accordance with the powers stated in section 8 of this constitution.
- 3) If any donation, subscription, legacy, grant, subvention or any other money shall be offered, paid, made or given to the General Fund or otherwise for the purposes of these presents upon or subject to special conditions, it shall be lawful for the Board to refuse or to accept and apply the same subject to such conditions, but otherwise as nearly as possible in accordance with the provisions herein contained and if necessary, the Board may constitute separate and distinct funds to be known as "Special Funds" reserved for particular objects.

9. POWERS OF THE BOARD

In pursuit of the above aims and functions, the Board shall have the following powers:

- 1) On its own or in co-operation with other organisations or individuals, to undertake activities which promote the involvement of the surrounding populations in the conservation and wise management of the natural resources of the wider Victoria Falls area, and to assist them in benefiting from such conservation and wise management.
- 2) On its own or in co-operation with other organisations or individuals, to conduct or commission research related to any of the aims and functions in Clause 1 of this constitution.
- 3) To publish books, magazines, leaflets or any other literary works and to produce and disseminate films, videotapes and audiotapes and to establish electronic databases in furtherance of the above objects. This shall include an Annual Report on the State of the Environment around Victoria Falls, translated into appropriate local languages.
- 4) To formulate the policies of the Trust.
- 5) To make, amend or repeal bye-laws, rules and regulations as the Board may consider necessary from time to time for the organisation and administration of the Trust and carrying its objects into effect, and to prescribe the conditions of employment of all persons employed in the Trust.
- 6) To employ all necessary staff for the proper conduct of the affairs of the Trust and to suspend or dismiss them and to remunerate them for their services.
- 7) To appoint, suspend and dismiss sub-committees; any such sub-committees shall, in the exercise of the powers so delegated, conform to any regulations from time to time prescribed by the Board.
- 8) To borrow moneys required for the purpose of the Trust upon such securities as may be determined.

- 9) To purchase, take on lease or in exchange, hire or otherwise acquire any property or any rights or privileges which the Trust may think necessary or convenient for its purposes.
- 10) To sell, improve, manage, develop, lease, mortgage, dispose of, turn to account or otherwise deal with all or any part of the property of the Trust.
- 11) To solicit and receive subscriptions, subventions, grants, funds, donations or legacies in cash or in kind from any person or body for any of the objectives or functions of the Trust.
- 12) To make and give receipts and discharge for moneys payable to the Trust; to determine who shall sign bills, notes, receipts, acceptances, endorsements, cheques, contracts and other documents of whatever nature on behalf of the Trust, and to make arrangements for the sealing of all deeds with the common seal.
- 13) To invest and deal with moneys of the Trust not immediately required upon such securities and in such manner as may from time to time be determined.
- 14) To grant pensions, allowances, gratuities and bonuses to officers, employees and ex-employees for the Trust or the relatives or dependants of such persons; to establish and maintain or concur in establishing and maintaining trusts, funds or schemes (whether contributory or non-contributory) with a view to providing pensions or other benefits for any such persons as aforesaid, their relatives or dependants, and to make payments towards insurance for any such benefits including sickness, injury, retirement and death benefit.
- 15) To pay all costs and expenses incurred in the conduct of the Trust's affairs including the costs and expenses of registration of the trustees under the relevant legislation in each country.
- 16) To exercise powers of the Trust and manage the affairs therefore.
- 17) The Board shall have all such administrative powers as may be necessary for proper carrying out of objects of the Trust and giving effect to this constitution and any rules or bye-laws made hereunder. The decision of the Board upon any matter or matters affecting the Trust and not provided for by this constitution or rules or bye-laws made hereunder shall be final and binding on Board members and Trust staff.
- 18) There shall be no control over the Trust on the part of any Trustee, donor, financier or any other provider of funds other than through the Board.
- 19) All the property of the Trust and the income arising therefrom shall be vested in the Board, which shall apply the same solely towards the objects of the Trust, the carrying out of the powers of the Trust or the remuneration of officers, employees or other persons for service rendered to the Trust.

10. THE ADVISORY PANEL

- 1) There shall be an Advisory Panel to the Trust. The members of this Panel shall be persons whose activities are related to the work of the Trust, or whose support is important for the work of the Trust. The purpose of this Advisory Panel shall include the following:
 - To keep organisations informed of discussions related to the work of the Trust. Panel members will be expected to brief their organisations on the outcome of deliberations and other developments, and help organise relevant activities where appropriate.
 - To provide a forum for discussion of issues and activities related to the work of the Trust.
 - To enable community and other organisation representatives to make joint representation to the Board and/or other organisations as they see fit.
 - To provide a safeguard against inappropriate domination of the Trust's activities by a small group of Board members.

- 2) The Advisory Panel shall consist of the following:
 - The members of the Board
 - The members of Parliament representing the constituencies within the wider Victoria Falls area.
 - The remaining chiefs and traditional leaders not already on the Board
 - The Mayor of Livingstone and the Chairman of the Victoria Falls Town Council
 - The chairmen of the various residents associations in Livingstone and Victoria Falls Town
 - The head wardens of the Zambezi National Park, Victoria Falls National Park, Mosi-oa-Tunya National Park.
 - The head foresters in charge of Dambwa and Simonga Forest Reserves, and Fuller, Myuthu and Panda Masuie Forest Lands
 - The Director of Livingstone Museum and a representative of the Department of National Museums and Monuments in Bulawayo
 - Representatives of the Department of Town and Country Planning in Zambia and the Department of Physical Planning in Zimbabwe
 - Representatives of the Department of Agriculture in Zambia and of Agritex in Zimbabwe
 - Representatives of the Environment Council of Zambia and of the Department of Natural Resources in Zimbabwe
 - Representative of the Zambezi River Authority
 - The Director of the ZESCO Victoria Falls North Bank Power Station and of the local branch of ZESA in Zimbabwe
 - Directors of Livingstone Airport and Victoria Falls Airport
 - Chiefs of Police in Livingstone and Victoria Falls Town
 - Chief Immigration Officers in Livingstone and Victoria Falls Town
 - One person each representing the interests of hotels and lodges in Zambia and in Zimbabwe
 - One person each representing the interests of tour operators offering boat cruises on the river in Zambia and Zimbabwe
 - One person each representing the interests of tour operators offering canoe trips on the river in Zambia and Zimbabwe
 - One person each representing the interests of tour operators offering white water rafting on the river in Zambia and Zimbabwe
 - One person each representing the interests of tour operators offering wildlife safaris in Zambia and Zimbabwe
 - One person each representing the interests of tour operators offering aircraft flights over the Falls in Zambia and Zimbabwe
 - One person each representing the interests of tour operators offering bungee jumping in Zambia and Zimbabwe
 - One person each representing the interests of tour operators offering any new tourist activities as may from time to time be promoted in Zambia and Zimbabwe (to be decided by the Board)
 - One person each representing the interests of curio carvers and traders in Zambia and Zimbabwe
 - One person each representing sport fishing interests in Zambia and Zimbabwe
 - One person each representing commercial farming interests in Zambia and Zimbabwe
 - One person each representing the commercial and business sector in Zambia and Zimbabwe

- One person each representing the industrial sector in Zambia and Zimbabwe
- One person each representing Zambia and Zimbabwe Railways
- One person each representing road haulage interests in Zambia and Zimbabwe
- One person each representing vehicle hire facilities in Zambia and Zimbabwe
- One person each representing social development NGOs in Zambia and Zimbabwe
- One person each representing environment and conservation NGOs in Zambia and Zimbabwe

The Board may in its discretion add other members to the Advisory Panel.

- 3) The Chairman and Vice-Chairman of the Panel shall be elected by the Panel at the Annual General Meeting and shall serve for a term of three years and shall be eligible for re-election to these offices.
- 4) The panel may invite or co-opt any person not specified in Clause 9. 2) and 3) to attend any meeting of the Panel but such persons shall not have power to vote.
- 5) The panel shall be able to set up special sub-committees and working groups as it sees fit
- 6) The panel may make recommendations to the Board on any matter connected with or incidental to the work of the Trust. In exceptional circumstances, the Panel may also make recommendations to other groups and bodies as it sees fit.
- 7) The Secretary to the Board shall send to all members of the Advisory panel copies of agendas for and minutes of, all Board meetings so that they may know what is being discussed.

11. MEETINGS OF THE BOARD

- 1) Meetings of the Board shall be called by the Chairman and shall be held at least twice in each year. Notice in writing of meeting, and the agenda for such meeting, shall be delivered or sent by post at least twenty-days before the meeting to each member by the Secretary or other officer appointed by the Chairman for the purpose.
- 2) There shall be a quorum when eight trustees, (of which at least four must be from each country) are present in person or by representative at any meeting of the Board. The Chairman or Vice Chairman must also be present.
- 3) Decisions of the Board shall be taken by a majority of the votes of the trustees and any representatives present and voting at a meeting: in the case of equality the chairman of any such meeting shall have a second or casting vote.
- 4) The voting at a meeting of the Board shall be by a show of hands unless a Trustee requires a poll.
- 5) The resolution of the Board may be rescinded or varied at a special meeting held after not less than fourteen days notice.

12. MEETINGS OF THE PANEL

- 1) Meetings of the Advisory Panel shall be called by the Chairman of the Panel and shall be held at least once in each year and may coincide with the Annual General Meeting. Notice in writing of meeting, and the agenda of such meeting shall be delivered or sent by post at least twenty one days before the meeting to each member by the Secretary or other officer appointed by the chairman for the purpose. At least twenty-one days before sending out the notice of meeting and agenda the Secretary shall write to all Panel members informing them of the intention to hold a meeting and asking for any items to be included on the agenda.
- 2) There shall be a quorum when sixteen members of the Panel or their representatives (including at least six members of the Board) are present in person.
- 3) In addition to formal business, the agenda for the Panel Meetings should focus on specific issues on which the views of the Panel are sought, which may from time to time be presented to the Trust.

13. ANNUAL GENERAL MEETING

- 1) There shall be an Annual General Meeting of the Trust held each year within six months of the commencement of each year. The Annual General Meeting shall be called to all members of the Board and to all members of the Advisory Panel.
- 2) There shall be a quorum when six of the Board and ten other members of the Panel are present in person. There shall be at least 8 members from each country.
- 3) If a quorum is not formed the Annual General Meeting shall stand adjourned until such time not later than three months from the date of the adjourned meeting as shall be advised by the Chairman of the Board.
- 4) The agenda for an Annual General Meeting shall include the following items:
 - Minutes of the previous Annual General Meeting and previous Board Meeting
 - Presentation by the Treasurer and adoption, if at all, of annual accounts
 - Presentation of the Annual Report on the State of the Environment around Victoria Falls
 - Appointment of an Auditor and an Attorney for the Trust
 - Election of Chairman and Vice-Chairman of the Board
 - Amendments, if any, to the Constitution and Rules
 - Any other competent business

14. ACCOUNTS AND RECORDS

- 1) Proper records and accounts shall be kept of the sums of money received or expended by the Trust and the matters in respect of which such receipt or expenditure takes place and of the property, credits and liabilities of the Trust and such accounts shall be open to the inspection of members of the Board and the Advisory Panel.
- 2) Once a year a professionally qualified auditor practising in the country in which the Headquarters is located and who is acceptable to the other country, shall present an auditor's report on the income and expenditure account and balance sheet of the Trust.
- 3) The auditor shall be appointed at the Annual General Meeting.
- 4) All books, vouchers and accounts of the Trust shall be kept at the headquarters of the Trust or any other location considered appropriate by the Board.
- 5) The Auditor shall be entitled to examine all books, vouchers and other records owned or controlled by the Trust and may require from Board members, employees or agents of the Trust such information as he considers necessary for the proper performance of his duties.

15. MINUTE BOOK

A Minute Book shall be provided and kept by the Board. Minutes of any vacancy in the Governing Board, and the entry into office of any new Board Member, and of all proceedings of the Board shall be entered therein.

16. SEAL

The Trust shall have a common seal which shall be kept by the Chairman of the Board. The common seal shall only be affixed to any document in the presence of the Board whose members then present shall set their hands as witnesses of the seal having been affixed. The common seal shall have the design shown below (to be designed).

17. SERVICE OF NOTICE

Any notice to be given to a Board member or other person or body under this constitution shall be sufficiently given if sent through the post addressed to such person or body at his or its usual or last known place of abode or business in Zambia or Zimbabwe or left for him or it at such place.

18. MODIFICATION OF CONSTITUTION

- 1) All or any of the provisions of this constitution may at any time or times be modified in any manner by written declaration to that effect signed by all the Trustees for the time being and sealed with the common seal.
- 2) Where the amendment affects the aims or functions of the Trust, the appointment, retirement and authority of the Board Members or other officers hereof, the authorisation by the Trust of acts of Board Members, the manner in which such authorisation may be verified, or the use of the common seal, such amendment shall be subject to official approval as designated under the appropriate trust legislation in each country.
- 3) Every amendment to this constitution shall be registered in the prescribed manner.

19. LIABILITY OF TRUSTEES AND OFFICERS

- 1) No Board Member or officer of the Trust shall be liable for the acts and omissions of any other Board Members or officer of the Trust, or by reason of his having joined in any receipt of money not received by him/her personally, or any loss of account or defect of title to any property acquired by the Trust, or no account of any security in or upon which monies of the Trust shall be invested, or for any loss incurred through the act of default of any backer, broker or other agent, or upon any fraud whatsoever, other than his own wilful acts or defaults.

APPENDIX 4

PLANTS CHARACTERISTIC OF THE RAINFOREST

"Rainforest" Characteristic Trees	"Rainforest" Understorey Woody Plants
<p>Diospyros mespiliformis Ficus capensis Flacourtia indica Mimusops zeyheri Olea africanum Phoenix reclinata Strychnos potatorum Syzygium cordatum Syzygium guineense ssp. barotsense Trichilia emetica</p>	<p>Feretia acrocarpa Friesodiaria obovata (Popowia obovata) Hibiscus calyphyllus Pavetta cataractarum</p>
Herbaceous Plants with Showy Flowers During the Rainy Season	Rare Plants found in Rainforest area and Associated Grassland
<p>Amorphophallus abyssinicus Calanthe corymbosa Chironia palustris Gloriosa superba Heamanthus filiflorus Heamanthus multiflorus</p>	<p>Amorphophallus abyssinicus Cheilanthes farinosa Emelia protracta Diclis petiolaris Galdiolus unguiculatus Lobelia kirkii Sebea pentandra Nesaea radicans Rotala spp.</p>