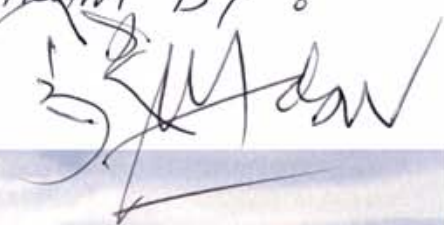


HAND OVER CEREMONY : 23 MARCH 2007

APPROVED BY/ FOR TECHNICAL TASK TEAM BY :

NAME : HENRY MABO

SIGNATURE :



## RESOURCE MANAGEMENT PLAN FOR INYAKA DAM

FIRST EDITION

(Draft, February 2007)

RECEIVED BY  
DRAFT FOR CONSIDERATION  
OF APPROVAL

MAXX-ANTHONY WILLIAMS



**water & forestry**

Department:  
Water Affairs & Forestry  
REPUBLIC OF SOUTH AFRICA

Signature :

**Compiled for:**

Department of Water Affairs and Forestry  
Directorate Water Abstraction and Instream Water Use  
Sub-directorate Environment and Recreation  
Private Bag X 313  
PRETORIA 0001  
Tel: (012) 336 8217  
Fax: (012) 336 6608

**Compiled by:**

Strategic Environmental Focus (Pty) Ltd  
PO Box 74785  
PRETORIA 00040  
Tel: (012) 349 1307  
Fax: (012) 349 1229

and

Ecotourism Afrika Trust  
1036 Haarhoff Street East, Villieria  
PRETORIA 0186  
Tel: (012) 331 0220  
Fax: 086 671 7878

All rights reserved except for the quotation of short passages for the purposes of criticism and review, no part of this publication may be reproduced, stored in a retrieval system or transmitted, in any form or by any means, electronically, mechanically, through photocopying, recording or otherwise, without the permission of the copyright holder.

## ACKNOWLEDGEMENTS

This Resource Management Plan for Inyaka Dam was compiled and recommended by a Technical Task Team, a multi-disciplinary team consisting of stakeholder representatives from *inter alia* Government; the local communities; user groups and the business sector. Contributions made by the larger stakeholder group (refer Appendix A) are also recognised.

### NATIONAL GOVERNMENT

Ms	Sibongile	Mavimbela	Department of Water Affairs and Forestry
Ms	Thandi	Mthembu	Department of Water Affairs and Forestry
Ms	Mercy	Mukhuwana	Department of Water Affairs and Forestry
Mr	SJ	Phasha	Department of Water Affairs and Forestry

### PROVINCIAL AUTHORITY / GOVERNMENT

Mr	Thomas	Dzivhani	Department of Public Works Department of Economic Development and Planning (DEDP)
Ms	Elizabeth	Manzini	Department of Land Affairs
Mr	David	Maraba	DEDP
Mr	Fortunate	Nyakane	DEDP
Mr	Love	Shabane	Department of Agriculture
Mr	Charles	Shongwe	DEDP
Mr	Richard	Simelani	Mpumalanga Parks Board - Head Office
Mr	TK	Theledi	Provincial Treasury

### LOCAL GOVERNMENT

Mr	Dennis	Chavane	Bushbuckridge Local Municipality
Ms	Louis	Hlabane	Enhlanzeni District Municipality
Mr	Nelson	Kopele	Maruleng Local Municipality
Ms	Sneki	Mashego	Ward 10
Mr	Theetsang	Seneke	Enhlanzeni District Municipality
Councillor	Thapelo	Shabangu	Head: LED and Tourism
Mr	Lazarus	Tshwale	The Office of Traditional Affairs

### TRIBAL AUTHORITIES


Mr	Mike	Mogane	Kgarudi Tribal Authority
----	------	--------	--------------------------

### INTERESTED AND AFFECTED PARTIES

Mr	Ben	Alali	Desert Eagle Projects
Mr	Enock	Chiloane	Youth For Youth Organisation
Ms	Nxumalo	Dumisani	Inkomati Catchment Management Agency
Ms	Iris	Gana	Interested and Affected Party
Ms	Judith	Khoza	Bushbuckridge Water Board
Ms	Nomsa	Kubayi	Inkomati Catchment Management Agency
Mr	Henry	Maboa	Sabie River
Mr	ND	Madalane	Community Owner Property Association
Mr	Billy	Malele	Business Forum
Ms	Queen	Malumane	Business Forum
Mr	Obed	Mogane	Working for Water & SRCC
Mr	MF	Moseri	Bcon
Mr	James	Mpangane	Inyaka Waterval CPF
Ms	Ivy	Nonyane	Mapulaneng EMPC
Ms	Dorah	Sifumdza	Inyaka Waterval CPF

## APPROVALS

This Resource Management Plan for Inyaka Dam is recommended for approval by:



Mr Pieter Ackerman  
**PROJECT MANAGER**

DATE:

Ms Valerie du Plessis  
**DEPUTY DIRECTOR: ENVIRONMENT AND RECREATION**

DATE:

Mr Piet F Pretorius  
**DIRECTOR: WATER ABSTRACTION AND INSTREAM USE**

DATE:

Ms Deborah Mochotlhi  
**CHIEF DIRECTOR: WATER USE**

DATE:



Mr Mark-Anthony Williams  
**DIRECTOR: NORTHERN OPERATIONS**

DATE: 23/03/07

and approved for the Department of Water Affairs and Forestry in his capacity as Deputy Director General: National Water Resource Infrastructure Branch, who by his signature hereto warrants that he is authorised to sign on behalf of the Minister of Water Affairs and Forestry in terms of delegation of powers and duties pertaining to Section 113 of the National Water Act, (Act No. 36 of 1998):

Dr Cornelius Ruiters  
**DEPUTY DIRECTOR GENERAL: NATIONAL WATER RESOURCE INFRASTRUCTURE**

DATE:

### ANNUAL REVIEW

Due date: April 2008, 2009, 2010, 2011

### FIVE (5) YEARLY REVIEW

Due date: April 2012

## EXECUTIVE SUMMARY

This Resource Management Plan is the management, development and institutional plan for Inyaka Dam and is reviewed based on the framework set out in page v.

The Inyaka Dam which is referred to in this document consists of the water body and the water surface as well as the surrounding State land, utilised by the Department of Water Affairs and Forestry (DWAF) for National State domestic purposes.

Compiled through the Resource Management Plan procedure, the plan is based on the principles underlying sustainability addressing environmental, industry and community involvement aspects.

As a document to guide the management of Inyaka Dam, based on the inputs of all stakeholders, the plan also serves as the base document for monitoring both performance and compliance regarding the various Key Performance Areas (KPA's) with respect to the National Water Act, (Act No. 36 of 1998).

Land and water use options identified as possibilities at Inyaka Dam include:

- Forestry (existing);
- Conservation;
- Agriculture;
- Aquaculture;
- Fishing (food security and recreation);
- Sport and recreation;
- Accommodation and leisure activities, and
- Tourism.

The primary purpose of the Inyaka Dam is to provide drinking water to the surrounding urban areas. However, the need to realise the full potential of the dam including recreational and tourism related development requires the compilation of a Resource Management Plan (RMP).

The structure of the RMP consists of four parts, the first addressing the background; aims and objectives; encumbrances to the plan, and challenges facing the management authority ("The Place").

The second part consist of an integrated environmental management plan and a zoning plan ("The Plan").

The third part outlines the proposed institutional structure ("The People").

"The Plan" covers three KPA's – Resource management; Utilisation, and Benefit flow management (community involvement and beneficiation). Within each area the plan provides insight into the specific rational regarding the KPA, the objectives, the policy and strategies, as well as operational guidelines and action projects which will focus the management decisions, actions and initiatives.

Various zones have been proposed in the zoning plan for both the water surface of Inyaka Dam and the State land within the expropriation boundary for which the DWAF is the user department, and includes management interventions pertaining to access, utilisation and development:

- Public Private Partnership areas;

- Public boating / activity node on the open water adjacent to dam wall;
- Community node, and
- Security area immediately around dam wall and infrastructure.

Several development cores based on the broad master plan as well as on environmental constraints have been identified including:

- Public area and access opposite open water at dam wall;
- Timeshare development node with restricted access adjacent to new bridge;
- Community resort with dedicated access;
- Protected spawning areas at tributary inlets with no access, and

One or two restricted access points in the Public Private Partnerships (PPP) areas to allow access to the water from adjacent properties.

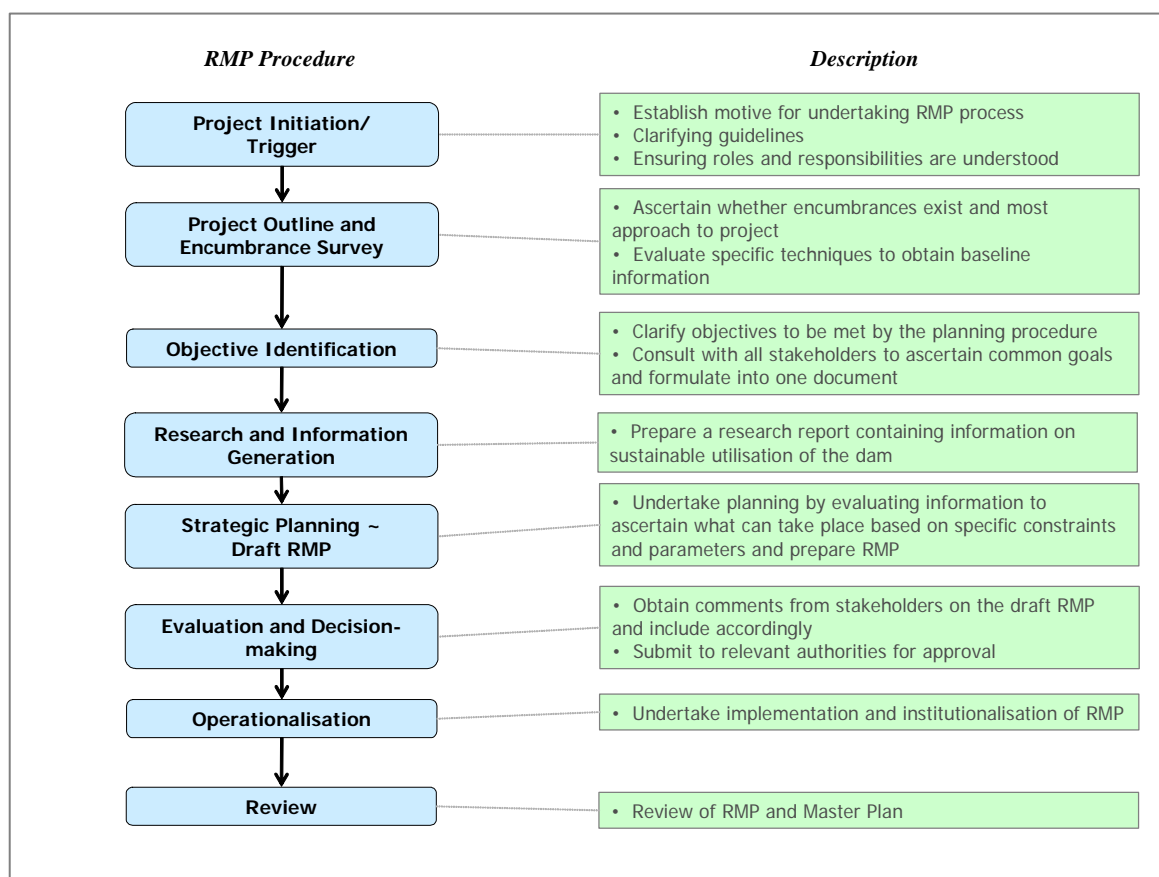
Only access via one of the designated access points or in terms of access agreements or permits will be deemed legal. All opportunities will be subject to a fair and open procurement procedure, and will be dependent on the successful finalisation of PPPs.

To effectively and efficiently manage the implementation of the plan, a proposal regarding the management authority as well as institutional structuring and arrangements is made, although the ultimate responsibility regarding the implementation of the RMP will resort with DWAF.

Undertaken in this manner it is believed that the sustainable utilisation of Inyaka Dam can and will be attained.

**The process for the compilation of the RMP is summarised**

Figure 1



**Figure 1: RMP Compilation Procedure**

## RMP REVIEW FRAMEWORK<sup>1</sup>

### Overview

The Resource Management Plan (RMP) process has an integrated planning component and operational planning component, each with a five (5)-year time frame that is reviewed annually.

### Integrated Planning Components

A *RMP* is the primary overarching planning document that describes the administrative and legal framework, contextual background, public participation process followed, vision / mission statements, prioritised management objectives, zoning as well as management policy framework and guidelines. The RMP forms the framework within which all the other planning components are developed. Within the framework of the RMP, a *Master or Zoning Plan* provides a strategic guideline for the utilisation and development of the water resource and water resource infrastructure within the constraints of the receiving environment. Operational plans, programmes and procedures that support the RMP are either in place or will be compiled where these do not exist.

### Authorisation of RMPs

These plans are authorised by the relevant Regional Chief Director of the Department of Water Affairs and Forestry (DWAF) in terms of Section 113 of the National Water Act (Act No. 36 of 1998) and operationalised through the following two operational planning components.

### Operational Planning Components

A 5-year *Strategic Plan (SP)* that operationalises (or actions) the management authority's management objectives and any projects identified in the RMP and Business Plan. The SP is an operational management component that identifies the activities and tasks that need to be undertaken in the achievement of the RMPs objectives and attaches responsibilities, timeframes, budgets and resources to each activity. The SP is a key planning document that also informs the management authority's Annual Budgeting Estimates and provides information for Annual Reports.

With expenditure estimates drawn from the SP a *Business Plan (BP)* will be developed. The BP is primarily aimed at describing the manner in which the RMP are to be financially resourced. It may address issues of operational efficiency and the optimisation of income generation opportunities in order to bridge any possible shortfalls between required operational expenditure and committed budget allocations.

### Authorisation of BP

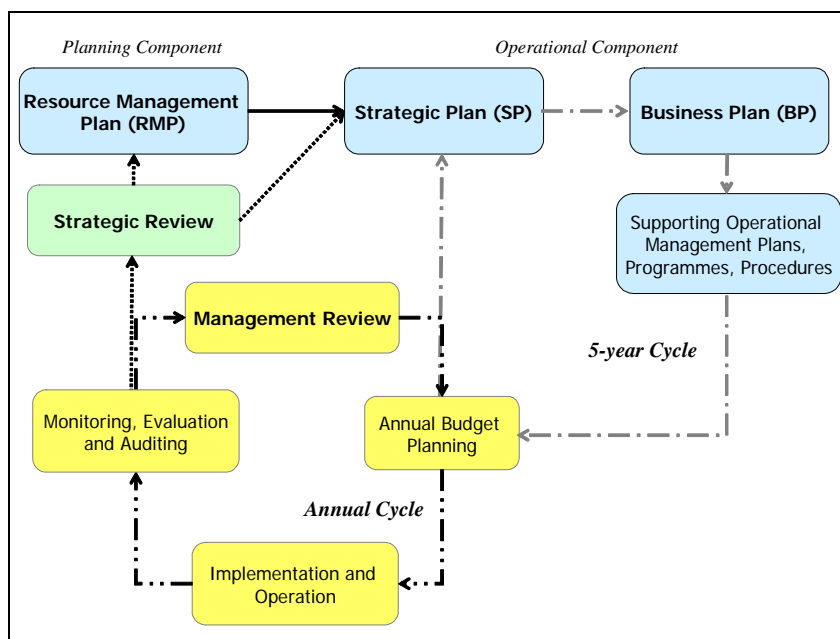
Once the BP has been approved by DWAF, the SP is finalised according to the committed budget allocations and other expected financial income.

### RMP Planning & Review

The RMP requires both annual and 5-yearly revisions to ensure that management objectives remain relevant and management actions are continually improved. Figure 2 illustrates the annual and 5-yearly planning and review cycles.

---

<sup>1</sup> This review framework is based on Ezemvelo KZN Wildlife's approach to Integrated Management Plans prepared in terms of the National Environmental Management: Protected Areas Act (Act. No. 57 of 2003).



**Figure 2: RMP Review Framework**

## Planning Process

The rationale of a RMP is to assist DWAF and the management authority in ensuring sustainability by protecting the integrity and value of water resources, providing measurable benefits to host communities, and enhancing the satisfaction of users.

By addressing the needs and expectations of resource managers; communities, and users by defining the processes that contribute to sustainability and monitoring the performance of these processes, DWAF and the management authority can ensure that their objectives, as well as those of relevant stakeholders are attained in an acceptable and appropriate manner, consistently.

Continual improvement can be achieved by using an ISO 9000 based management system as framework, and the system provides DWAF and the management authority with confidence that their policies are relevant and acceptable to all stakeholders.

The procedure used during the planning process is based on DWAF's *Guidelines for the Compilation of Resource Management Plans* ensuring the involvement of all stakeholders, as well as interested and affected parties. Opportunity was provided to all participants to actively participate in the planning, discussions and compilation of the management plan, compliant to the prescripts of the National Environmental Management Act (Act 107 of 1998), as well as Chapter 3 of the Constitution of South Africa (Act No. 108 of 1996). This approach ensures inclusivity, transparency and builds trusts between all participants. See Appendix A for a stakeholder list.

The planning procedure for Inyaka Dam's First Edition RMP consisted of three distinct phases, namely:

**Phase 1:** The first phase aimed at ensuring the support of key stakeholders. This phase mainly addressed the encumbrances to the process, attaining institutional support and identifying participants to the process.



Phase 2: The second phase aimed at ensuring broad stakeholder involvement, building capacity within the stakeholders and providing the stakeholders with relevant information to assist in decision making.

Phase 3: The third aimed at achieving recommendation for the RMP, prior to submitting the plan to DWAF for approval and implementation.

See Appendix B for a detailed description of each project phase.

## LIST OF FIGURES

Figure 1: RMP Compilation Procedure.....	iv
Figure 2: RMP Review Framework .....	vi
Figure 3: Role Players.....	8
Figure 4: Management Framework .....	11
Figure 5: Zoning Process .....	33
Figure 6: Sabie River Catchment .....	48
Figure 7: Inyaka Dam Drainage Region .....	49
Figure 8: Geology.....	50
Figure 9: Elevation Model.....	51
Figure 10: Slope Categories.....	52
Figure 11: Hydrology per Catchment .....	53
Figure 12: Photos of Inyaka Dam.....	54
Figure 13: Existing Infrastructure .....	55
Figure 14: Land Cover.....	56
Figure 15: Educational and & Health Facilities.....	57
Figure 16: Sections through Inyaka Dam wall structure.....	58
Figure 17: Safety Factors .....	59
Figure 18: Inyaka Dam Zoning Plan.....	64
Figure 19: Proposed Water User Association Structure.....	65
Figure 20: Proposed Sub-area Structure .....	65

## LIST OF TABLES

Table 1: Inyaka Dam Statistics.....	6
-------------------------------------	---

## **ABBREVIATIONS**

ARDC	Agricultural Rural Development Corporation
BBBEE	Broad Based Black Economic Empowerment
BFI	Benefit Flow Institution
DEAT	Department of Environmental Affairs and Tourism
DFA	Development Facilitation Act (Act No. 67 of 1995)
DLA	Department of Land Affairs
DPW	Department of Public Works
DWAF	Department of Water Affairs and Forestry
ECHOS	Ecotourism Characteristics Opportunity Spectrum
FSL	Full Supply Level
I&AP	Interested and Affected Parties
IDP	Integrated Development Plan
ISO	International Standards Organisation
IUCN	International Union for the Conservation of Nature
KPA	Key Performance Area
MAR	Mean Annual Runoff
NEMA	National Environmental Management Act (Act No.107 of 1998)
NGO	Non-Governmental Organisation
NHRA	National Heritage Resources Act (Act No. 25 of 1999)
NWA	National Water Act (Act No. 36 of 1998)
PFMA	Public Finance Management Act (Act No. 1 of 1999)
PPP	Public Private Partnership
RLRA	Restitution of Land Rights Act (Act No. 22 of 1994)
RMP	Resource Management Plan
RQO	Resource Quality Objective
WUA	Water User Association

# CONTENTS

	Page
ACKNOWLEDGEMENTS .....	i
APPROVALS.....	ii
EXECUTIVE SUMMARY.....	iii
RMP REVIEW FRAMEWORK .....	v
LIST OF FIGURES.....	viii
LIST OF TABLES .....	viii
ABBREVIATIONS .....	ix
CONTENTS.....	x
<b>SECTION 1. THE PLACE.....</b>	<b>1</b>
<b>1.1 PURPOSE AND AIM .....</b>	<b>1</b>
<b>1.2 LEGAL FRAMEWORK, CONCEPTS AND PRINCIPLES FOR UTILISATION AND SUSTAINABILITY PLANNING .....</b>	<b>2</b>
<b>1.3 BACKGROUND TO INYAKA DAM.....</b>	<b>2</b>
1.3.1 <i>Physical Environment</i> .....	2
1.3.2 <i>Socio-economic Environment</i> .....	6
<b>1.4 SUSTAINABLE UTILISATION OF THE Inyaka Dam.....</b>	<b>7</b>
1.4.1 <i>The Challenge</i> .....	7
1.4.2 <i>Role Players</i> .....	7
1.4.3 <i>Implementation Policy</i> .....	8
<b>SECTION 2. THE PLAN .....</b>	<b>9</b>
<b>2.1 OVERARCHING FRAMEWORK.....</b>	<b>9</b>
2.1.1 <i>DWAF's Vision</i> .....	9
2.1.2 <i>DWAF's Mission</i> .....	9
2.1.3 <i>Key Objectives of the Department</i> .....	9
<b>2.2 VISION, MISSION AND OBJECTIVES FOR INYAKA DAM .....</b>	<b>10</b>
2.2.1 <i>Vision</i> .....	10
2.2.2 <i>Mission</i> .....	10
2.2.3 <i>Key Objectives</i> .....	10
<b>2.3 MANAGEMENT APPROACH .....</b>	<b>11</b>
<b>2.4 KPA 1: RESOURCE MANAGEMENT.....</b>	<b>13</b>
2.4.1 <i>Natural Resources</i> .....	13
2.4.2 <i>Cultural Resources</i> .....	16
2.4.3 <i>Land Expansion and Incorporation</i> .....	18

<b>2.5</b>	<b>KPA 2: UTILISATION.....</b>	<b>19</b>
2.5.1	<i>Target Market.....</i>	19
2.5.2	<i>Commercial Access and Use.....</i>	19
2.5.3	<i>Public Access and Use.....</i>	23
2.5.4	<i>Infrastructure.....</i>	25
2.5.5	<i>Marketing.....</i>	28
<b>2.6</b>	<b>KPA 3: BENEFIT FLOW MANAGEMENT.....</b>	<b>30</b>
2.6.1	<i>Rational.....</i>	30
2.6.2	<i>Objectives.....</i>	30
2.6.3	<i>Policy.....</i>	31
2.6.4	<i>Strategy.....</i>	31
2.6.5	<i>Operational Guidelines.....</i>	31
2.6.6	<i>Action Projects.....</i>	32
2.6.7	<i>Monitoring.....</i>	32
<b>2.7</b>	<b>THE ZONES.....</b>	<b>33</b>
2.7.1	<i>Process.....</i>	33
2.7.2	<i>Zonation.....</i>	33
2.7.3	<i>Rural Developed Zone Management Interventions.....</i>	34
2.7.4	<i>Rural Natural Zone Management Interventions.....</i>	35
2.7.5	<i>Suburban Zone Management Interventions.....</i>	35
2.7.6	<i>Water Surface Zones.....</i>	36
<b>SECTION 3.</b>	<b>THE PEOPLE.....</b>	<b>37</b>
<b>3.1</b>	<b>INSTITUTIONAL PROPOSAL.....</b>	<b>37</b>
3.1.1	<i>Functions.....</i>	37
3.1.2	<i>Action Projects.....</i>	38
<b>REFERENCES.....</b>		<b>39</b>
APPENDIX A:	RMP PROCESS STAKEHOLDER LIST.....	41
APPENDIX B:	RMP PROCESS SCHEDULE.....	46
APPENDIX C:	BACKGROUND INFORMATION.....	47
APPENDIX D:	STAKEHOLDER OBJECTIVE MATRIX.....	60
APPENDIX E:	CONSOLIDATED LIST OF ACTION PROJECTS.....	61
APPENDIX F:	ZONING PLAN.....	63
APPENDIX G:	INSTITUTIONAL ARRANGEMENTS.....	65
APPENDIX H:	REGISTERED SERVITUDES.....	66

## SECTION 1. THE PLACE

### 1.1 PURPOSE AND AIM

In an effort to ensure that the biodiversity and resources of the Inyaka Dam are protected, used, developed, conserved, managed and controlled in a sustainable and appropriate manner, and to ensure that the access to and use of the dam and surrounding land is equitable, the Department of Water Affairs and Forestry (DWAF) commissioned the compilation of an integrated Resource Management Plan (RMP) for the Inyaka Dam to build forth on the zoning process initiated in 1997 (refer DWAF, 2000).

The procedure applied during the planning process was designed and based on the DWAF, 2006 *Guidelines for the Compilation of Resource Management Plans* ensuring the involvement of all stakeholders, as well as interested and affected parties. Opportunity was provided to all participants to actively participate in the planning, discussions and compilation of the management plan, compliant to the prescripts of the National Environmental Management Act (Act No. 107 of 1998) [NEMA] as well as Chapter 3 of the Constitution of South Africa (Act No. 108 of 1996). This approach ensures inclusivity, transparency and builds trusts among all participants. Refer to Appendix A and B for a stakeholder list and project schedule of the process followed for the compilation of the RMP for Inyaka Dam.

The **purpose** of the RMP for the Inyaka Dam is to ensure the attainment of the National Water Act, 1998 (Act No. 36 of 1998) [NWA] Section 2 objectives, including that-

- access to water is equitable;
- past gender and racial discrimination is redressed;
- the utilisation of the water is efficient, sustainable and beneficial;
- social and economic development is facilitated;
- provision is made for the growing demand for water use, in particular the use of water for recreational purposes;
- both the aquatic and associated ecosystems, inclusive of their biodiversity, are protected;
- pollution and degradation of the water resource is reduced and prevented;
- international obligations can be met;
- dam safety is promoted, and
- as part of the RMP, a suitable institution is proposed that is representative of the stakeholders and host community of Inyaka Dam, both in racial and gender terms.

The Minister, as the public trustee of the nation's water resources, must through DWAF ensure that the water of the Inyaka Dam is *inter alia* protected and managed in a sustainable and equitable manner, for the benefit of all persons and in accordance with her constitutional mandate (see NWA, Section 3).

The **aim** thus of the Inyaka Dam RMP is to provide a broad policy framework, setting out key objectives, defining responsibilities and operational guidelines for sustainable management and development of the water resource and surrounding State owned land. As a planning tool the management authority for the Inyaka Dam will use this plan for decision-making purposes, as well as an awareness tool for staff, neighbours and water users as to the vision, mission and operational guidelines of the dam.

Additionally, the Inyaka Dam RMP will serve as regulation in terms of Section 26 and guide the management authority in its provision of general access to and use of the dam, while DWAF will be responsible and accountable for specific approvals such as water use authorisations; Public Private Partnerships, and management contracts.

The intention is also that the Inyaka Dam RMP informs and be incorporated into the Integrated Development Planning (IDP) process for the Local and District Municipalities. The RMP could

serve as management area / precinct plan, ensuring that development objectives are attained in a sustainable and co-operative manner.

## **1.2 LEGAL FRAMEWORK, CONCEPTS AND PRINCIPLES FOR UTILISATION AND SUSTAINABILITY PLANNING**

The principles underlying the RMP for the Inyaka Dam are based on general principles guiding the attainment of sustainability – sound resource management; equitable and appropriate community involvement and beneficiation; the creation of viable and sustainable business opportunities, and clear policies, objectives and operational guidelines.

A legal survey illustrated that within the South African context, ensuring compliance with relevant legislation is pivotal to the attainment of sustainability. At the Inyaka Dam, not only the NWA is applicable, and is it imperative that all actions are compliant with relevant legislation, regulations and planning frameworks such as:

- National Heritage Resources Act (Act No. 25 of 1999)[NHRA];
- Development Facilitation Act (Act No. 67 of 1995) [DFA];
- Civil Aviation Regulations;
- Occupational Health and Safety Act (Act No. 85 of 1993);
- Conservation of Agricultural Resources Act (Act No. 43 of 1983);
- NEMA;
- Public Finance Management Act (Act No. 1 of 1999) [PFMA];
- National Treasury Regulations and Public Private Partnership (PPP) Toolkit for Tourism, December 2005;
- Government Notice R 654 of 1964 - regulations framed in terms of paragraph (b), (c), and (j) of Section 70 of the Water Act, 1956 (Act No. 54 of 1956);
- Restitution of Land Rights Act (Act No. 22 of 1994)[RLRA];
- Municipal Systems Act (Act No. 32 of 2000);
- Municipal Structures Act (Act No. 117 of 1998);
- Municipal Demarcation Act (Act No. 27 of 1998), especially Sections 24 and 25;
- Municipal by-laws;
- Relevant Integrated Development Plans (IDPs);

Not only do these Acts, regulations and frameworks guide specific decisions and actions, they also provide the framework for monitoring performance and compliance, and provide guidelines regarding contravention, offences and penalties.

## **1.3 BACKGROUND TO INYAKA DAM**

A study was undertaken by DWAF during 1985-1991 which revealed that basic water requirements of the Bushbuckridge region will not be met unless water supplies were augmented. This motivated the construction of Inyaka Dam as a storage dam in the Marite River, a major tributary of the Sabie River (DWAF, 2000). Inyaka Dam, forming part of the Sabie River Government Water Scheme, is situated adjacent to Bushbuckridge and falls within the jurisdiction of the Bohlabele District Municipality. The site is approximately 25 km north of the town of Hazyview within Mpumalanga Province (refer Appendix C, Figure 7).

### **1.3.1 Physical Environment**

#### **1.3.1.1 *Weather***

Inyaka Dam falls in the summer rainfall region of South Africa on the border of the Northern Province and Mpumalanga. Generally it is a warm to hot, sub-tropical climate with periods of

high flow and sporadic flooding during summer months and low flows during winter (Sudlow, 2004). The mean annual precipitation rate is 1 260 mm/yr in the Inyaka Dam region.

The evaporation rate is lowest in the west with 1 400 mm, but much higher in the east, rising to 1 700 mm. It is estimated that 80% of runoff is generated in the upper 20% of the Sabie River catchment. This also relates to the sediment production in the catchment which is highest in the region west of the Kruger National Park due to overgrazing and land degradation (Jewitt et al, 1997).

The average summer and winter temperatures are 26°C and 16°C respectively. A maximum average temperature of 34°C and a minimum average temperature of 15°C can be expected during summer. In winter the maximum average temperatures may rise to 29°C while minimum average temperature may drop to 4°C (Ackerman, 2000).

The prevailing wind direction is north east during summer and south east during winter. A general wind speed of 12 km/hour can be expected (Ackerman, 2000).

### **1.3.1.2 *Geology***

Geology in the Inyaka Dam region is dominated by granites and granodiorites of the Basement Complex (Ackerman, 2000). The valley flanks consist mainly of a residual granite soil, interspersed by completely weathered dolerite dykes. The dam wall is founded on highly erodable decomposed granite into which diabase dykes have intruded. The upper horizon of the decomposed granite comprising the foundation of the dam wall was found to be collapsible (refer to Appendix C, Figure 8).

### **1.3.1.3 *Topography***

The Inyaka Dam is situated in the transition zone between the Drakensberg Mountains and the Lowveld. The western portion of the Sabie River catchment is mountainous, panning out into a low lying plain to the east (refer to Appendix C, Figure 9). The region around Inyaka Dam is characterised by gentle undulating hills and slopes (Ackerman, 2000).



### 1.3.1.4 Hydrology

Inyaka Dam is located in the upper part of the Sabie River catchment, in a main, perennial tributary referred to as the Marite River (refer Appendix C,

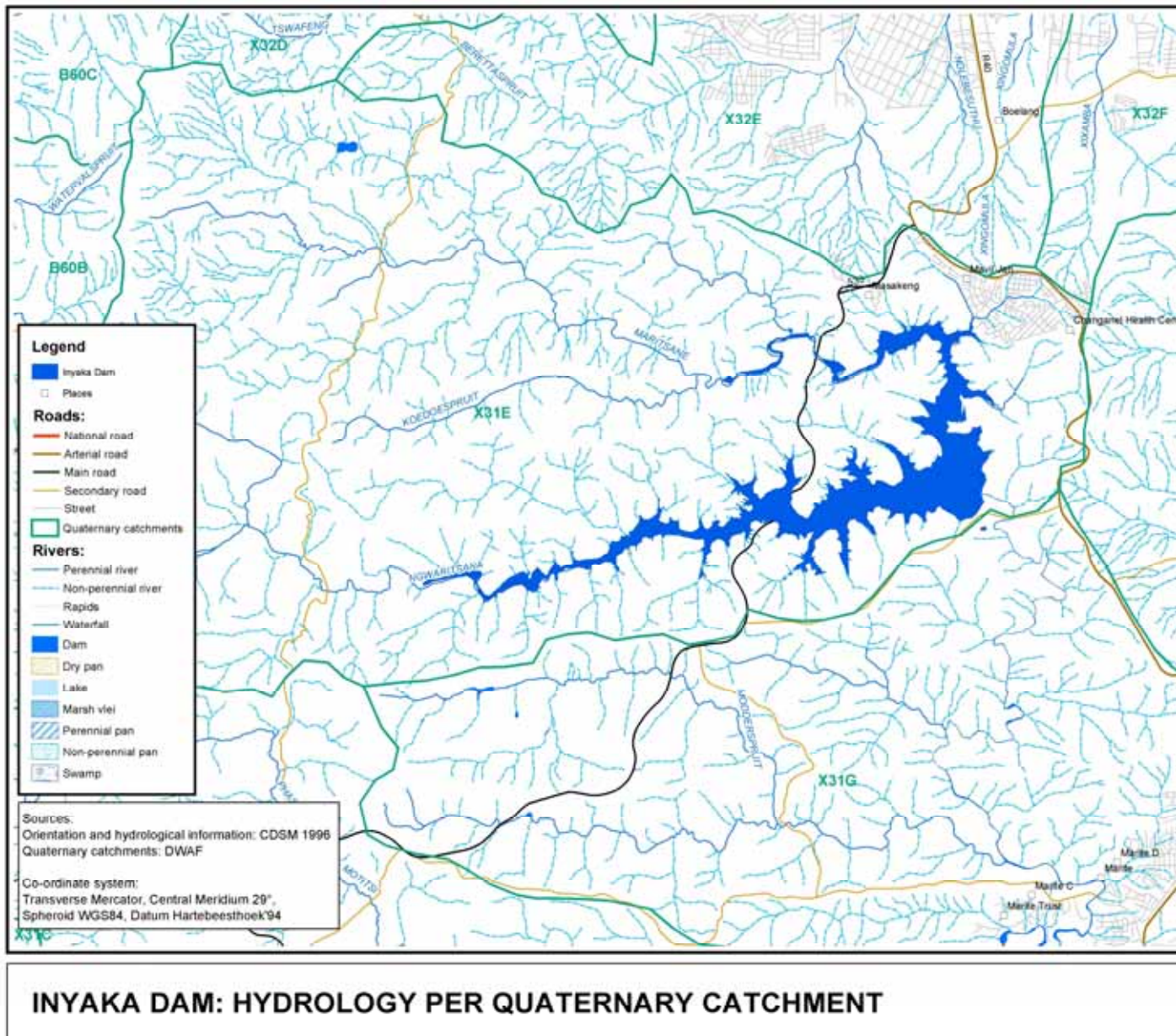


Figure 11). The Sabie River catchment forms part of the larger Incomati River basin, which is an international drainage basin traversing over South African, Swaziland and Mozambican borders (Sudlow, 2004). The Marite River is 58 km long from origin to where it meets the Sabie River near Hazyview (Deacon, 1996). Inyaka Dam is located roughly in the middle of the Marite River system on the foothills of the Drakensberg Escarpment (Sudlow, 2004). The catchment of Inyaka Dam is 209 km<sup>2</sup> (Ackerman, 2000) which forms part of the 6347 km<sup>2</sup> catchment of the Sabie River that lies within South African borders (Sudlow, 2004).

### 1.3.1.5 Soils

The soils in proximity to Inyaka Dam have a medium to high collapse potential due to a low density and are prone to dispersion (Ackerman, 2000).

### **1.3.1.6 Water Quality**

There is currently no data on water quality as measured from monitoring points within the dam. The water quality in the dam is however assumed to meet the DWAF standards for domestic and recreational use. Water quality monitoring points at appropriate sites of water inflow and outflow must be established and monitored. At least one point must be established downstream from the sewerage treatment works.

### **1.3.1.7 Flora**

Low & Rebelo, 1996 classifies the veld type of the area around Inyaka Dam as a Sour Lowveld Bushveld. However most of the natural vegetation has been removed due to forestry practices. The only remaining portions that represent the natural vegetation of the region are located on small isolated patches, north of the dam near Maviljan and Bushbuckridge and a thin zone of riparian vegetation (Ackerman, 2000).

Large areas around Inyaka Dam are planted with Blue gum and Pine, with abandoned Coffee plantations (Ackerman, 2000). It was estimated that 69 000 ha of the Sabie River catchment was replaced with exotic afforestation in 1972. Since then a permit system controlled additional exotic afforestation to a moderate increase in the catchment (Sudlow, 2004).

The riparian zones of rivers and water bodies are particularly vulnerable to invasion by alien vegetation. Some exotic invaders have become a concern along the Sabie River riparian zone and have probably spread into the tributaries. In particular *Lantana camara* and to a lesser degree *Melia azedarach*. Higher up in the catchment outside the borders of the Kruger National Park many *Pinus* and *Eucalyptus* species occur as a result of commercial forestry (Mackenzie et al., 1996).

### **1.3.1.8 Fauna**

It is expected that the presence of game will be limited to low numbers of small mammals due to the extensive forestry practices in the region and a lack of connectivity to more natural and/or conserved areas (Ackerman, 2000).

It was stated during the 2<sup>nd</sup> task team meeting (2006-04-04) that hippo are present in the system and were most probably introduced. Crocodiles have not been seen yet but it is expected that these animals will eventually populate the water system.

The aquatic bird diversity and numbers will increase as a result of the presence of a permanent water source. This can be enhanced and it is expected that the occurrence of terrestrial birds will recover through the planting of indigenous vegetation on the banks as proposed by Ackerman (2000).

The occurrence of reptiles and amphibians will probably increase if suitable habitats are established on the banks.

The presence of Inyaka Dam will alter the populations and specie compositions of fish in the system. A potential population explosion may occur which can be of great benefit to the surrounding communities (Ackerman, 2000).

### **1.3.1.9 Inyaka Dam Statistics**

The dam comprises a 53 m high earth fill embankment with a central through spillway of mass and reinforced concrete (see Appendix C, Figure 16). This layout and design was dictated by the fact that rock for the overspill structure was available at a shallow depth only in the riverbed (DWAF, 2000). Table 1 sets out further statistics of the dam.

**Table 1: Inyaka Dam Statistics**

COMPONENT	DESCRIPTION
Maximum height of dam wall	53 m
Length of dam wall	550 m
Length of spillway	138 m
Approximate length of dam	10,5 km
Approximate width of dam	1,5 km at widest point
Spillway discharge at high flood level (1:200yr)	1300 m <sup>3</sup> /sec
Maximum capacity of outlet works	30,5 m <sup>3</sup> /sec
Maximum spillway capacity	3000 m <sup>3</sup> /sec
Gross storage capacity	123 million m <sup>3</sup>
Annual yield	57,8 million m <sup>3</sup>
Full drawdown level/FSL	768,6 m
Lowest drawdown level	734 m
Non-overspill crest level	773,1 m
Lowest foundation level	718 m
High flood line	771,2 m
Surface area at FSL	795 ha
Full drawdown level	768,6 m
Catchment area	209 km <sup>2</sup>
MAR	101 million m <sup>3</sup>
1:5 year flood	175 m <sup>3</sup> /sec
1:20 year flood	300 m <sup>3</sup> /sec
1:50 year flood	670 m <sup>3</sup> /sec
1:100 year flood	940 m <sup>3</sup> /sec
Regional maximum flood	1 900 m <sup>3</sup> /sec
Safety evaluation flood	2 750 m <sup>3</sup> /sec
Instream flow requirement as % of present MAR	40%

### 1.3.2 Socio-economic Environment

#### 1.3.2.1 Land Use

A population growth projection was made by Davies & Day (1998) for the entire Sabie River catchment. This estimates that population will increase from approximately 338 000 people in 1985 to approximately 691 000 people in 2010.

Large areas of the Sabie River Catchment are utilised for forestry (refer to Appendix C, Figure 14). The middle parts of the catchment are recognised for rural community activities such as subsistence farming, small scale livestock and fruit production. Overgrazing is a tangible problem which contributes to extensive erosion and sedimentation down stream (Sudlow, 2004).

#### 1.3.2.2 Educational and Health Facilities

A number of schools and health care facilities are located around the Inyaka Dam within Bushbuckridge see Figure 15

#### 1.3.2.3 Cultural Environment

The Inyaka Dam covers an area that affects a number of Tribal Authorities of which the following were identified through the Office of the Traditional Affairs and have registered as stakeholders in this process: Kgarudi Tribal Authority; Moreipuso Tribal Authority; Thabakgolo Tribal Authority; Mathibela Tribal Authority; and Mathibela Tribal Authority :Injaka-Waterval Community.

Seven (7) land claims have been lodged on the farms Injaka 267 KU and Waterval 273. The claimants are the Injaka-Waterval community, as defined in terms of Section 2 of the RLRA as amended. The community comprises of the originally dispossessed people. The Department of Land Affairs as the successor in title to the South African Development Trust and former Lebowa Government currently owns a greater part of the farms Injaka 267 KU and Waterval 273 KU. A part of the land under claim is used for forestry purposes. The greater part of the claimed land is not being used, except by local residents for seasonal cropping. A portion of the Injaka 267 KU was previously used for coffee production by the Agricultural Rural Development Corporation (ARDC). Currently, the project has been abandoned.

## 1.4 SUSTAINABLE UTILISATION OF THE INYAKA DAM

### 1.4.1 The Challenge

Sustainability is a term that is often used, yet seldom understood in terms of its complexity and implications and is thus the overarching challenge facing the management authority of Inyaka Dam. Without a focus on sustainability, Inyaka Dam will never reach its optimal potential nor contribute to the attainment of the objectives set out in the RMP and legislation such as the NWA. Through the protection and sustainable utilisation of the resource of Inyaka Dam it is believed that substantial financial, social and environmental benefits will be generated, making the management thereof both meaningful and viable.

However, the following **broad encumbrances** exist and will have to be overcome in planning and operationalisation of the RMP, including:

- Conditions within and around the dam presenting safety risks including overhead transmission lines; the new road bridge; incomplete data on the bottom profile of the dam; submerged trees; three partially submerged islands, and a submerged weir at the water treatment works;
- Biophysical encumbrances including the lack of data on water quality and the possibility that crocodile and hippo may occur within the dam;
- Expectations regarding benefits emanating from tourism and agriculture;
- Lack of clarity regarding PPPs;
- Unclear relationships between different spheres of Government;
- Servitudes and rights of use of State assets on the State land surrounding the dam (refer to Appendix H for servitudes registered against the title deed);
- Understanding of the dynamics surrounding the land claims; and
- A political encumbrance has recently arisen in the form of a proposal to change the municipal boundaries in the study area proposed by the municipal demarcation board.

### 1.4.2 Role Players

The success of the Inyaka Dam RMP and its implementation is dependent on the level of involvement by stakeholders and beneficiation and as such, the Inyaka Dam should not function in isolation from these stakeholders. Stakeholder categories include:

- Resource Managers;
- Industry or Users of the resource;
- Communities (i.e. Traditional Authorities; Non-Governmental organisations; Civil Society Structures);
- Policy Makers (including DWAF and other relevant Government Departments at national, provincial and local spheres), and
- Other Interested and Affected Parties (I&APs).

By forming close working relationships with resource managers and private sector operators and contractors, benefits can emanate from the management and utilisation of the dam, allowing the management authority the opportunity to disseminate these benefits to neighbouring communities in an equitable manner based on sound Government policy supported by the relevant authorities.

Figure 3 (vide page 8) illustrates the relationships among stakeholders.

### 1.4.3 Implementation Policy

In an effort to optimise benefits to all role players, the implementation of the RMP for the Inyaka Dam will be undertaken in an adaptive, dynamic and integrated manner based on sound ecological, social and economic principles.

The policy will be to seek advice and support from DWAF regarding the key objectives of the NWA, and ensuring that the activities of the Inyaka Dam enhance these objectives. Additionally, it will be the policy of the management authority of the Inyaka Dam to document activities, accomplishments, problems and solutions, so that management of other similar water resources can be aided and guided regarding possible solutions and pitfalls.

Without the alignment of Government plans – national; provincial, and local – it will be extremely difficult for Government to attain its broad objectives, as would it be difficult to achieve co-operative governance. For this reason DWAF and the Inyaka Dam management authority will provide an opportunity for its Governmental planning partners such as Department of Agriculture (DoA); Land Affairs (DLA); Public Works (DPW), and Environmental Affairs and Tourism (DEAT), together with the Bohlabele District Municipality and the Bushbuckridge and Maruleng Local Municipalities to actively be involved throughout the planning and implementation of the management plan, guided by the principles contained in Chapter 3 of the Constitution.

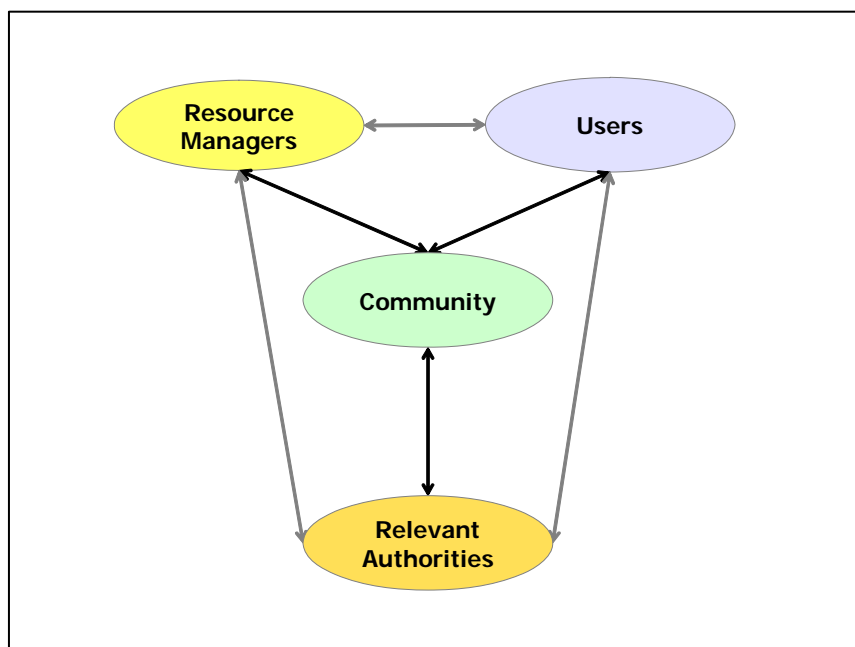


Figure 3: Role Players

## **SECTION 2. THE PLAN**

### **2.1 OVERARCHING FRAMEWORK**

DWAF is the custodian of South Africa's water forestry resources and is primarily responsible for the formulation and implementation of policy governing this sector and also promotes effective and efficient water resources management to ensure sustainable economic and social development.

#### **2.1.1 DWAF's Vision**

DWAF has a vision of being:

*'a country that uses water and forests productively and in a sustainable manner for social and economic activities; in a manner that promotes growth, development and prosperity of all people to achieve social justice and equity.'*

#### **2.1.2 DWAF's Mission**

As sector leader, the mission of DWAF is to serve the people of South Africa by:

- guiding, leading, developing legislative framework, regulating and controlling the water and forestry sectors;
- conserving, managing and developing water resources and forests in a scientific and environmentally sustainable manner in order to meet the social and economic needs of South Africa, both now and in the future;
- managing and sustaining our forests, using the best scientific practice in a participatory and sustainable manner;
- educating the people of South Africa on ways to manage, conserve and sustain water and forest resources;
- cooperating with all spheres of Government, in order to achieve the best and most integrated development, and
- creating the best possible opportunities for employment, the eradication of poverty and the promotion of equity, social development and democratic governance.

#### **2.1.3 KEY OBJECTIVES OF THE DEPARTMENT**

The Department's key focus areas and strategic objectives are as follows:

- Ensure the sustainable development and management of plantation forestry to optimise equitable economic benefit, particularly in rural areas.
- Ensure the sustainable development and management of indigenous forests to optimise their social, economic and environmental benefits.
- Ensure Sustainable Forest Management (SFM) in South Africa by developing effective oversight of the sector and facilitating co-operative government.
- Promote sustainable forest management in Africa and internationally.
- Ensure that communities and disadvantaged groups are empowered to make use of tree and forest resources to support sustainable livelihoods.
- Ensure reliable and equitable supply of water for sustainable economic and social development including the eradication of poverty.
- Ensure the protection of water resources.
- Develop effective water management institutions.
- Align staff, stakeholders and general public to a common vision for Integrated Water Resource Management (IWRM) and develop, capacitate and empower them in best practices thereof.

- Ensure provision of basic Water Supply & Sanitation for improved quality of life and poverty alleviation.
- Ensure effective & sustainable delivery of water services to underpin economic & social development.
- Ensure effective Water Services Institutions.
- Ensure effective local-level operations and management of DWAF water services schemes.
- Promote & support sound policy & practice of WS to achieve millennium targets in Africa.
- Promote IWRM in Africa in support of the New Partnership for Africa's Development (NEPAD).
- To guide initiatives aimed at attaining DWAF's vision, mission and objectives, an operational policy regarding the use of water for recreational purposes has been developed. This policy addresses planning, safety, authorisation, equity, communication, capacity building, institutions and linkages, legislative and legal framework, and monitoring and information management, and provides strategic direction to the Inyaka Dam RMP.

## 2.2 VISION, MISSION AND OBJECTIVES FOR INYAKA DAM

### 2.2.1 Vision

Stakeholders engaged during the compilation of the RMP envisaged Inyaka Dam as a dam that contributes to regional economic and social benefits through sustainable utilisation.

### 2.2.2 Mission

Numerous stakeholders were identified and invited to participate in an open and consultative RMP process for the Inyaka Dam (refer Appendix A and B for a stakeholder list and RMP process project schedule).

During stakeholder workshops and planning sessions, all the role players envisaged the sustainability of Inyaka Dam being attained by resource utilisation, host community beneficiation, and industry participation, based on clear and acceptable public policy. As such, the **mission** for the dam was accepted as being:

***“A commitment to unlock the potential of Inyaka Dam in a sustainable manner, based on sound business, resource management, and environmental principles that benefit both the water user and affected community in an equitable manner.”***

The RMP procedure at the Inyaka Dam entailed several public meetings; discussions with Technical Task Team members and stakeholders, and open days. Throughout the planning process efforts were made to ensure effective inputs by all stakeholders regarding the development of the RMP for the Inyaka Dam. Refer to Appendix D for a summary of stakeholder objectives for the Inyaka Dam.

### 2.2.3 Key Objectives

To attain the mission for the Inyaka Dam, and accept the challenges, the key objectives for the dam's management, utilisation and development were acknowledged by the stakeholders (refer Appendix D) as being:

- Protection and management of the aquatic and related ecosystem, biodiversity and cultural resources of the dam in accordance with applicable legislation and regulations;
- To provide ecotourism and public access opportunities based on the natural and cultural resources of Inyaka Dam;
- Unlocking the economic potential of the dam through the establishment of effective PPPs;
- To provide socio-economic benefits to the neighbouring communities and to contribute to the local economy in a sustainable manner based on sound business principles through the

creation of employment opportunities, training, skills development, capacitation and empowerment;

- Ensure equitable and sustainable participation in the management of the dam;
- Ensure compliance with applicable legislation, and
- Establishing monitoring and management systems.

Additional to these key objectives and for its execution is the appointment of a management authority to manage the dam and its surrounding State land that is dynamic, focused and representative of the stakeholders and landowners of the host community, where the host community is defined as the community directly affected by and adjacent to the water resource. The performance of this institution in its endeavours to attain these objectives will be constantly audited and reviewed, to ensure that DWAF can assist wherever necessary and appropriate.

## 2.3 MANAGEMENT APPROACH

To ensure that the RMP contributes to the attainment of the objectives set by its stakeholders, a process approach based on the ISO 9000 management system forms the basis of the management approach for the Inyaka Dam. The rationale for this approach is to assist DWAF and the management authority in ensuring sustainability by protecting the integrity and value of environmental resources, providing measurable benefits to host communities, and enhancing the satisfaction of users (refer DWAF's *Guidelines for the Compilation of Resource Management Plans*).

Without a plan it will be impossible to co-ordinate and manage the activities required to unlock the potential of the Inyaka Dam. Only by measuring the performance of specific actions and operational guidelines against objectives will it be possible to effectively manage the water resource. The structure of the plan is based on Key Performance Areas (KPAs), aimed at attaining the management objectives set for Inyaka Dam by the stakeholders, namely:

- **Resource Management** – natural and cultural resource management and land expansion and incorporation;
- **Utilisation** – public private partnerships; public access; infrastructure and marketing, and
- **Benefit Flow Management.**

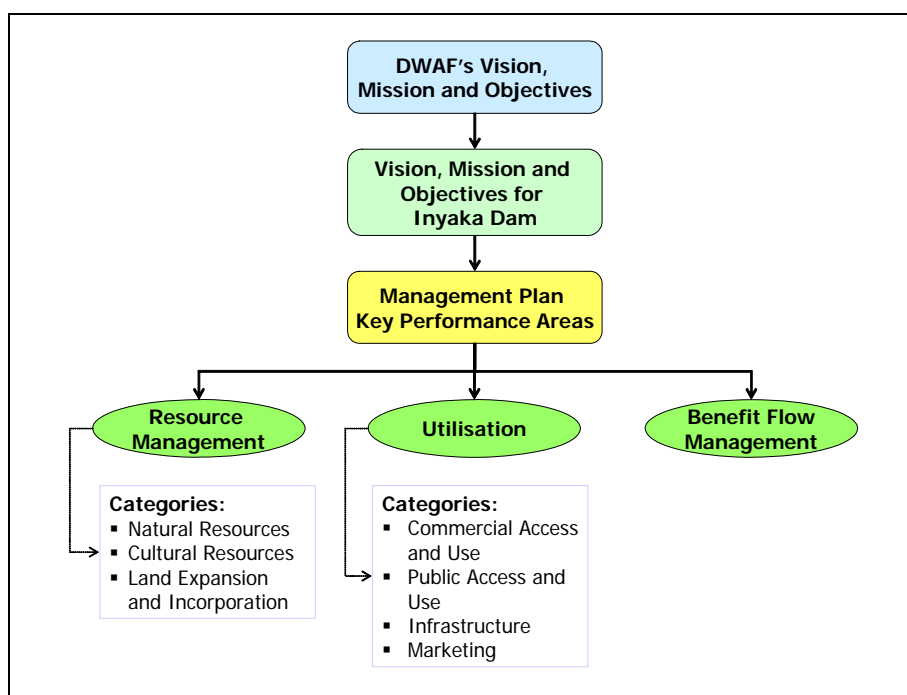


Figure 4: Management Framework



Within each of these KPAs the following aspects are addressed:

- Rational
- Objectives – primary, secondary, tertiary
- Policy
- Strategy
- Operational Guidelines
- Action Projects (refer to Appendix E for a consolidated list of action projects)
- Monitoring and auditing.

Undertaken in this manner, the RMP can be implemented based on clear policies and objectives within each KPA, and with operational guidelines to facilitate the co-ordination of actions to a common vision. Decisions are based on objectives and vision, guided by policy statements. In this way the management authority, host community and users will clearly understand why certain activities are allowed or prohibited.

A *Zoning Plan* (refer section 3 and Appendix F, Figure 18) sets out zones and provides strategic direction for the utilisation and development of the dam within the constraints and opportunities of, as well as vision, objectives and policies for the receiving environment.

## **2.4 KPA 1: RESOURCE MANAGEMENT**

### **2.4.1 Natural Resources**

#### **2.4.1.1 *Rational***

It is envisaged that the biodiversity, biophysical processes, non-renewable resources and landscape of the Inyaka Dam are well conserved through a consistently applied adaptive management process and that the ecological management of Inyaka Dam obtain recognition, both regionally and nationally as a successful model of efficient and cost effective use of human and financial resources for the achievement of natural resource management objectives. Additionally, that Inyaka Dam becomes a renowned centre for biodiversity management and conservation; management partnerships; adaptive management; sustainable resource utilisation, and socio-economic aspects of resource management.

#### **2.4.1.2 *Objectives***

The objectives for natural resource management are:

- To maintain and enhance the system's present character and to minimise impacts on the natural landscape - the objective will be to allow for natural functioning of the aquatic and related eco-system with minimal interventions, however, programmes for controlling alien invasive vegetation will be initiated;
- To determine sustainable carrying capacity for resource utilisation and limits of acceptable change and to accordingly monitor utilisation impacts, and
- To provide for sustainable utilisation of the natural resources of Inyaka Dam in a manner that optimises income and other benefits without compromising the primary and secondary objectives.

#### **2.4.1.3 *Policy***

Recognising that due to the construction of the dam, the aquatic system can no longer function as a truly natural system, the policy is to apply management interventions for the achievement of ecological management objectives, including:

- Natural systems will be similar or rehabilitated where possible based on current knowledge and resources;
- No introduction of alien or invasive species into the system will be permitted;
- Only registered and permitted resource users will be allowed under specific conditions, and
- A policy on waste management will be enforced and adhered to.

#### **2.4.1.4 *Strategy***

To achieve the rational and objectives for natural resource management, the following strategies will be implemented:

- Develop a natural resources database;
- Identification of neighbours and forming ecological management partnerships with them;
- Research the status of resources and the aquatic and associated ecosystem;
- Support the establishment of a nursery for indigenous plants;
- Initiate and support capacity building and environmental education programmes;
- Enforce policy and legislation;
- Synchronise and align all invasive removal projects;
- Set resource quality objectives and carrying capacities for resource utilisation;
- Implement efficient, effective and appropriate monitoring and review systems;

- Initiate a programme to rehabilitate the natural link between the Coffee Farm area and the Bushbuckridge Nature Reserve, and
- Initiate a programme to manage hippo and crocodile.

#### **2.4.1.5 Operational Guidelines**

##### *Water Releases*

The Management Authority must participate in decision-making regarding down stream releases and operational plans for the dam and communicate relevant information to operators; contractors; users, and stakeholders.

##### *Alien Plant Control*

No alien plants will be introduced to the Inyaka Dam except in the gardens of management; PPP, and public access facilities. The objective is to manage all existing alien plants in Inyaka Dam based on the latest alien plant control technology and knowledge, in compliance with forestry legislation and regulations. A continuous, appropriate programme will be implemented or co-ordinated by the management authority.

##### *Erosion/Wave Action*

Soil erosion is a natural process, yet where it is accelerated due to unsustainable land use practices or activities, active measures to mitigate, rehabilitate and control will be implemented. Sheet and gully erosion will be managed according to conditions through the timing of controlled burns and packing of branches. The impact of these interventions will be monitored.

##### *Sustainable Utilisation*

To enable Inyaka Dam to reach its mission and objective it will be necessary to consumptively utilise the natural resources of the dam, based on the principles of sustainability. Consumptive utilisation will include *inter alia* fishing and grazing. These activities will all be zoned and authorised ensuring minimal impact on the resource, and as an active management tool the impact of consumptive use will be monitored on a continuous basis.

##### *Control of Illegal Use*

Illegal use of natural resources within Inyaka Dam is low, yet remains a latent threat, thus ongoing vigilance through cost effective surveillance and monitoring will be required, backed with reaction capabilities. Access to the dam will be controlled, and informants rewarded regarding the provision of information regarding illegal use.

##### *Waste*

Responsible and environmentally friendly waste management will be adopted at Inyaka Dam. Operators, contractors and permit holders will be responsible for on site waste management and will be required to prepare waste management plans and submit performance reports to the management authority compliant with industry best practice, conditions of contract and relevant environmental authorisations.

#### **2.4.1.6 Action Projects**

##### **Action Project:**

Develop and implement a removal and remediation programme for alien invasive vegetation within a buffer of 30 m of the High Flood Line (shore line) of the dam in partnership with Working for Water.

**Action Project:**

Conclude co-management agreements regarding the management and exploitation of the remaining trees within the purchase boundary.

**Action Project:**

Initiate an aquatic biodiversity assessment study.

**Action Project:**

Undertake a biodiversity assessment and prepare a biodiversity management plan for especially crocodile, hippo and fish in co-operation with Mpumalanga Tourism and Parks Agency and the Kruger National Park.

**Action Project:**

Prepare a strategy regarding the trees inundated by the dam to address public safety concerns.

**Action Project:**

Lobby to include Inyaka Dam on the State Dams Eutrophication Project List and initiate a limnology study with a view on understanding the water quality changes of the dam.

**Action Project:**

Prepare resource quality objectives (RQOs) and set carrying capacities for resource utilisation.

**Action Project:**

Establish water sampling points within the dam basin as well as up- and downstream of the dam.

**Action Project:**

Facilitate a process to link the Inyaka Dam with the Bushbuckridge Nature Reserve.

**Action Project:**

Prepare biodiversity management provisions and include together with landscaping specifications as conditions of contract in access and use agreements.

**Action Project:**

Prepare and implement a soil erosion management plan, especially at old mining sites.

**Action Project:**

Participate in decision-making regarding down stream releases and operational plans for the dam and communicate relevant information to stakeholders.

#### **2.4.1.7 Monitoring:**

For effective management of biodiversity and natural resources it is essential that performance be monitored utilising techniques and procedures based on:

- Assumptions regarding adaptive management;
- Cost efficiency and applicability;
- Appropriateness to management objectives;
- Current ecological theory;
- Best Practical Environmental Options; and
- Consistency over time.

## **2.4.2 Cultural Resources**

### **2.4.2.1 *Rational***

It is envisaged that the palaeontological, archaeological, historical and cultural resources of Inyaka Dam are well conserved through an innovative, adaptive management process.

### **2.4.2.2 *Objectives***

The objectives for natural resource management are:

- To research, document and protect the cultural resources within the area, with specific consideration to the palaeontological, archaeological, historical and cultural heritage resources applied in the following descending order of priority: international, national, provincial and local;
- To document the history of the Inyaka Dam, specifically the history of the farm and valley, and
- As part of the tourist experience, to provide insight into the establishment and purposes of the dam, and the cultural heritage resources associated with the area.

### **2.4.2.3 *Policy***

Cultural resources will be managed based on the guidelines of the NHRA and by continuously updating and expanding the knowledge base regarding cultural resources, through research, documentation and conservation, as well as training and capacitation.

### **2.4.2.4 *Strategy***

Since cultural resource management is a new management field within environmental management, the guiding strategies within the adaptive management process will be:

- Review of current and relevant legislation;
- Compilation of a cultural resource data base;
- Development of clear, measurable objectives and goals;
- Continuously updating knowledge and technology;
- Establishing effective, efficient and repeatable monitoring systems;
- Regular review and evaluation by experienced archaeologists and cultural resource managers, and
- Support for cultural resource management initiatives in the area.

### **2.4.2.5 *Operational Guidelines***

For sites of palaeontological, archaeological; historical; rock art and the built environment the following cultural resource management guidelines will be used:

#### *Identification*

Staff of operators, contractors and the management authority will be trained in identifying cultural resources based on cultural resource management guidelines, focusing on palaeontological, archaeological, historical and cultural heritage features, both tangible and intangible.

### *Documentation*

A data base of cultural resources will be compiled by properly trained and accredited researchers and continuously updated by the management authority, based on cultural mapping techniques.

### *Conservation*

Conservation work will not only be undertaken where the cultural resource is threatened, but also where the resource can contribute to enhancing the tourism experience, yet will be based on guidelines as provided by the relevant authority. No conservation work will be undertaken without the authorisation of this authority.

### *Utilisation*

Both tangible and intangible cultural resources will be incorporated into the visitor experience programme at Inyaka Dam ensuring an authentic and culturally appropriate experience.

#### **2.4.2.6 Action Projects**

**Action Project:**

Formalise a co-operation agreement and relationships with the relevant provincial heritage authority and the South African Heritage Resource Authority (SAHRA).

**Action Project:**

Identify cultural projects in the region and possible links with Inyaka Dam.

**Action Project:**

Develop an operational guideline that clarify the involvement of the traditional authorities in the area utilising existing community structures and forums.

#### **2.4.2.7 Monitoring**

As an essential step in the effective management of cultural resources, it is imperative that the performance of management interventions be monitored, based on aspects such as:

- Attainment of management objectives;
- Compliance with legislative guidelines;
- Current monitoring theory;
- Cost efficiency;
- Effectiveness, and
- Trends identification.

### **2.4.3 Land Expansion and Incorporation**

#### **2.4.3.1 *Rational***

It is envisaged that the area available for resource protection and conservation, utilisation and tourism development around Inyaka Dam should be as large as possible.

#### **2.4.3.2 *Objectives***

The primary objective for land expansion and incorporation is to incorporate all land within the Inyaka Dam sphere of influence under formal co-management agreement. Expansion will be considered if it enhances the natural resource management and business objectives of Inyaka Dam by significantly enhancing the tourist experience available at Inyaka Dam.

#### **2.4.3.3 *Policy***

The management authority for Inyaka Dam will incorporate as much land as is feasible and necessary under co-management agreement and subject to conditions to allow for unhindered tourist movement and compatible land management practices.

#### **2.4.3.4 *Strategy***

The guiding strategy regarding land expansion will be to evaluate the contribution that the proposed expansion will have on the natural and cultural resources; tourist experience; possible community involvement and beneficiation, and managerial impact and efficiency.

#### **2.4.3.5 *Operational Guidelines***

##### *Co-management agreements*

The co-management agreements required for the effective management of the State land adjacent to the dam will be entered into between DWAF and adjacent landowners, including the Community Property Associations (CPAs).

#### **2.4.3.6 *Action Projects***

<b>Action Project:</b>
------------------------

Conclude co-management agreements with neighbours.
--

<b>Action Project:</b>
------------------------

Facilitate the incorporation of the RMP in the IDP for Bushbuckridge.
---

#### **2.4.3.7 *Monitoring***

A record of all management agreements must be kept, as well as a record of annual reports regarding compliance with conditions of agreement.

## **2.5 KPA 2: UTILISATION**

### **2.5.1 Target Market**

Numerous target markets exist that could form the foundation for the utilisation of Inyaka Dam. Ensuring that these target markets cover as wide a spectrum as possible will assist in ensuring that fluctuations in market demands for water based recreation do not negatively impact on the local economy.

Regional demand for water based recreation will draw on users from Hazyview, Whiteriver, Phalaborwa; etc. This target market focuses on traditional water based activities such as boating – power, human and sail – and fishing, both boat and shore based. Factors influencing this market are distance, fuel cost, weather and season. Peak demand should be weekends and school holidays.

The proximity of Bushbuckridge to Inyaka Dam creates the opportunity for the establishment of local demand by residents of Bushbuckridge. Being an impoverished community it can be expected that local demand will be for facilitated water based activities providing access to water based activities for people who do not have their own watercraft. This local market provides an excellent opportunity for the establishment of a water sport facility which can provide numerous recreational opportunities such as cruises, skiing, parasailing, sailing, wake boarding, windsurfing, canoeing, etc. This facility could be linked to a beach style facility/resort accessible to local residents.

Not only will this opportunity contribute significantly to transforming recreational patterns in the region through exposure of local residents to water based recreation, but also provide opportunity for training programmes such as Swimming South Africa's Rural Splash.

The exceptional quality of bass fishing available at the Inyaka Dam, utilised for international bass fishing competitions, provides an opportunity to access an international market focused on guided fishing opportunities, exploiting the narrow upper reaches of the dam. As a long narrow strip, with numerous submerged trees in various coves, self guided recreational boating can be dangerous. However, through guided activities, both motorised and non-motorised, these constraints can be overcome, adding value not only to the experience but also to the region as a whole.

These three markets – local; regional and international, provide an ideal platform from which to develop a diverse and economically viable water based recreational economy.

### **2.5.2 Commercial Access and Use**

#### **2.5.2.1 *Rational***

It is envisaged that tourism related and economic development activities are implemented in a cost-effective, socially responsible and environmentally acceptable manner, maximising local employment, skills development and local economic benefit, based on the principles underlying Broad Based Black Economic Empowerment (BBBEE) and National Treasury guidelines.

#### **2.5.2.2 *Objectives***

The objectives for this KPA are:

- To optimise tourism and economic development opportunities in an equitable manner based on the opportunities and constraints posed by the dam and surrounds;
- To formalise relationship with operators, ensuring that all activities are authorised in terms of relevant legislation, and



- To ensure that private sector involvement is equitable, and that market related fees are paid for the use of Inyaka Dam.

### **2.5.2.3 Policy**

In compliance with official Government policy, private sector partnerships will be established for tourism related and economic development. All development and management opportunities at the dam will thus be outsourced as Public Private Partnerships (PPPs).

### **2.5.2.4 Strategy**

The strategy to achieve the vision will be to follow National Treasury's guidelines for PPPs (i.e. PPP Toolkit for Tourism and PPP Manual).

### **2.5.2.5 Operational Guidelines**

#### *Local Strategic Plan for Commercialisation*

Based on and aligned with DWAF's policy for commercialisation of water resource infrastructure, a local strategic plan for commercialisation must be compiled addressing the following aspects:

- DWAF's and the management authority's mandate, rational, mission, objectives and activities;
- Possible sites and opportunities for PPPs based on the Zoning Plan (Appendix F, Figure 18);
- DWAF's and the management authority's legal capacity to carry out PPPs;
- The commercialisation policy, objectives and strategies for Inyaka Dam;
- Personnel and systems capacity for PPPs;
- Budgetary parameters;
- Internal and external stakeholders;
- Additional support required for PPPs, and
- Initial checklists for each of the commercial opportunities identified.

It may not be necessary for the management authority to compile documentation from a fresh since much of the content is already contained in the RMP and DWAF's policy for commercialisation. It is necessary, however, to make sure that all the information needed is compiled in one document, and that the existing planning is referenced against National Treasury's guidance for commercialisation planning.

#### *Existing Operations*

All existing operators must be requested to verify their operation and activities with the management authority, after which an evaluation regarding authorisations will be undertaken and appropriate interventions and regularisation implemented.

#### *Selection Procedure and Criteria*

All PPP opportunities should be advertised publicly and contracts awarded according to National Treasury's requirements, after adjudication against pre-set criteria which includes environmental; community; commitment; expenses and expectations; existing entitlements; access; employment opportunities, cost and impact.

### *PPP Allocation*

All commercial operations at Inyaka Dam will be subject to PPP contracts. The cost of the PPPs will be commensurate with concessions, impacts and benefits in terms of the RMP and zoning of the Inyaka Dam, and must be market related.

DWAF will procure and allocate PPP agreements, yet once awarded these contracts will be administered by the management authority for Inyaka Dam. Agreements must be awarded through a public procurement process compliant with the PFMA and other relevant legislation with the assistance of the management authority.

### *Allocation Criteria*

Generally contracts will be awarded to companies and individuals with proven track records in the industry, however, opportunities could be given to smaller, emerging companies or individuals. Priority will be given to local people where equity, efficiency and standards are commensurate to the objectives for Inyaka Dam.

### *Rules and Regulations*

Operators must operate within defined codes of conduct and rules as provided by the management authority, and amended as required.

### *Limits of Development and Use*

All PPP contracts will have clearly defined limits placed on sizes, numbers and levels of use and development, as well as type of activity and restrictions of zones. Operators are responsible for compliance.

### *PPP Fees*

Fees will be levied for the rights to operate commercial activities at Inyaka Dam. PPP fees will be collected by the management authority, based on DWAF policy, as well as criteria such as:

- exclusivity;
- size of the operation;
- location of the operation; and
- impact of the operation.

Fees may consist of an upfront payment and basic lease, payable monthly or annually.

### *Allocation of PPP Fee Income*

All PPP fees levied and all income earned will be paid to the management authority, for disbursement and utilisation regarding *inter alia* the following:

- development and operational costs of infrastructure;
- development and management costs of conservation, and
- contribution to community beneficiation projects and programmes.

### *Environmental Authorisations*

All developments and operations at Inyaka Dam must be authorised in terms of relevant legislation such as the NWA and NEMA.

### **2.5.2.6 Action Projects**

**Action Project:**

Prepare a local strategic plan for commercialisation and a detailed master plan for the opportunities identified in the zoning plan for the dam (refer Section 3 and Appendix F, Figure 18).

### **2.5.2.7 Monitoring**

A record of all PPPs, operators, contracts and conditions will be kept to monitor compliance and performance. Operators will be required to submit annual reports to the management authority regarding performance and compliance with conditions of contract.

## **2.5.3 Public Access and Use**

### **2.5.3.1 *Rational***

It is envisaged that the public has affordable, equitable and safe access to Inyaka Dam.

### **2.5.3.2 *Objectives***

The objectives for public utilisation are:

- To address the needs of the public in an appropriate and equitable manner;
- To encourage outsourcing of public access facilities and to define operating and safety rules in co-operation with contractors and operators, and
- To create awareness regarding these rules.

### **2.5.3.3 *Policy***

Public access and use will be equitable, compatible and safe. Public access will be provided at designated points by contractors and managed to address the needs of the public, reduce environmental impacts and achieve resource management objectives.

Access for private, non-commercial use and for organised events will be provided based on environmental assessment commensurate with the strategic plan for commercialisation; agreements with operators and contractors; operating rules and carrying capacity, and through access agreements or permits.

### **2.5.3.4 *Strategy***

To address the needs of the public regarding access and use of Inyaka Dam, the private sector will play an essential part in the planning, development, funding, management, marketing and operation of activities and related infrastructure, or implementing projects and managing them on a contract basis where appropriate. These activities create employment and business opportunities, and therefore where practical and feasible existing initiatives must be recognised and activities acknowledged through appropriate procedures.

The management authority will be responsible for output, not input, and therefore it is strategically important that where practical, feasible and cost effective supplies; contracts, and opportunities for public utilisation provision and management must be outsourced, with the primary focus on local people and business.

### **2.5.3.5 *Operational Guidelines***

#### *Outsourcing*

Public access sites will be outsourced through an open and transparent procedure compliant with the requirements of the PFMA, Treasury Regulations and the NEMA, where the management authority will be responsible for ensuring that the specific conditions related to contracts are adhered to. The management authority will be responsible for the output as opposed to the input regarding public access and use.

#### *Operational Rules*

All contractors will be subject to a common set of operational rules for the Inyaka Dam. These operational rules will form part of the conditions of contract, and will be updated regularly, at least annually.

### *Carrying Capacity*

To ensure safe and compatible use as well as attain resource management objectives, user densities will be set for the public access zone (refer Appendix F, Figure 18). Application of a variety of management techniques will ensure flexibility regarding carrying capacity, while reducing impacts.

### *Monitoring Attitudes and Satisfaction*

Contractors will be required to obtain and encourage feedback from users. Through constant monitoring of user satisfaction with the service levels of contractors, environmental standards and overall experience, the management authority can ensure that users' needs and expectations can be met.

### *Access Control*

Public access will only be allowed at designated approved points (vide Figure Figure 18). Contractors providing access must provide information regarding the zoning, operational rules and restrictions to users and visitors.

Private, non-commercial access and access for organised events (e.g. fishing competitions), not utilising designation public access facilities, will be subject to prior approval and conditions of use set out in access agreements. The management authority will implement a permit system for access for subsistence fishing in co-operation with the relevant Provincial environmental authorities to ensure safe use and to manage adverse impacts on biodiversity.

#### **2.5.3.6 Action Projects**

<p><b>Action Project:</b> Procure public access contracts.</p>
--

<p><b>Action Project:</b> Conclude access agreements for private use and organised events (e.g. angling competitions).</p>
--

<p><b>Action Project:</b> Prepare operating rules and set carrying capacities based on the environmental and safety encumbrances of Inyaka Dam (vide Appendix C, Figure 17) in co-operation with contractors and operators.</p>
---

<p><b>Action Project:</b> Develop a permit system for subsistence fishing together with the relevant Provincial environmental authority.</p>
--

<p><b>Action Project:</b> Compile and implement an awareness strategy.</p>
--

#### **2.5.3.7 Monitoring**

Contractors will be required to maintain a record of incidents regarding visitors, either positive or negative, as well as complaints, compliments and concerns and report this to the management authority. This will enable the management authority to monitor user satisfaction levels, and therefore also manage contractors appropriately.

Compliance with operational rules and carrying capacities will also be applied as performance monitoring tool by the management authority.

## **2.5.4 Infrastructure**

### **2.5.4.1 *Rational***

It is envisaged that infrastructure at Inyaka Dam will be developed in an aesthetically pleasing, environmentally friendly and cost effective manner, based on the resource management objectives of Inyaka Dam.

### **2.5.4.2 *Objectives***

The objectives for infrastructure are:

- To ensure that all infrastructural development enhance the sense of place of the dam, while complying with all environmental and related regulatory requirements;
- All infrastructural development must be planned to ensure that it is cost effective, appropriate and contributes to attaining the objectives of the dam, and
- To control and limit infrastructural development through authorisations and conditions attached to agreements and contracts.

### **2.5.4.3 *Policy***

Operators and contractors will be responsible for the planning, authorisation, development and maintenance of infrastructure at Inyaka Dam, in accordance with conditions of contracts and agreements.

### **2.5.4.4 *Strategy***

The management authority will evaluate and recommend all plans for infrastructural development prior to any implementation and ensure that all relevant legislative requirements are complied with and necessary authorisations obtained.

All infrastructure will be catalogued and annually monitored by the management authority according to relevant norms and standards and conditions of approval.

### **2.5.4.5 *Operational Guidelines***

#### *Standards*

DWAF's *Environmental Best Practice Guidelines and Specifications for Planning, Construction, Operation and Decommission* together with relevant industry norms and standards will form the base minimum for the establishment of infrastructural development and the onus will rest with the developer to provide evidence of compliance.

#### *Infrastructural Development Plans*

Plans for any infrastructural development will be submitted to the management authority for evaluation and recommendation. All relevant authorisations must be obtained prior to implementation.

#### *Resource Plans*

As a minimum the following plans should be compiled:

- Locality Map;
- Zoning Plan;

- Circulation Plan;
- Master Plan;
- Sketch Plan;
- Plant Plans, and
- Detail drawings including sections and elevations.

#### *Authorisations*

All infrastructural development will comply with relevant regulatory requirements as well as management authority regulations where applicable. No infrastructural development may take place without recommendation from the management authority and authorisation from DWAF, Department of Environmental Affairs and Tourism (DEAT) and any other relevant regulatory authority.

#### *Roads*

All existing roads and tracks in Inyaka Dam area will be GPS logged and catalogued. The need for, and condition of these roads ascertained and decisions regarding their use and maintenance made. No roads will be developed or allowed in sensitive areas, nor without the necessary authorisations. All roads will be maintained according to a set of standards for each class of roads, as compiled by the management authority. Roads should be contoured and provided with spillways and drainage. Erosion will be monitored and no off-road driving allowed.

#### *Services*

Wherever possible, services such as telephone lines, electricity and water should be underground or provided in an aesthetically pleasing manner. All services are to be maintained by the developer, including decommissioning.

#### *Fencing*

Only areas requiring security measures should be fenced, patrolled and an extensive awareness campaign regarding the importance of these fences launched. The purchase boundary should however be managed under a co-management agreement with the neighbour for ecological and operational reasons.

#### *Safety and Security*

The management authority must ensure that all contractors and operators comply with, and that their visitors comply with relevant industry norms and standards regarding vehicles and vessels, as well as relevant legislation. Additionally, the management authority must provide operators and contractors with information regarding zoning, restrictions and codes of conducts for both themselves and visitors. It is also imperative that all contractors and operators provide guarantees to the management authority that they have sufficient public liability insurance cover for their operations.

#### *Staff housing and offices*

Appropriate operational guidelines must be prepared for all DWAF staff housing and offices and must address integration with other developments, ensuring that only key staff are accommodated at the dam. All other non-key staff should live within the community as an integral part of civil society.

#### **2.5.4.6 *Action Projects***

**Action Project:**

Compile and manage a database of all infrastructure and approvals.

**Action Project:**

Develop norms and standards and application procedures for infrastructure development.

**Action Project:**

Conclude an infrastructure development agreement with the Local Municipality.

**Action Project:**

Prepare a fencing strategy and fence management protocol and include conditions of contract in access, use and co-management agreements.

#### **2.5.4.7 *Monitoring***

By maintaining a database of all infrastructure and related authorisations it will be possible to monitor compliance and performance regarding conditions of approval.



## **2.5.5 Marketing**

### **2.5.5.1 *Rational***

It is envisaged that Inyaka Dam becomes recognised, both locally and regionally, for its anchor role in development, and for the successes of its management authority regarding sustainable resource management, private sector involvement and benefit flow management and that these aspects be marketed ethically and appropriately.

### **2.5.5.2 *Objectives***

The objectives for marketing are:

- To develop a unique branding for the dam that can be well marketed;
- To ensure consistency and accuracy regarding the content of marketing material and programmes, and
- Optimise economic and social benefits locally and for the region through the establishment awareness regarding the dam, its products, and programmes.

### **2.5.5.3 *Policy***

The policy regarding marketing will be based on the principle of those who stand to benefit from the marketing of a product or specific programme are responsible and carry the costs associated with it. Content conflicting with the operations, policy or management principles of the RMP and the management authority will not be permitted.

### **2.5.5.4 *Strategy***

The strategies for achieving the rational, objectives and policy for marketing at Inyaka Dam will be to:

- Develop an integrated marketing strategy, and
- To screen all marketing material pertaining to the dam prior to publication.

### **2.5.5.5 *Operational Guidelines:***

#### *Marketing Roles*

The management authority is responsible for both the promotion of the concept of the Inyaka Dam as integrated part of the region, its philosophy and policies, as well as the promotion of PPP and related opportunities.

The promotion of the products and programmes will be undertaken by the individual operators or contractors.

Local and provincial Government will be tasked with the promotion of the region as a destination, yet the management authority will endeavour to ensure that these agencies include the Inyaka Dam in regional and national marketing strategies and campaigns.

#### *Joint Marketing*

The unifying factor of the utilisation of Inyaka Dam will provide some opportunity for joint marketing of the concept and products, and where appropriate the management authority should work together with the private sector.

### *Screening of Marketing Material*

All marketing material, both print and electronic, concerning the Inyaka Dam should be screened by the management authority to avoid the creation of false impressions.

#### **2.5.5.6 Action Projects**

<b>Action Project:</b>
------------------------

Prepare and implement a marketing strategy.
---

<b>Action Project:</b>
------------------------

Conclude co-operation agreements with local and provincial Government and relevant tourism authorities and organisations.
---

#### **2.5.5.7 Monitoring**

As one of the most difficult aspects to monitor, marketing, however, is an essential component, and requires continuous monitoring both in scope as well as content to ensure maximum effect and impact. Since most marketing will be undertaken by the private sector, the main focus of monitoring marketing will be the screening of material to ensure compliance to objectives and consistency of message. Good communication should form the basis for the relationship between the operators, contractors and the management authority, of which this monitoring could be one aspect.

## 2.6 KPA 3: BENEFIT FLOW MANAGEMENT

### 2.6.1 Rational

As a newly established dam, Inyaka Dam provides benefits to communities in the form of bulk water in an assured manner. However, the host community often does not perceive the dam as a benefit but rather as an encumbrance for which a few directly affected individuals from within the community were compensated, and now as a community must live with a changed environment, both physically and socially.

Through the RMP process it is envisaged that the Inyaka Dam will provide broad based benefits to the affected communities, inclusive of employment, training and skills development, investment and environment improvement.

As an impoverished community the benefits emanating from the development of Inyaka Dam will initially be aimed at achieving poverty alleviation. However the sustainable development of Inyaka Dam will benefit numerous other communities equally, even though these communities are not geographical, local nor residential.

Benefits accruing to the political community include meeting government targets regarding poverty relief; economic growth; redressing past imbalances; transformation and municipal infrastructure.

Benefits accruing to the research community include increased understanding of local hydrological conditions; water conditions; flood attenuation; drought management; water service delivery; etc.

Direct benefits to the youth community include *inter alia* skills development; employment opportunities; investment opportunities; the establishment of a local economy, and opportunities for economic diversification.

Local economic benefits include the creation of a broadened customer base; opportunities for local suppliers; employment; injection of external capital into the rural economy; and opportunities for the establishment of public private partnerships.

Environmental benefits emanating from the sound resource management of Inyaka Dam include opportunities for farming – both aquaculture and agriculture; improved water quality and quantity; increased biodiversity; better control regarding emissions, effluent and waste; as well as diversified products and services.

The water management institution for Inyaka Dam must ensure that all these benefits – diverse and comprehensive as they are – are managed and controlled in a synergised and aligned manner, cognisant of the temptation only to manage aspects that are urgent rather than important. For this reason either a Benefit Flow Institution (BFI) tasked with the responsibility of benefit flow management should be established and mandated with the co-ordination of these benefits.

### 2.6.2 Objectives

The objectives of this KPA include:

- To facilitate the establishment of a Benefit Flow Institution (BFI) or appropriate institutional arrangements consisting of representatives from neighbouring communities and selected external persons as a vehicle to oversee and distribute community benefits equitably and fairly;

- To illustrate the benefits accruing from sustainable management, utilisation and development, and
- To stimulate local economic activities through training, capacitation and empowerment programmes.

### **2.6.3 Policy**

The utilisation and development of the dam will provide tangible benefits to the neighbouring communities in an equitable and appropriate manner, supportive of the objectives of the RMP and the NWA. The management authority will support and optimally utilise the resources and capacities of regional support institutions wherever possible for community capacity building and empowerment.

### **2.6.4 Strategy**

The following strategies will assist the management authority in achieving its objectives regarding community participation and beneficiation:

- Participate in appropriate fora regarding community beneficiation;
- Assist and participate in awareness programmes, capacitation and empowerment initiatives targeting local communities;
- Where feasible, only utilise local entrepreneurs and service providers;
- Support the activities of the BFI and promote training programmes for local entrepreneurs regarding *inter alia* aquaculture; holistic farming, and ecotourism, and
- Avail itself for workshops, training seminars.

### **2.6.5 Operational Guidelines**

#### *Benefit Flow Institution*

The management authority must facilitate the establishment of an independent legal entity with representatives from *inter alia* the neighbouring communities, broad ecotourism industry, and relevant Government departments to manage the benefits flowing from the utilisation of the Inyaka Dam. These benefits will be determined through the business plan as a percentage of the income after operational costs have been settled. The BFI should be properly constituted and institutionalised, with clear mandates.

The Inyaka Dam BFI will be responsible for all external projects within the surrounding community. Individual projects or initiatives within these communities can approach the BFI for support, based on specific criteria and within clear budgets. The BFI has the right to source additional donor or grant funding for these projects, and therefore need not rely solely on the percentage accruing to it from PPPs. Any projects, not only those related to water use, can be supported if the BFI believes that it could contribute to attaining the objectives set for the Inyaka Dam, as well as those of the NWA.

#### *Neighbour Relations*

Formal relationships should be established with stakeholders and neighbours through existing fora, working groups, friends of groups and any other formal institutions that may exist.

#### *Communication*

Through regular two-way communication with recognised community institutions and structures, it will be possible to monitor community perceptions and attitudes, as well as expose entrepreneurs in these communities to opportunities and initiatives that are available. Ideally the management authority should provide documentation through media such as a newsletter,

webpage and e-mails, thereby establishing a formal means of communication with all stakeholder groups. Local radio should also be employed as an appropriate communication vehicle.

#### *Awareness Groups*

The management authority should develop an awareness programme based on its vision, objectives and policies. Wherever possible this awareness programme should be implemented to ensure that all stakeholder groups and interested parties know what the Inyaka Dam is all about, and why certain activities or development nodes have been established or are restricted. This awareness programme should be dynamic and adaptable for variation in audiences, and should clearly highlight the benefits of sustainable utilisation.

#### *Database*

To maximise community benefits it is essential that a database be established and regularly updated consisting of local service providers. Not only can the management authority draw on this pool of expertise, but all contractors and operators should be encouraged to do the same. Where possible, only registered service providers should be requested to provide services at Inyaka Dam. The needs and requirements of the management authority should be provided to service providers so that a synergistic and effective partnership can be established.

### **2.6.6 Action Projects**

**Action Project:**

Facilitate the establishment of a BFI, specifically recognising existing structures, institutions and organisations.

**Action Project:**

Compile an awareness strategy and action plan.

**Action Project:**

Compile a communication strategy and action plan.

**Action Project:**

Compile a database of local service providers in conjunction with Local Government.

**Action Project:**

Jointly plan the vegetable garden project at the Inyaka Water Treatment Works and facilitate water supply in association with relevant Government departments at all spheres; NGOs and local stakeholders.

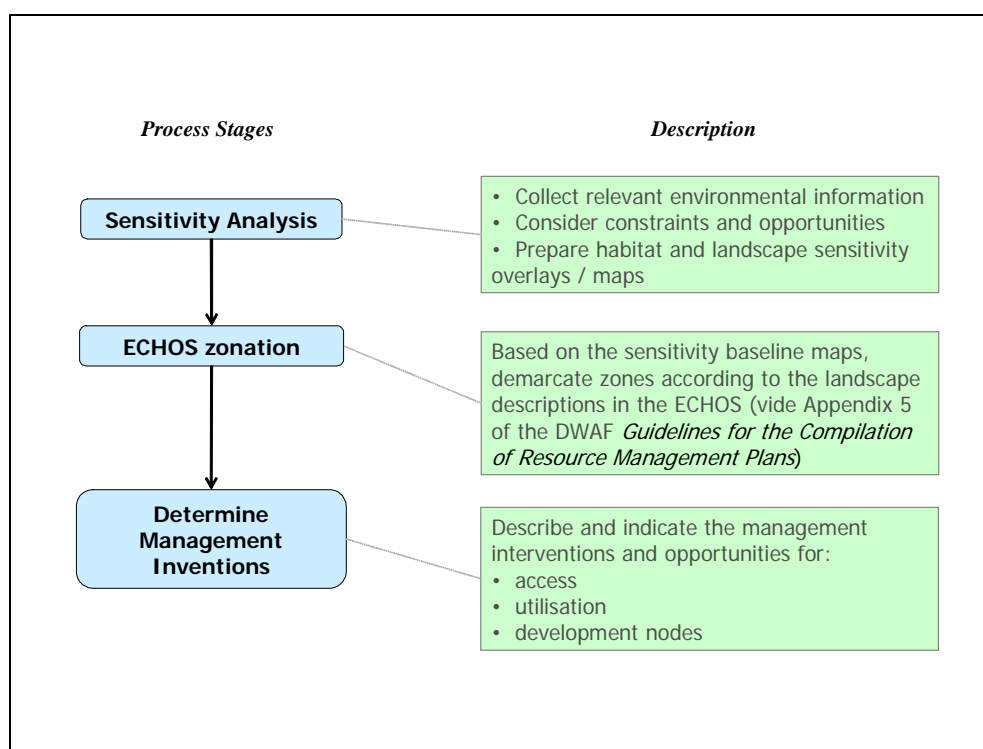
### **2.6.7 Monitoring**

By monitoring aspects such as the establishment and updating of the database; use of local suppliers and service providers; participation of the management authority in fora, meetings and related structures, and performance of the BFI will it be possible to ensure benefits based on specific needs and measurable criteria.

## 2.7 THE ZONES

### 2.7.1 Process

The zoning of the Inyaka Dam has been undertaken to ensure organised development, equitable visitor access, sound resource management and optimal community beneficiation. This approach also minimises the potential conflict that could arise between the various stakeholder groups. The zoning system is based on the Ecotourism Characteristics Opportunity Spectrum (ECHOS) as set out in the DWAF *Guidelines for the Compilation of Resource Management Plans*. Its application is illustrated in the zoning plan for Inyaka Dam, refer Figure 18, Appendix F.



**Figure 5: Zoning Process**

### 2.7.2 Zonation

To effectively zone a resource an assessment of all relevant information must be undertaken to ascertain both habitat and landscape sensitivity. Following this sensitivity analysis an assessment of the environmental characteristic must be undertaken. This assessment entails the determination of current environmental character status, opportunity for ecotourism development based on a spectrum of the environmental limitations and stakeholder objectives.

Both the environmental sensitivity analysis and ECHOS Zonation guide management interventions required to achieve resource management, social and economic objectives. Aspects such as access, utilisation and development nodes can be selected and planned for.

The plan (refer Figure 18, Appendix F) provides for three main zones, namely:

- Rural Developed Zone;
- Rural Natural Zone; and,
- Suburban Zone.

Within these zones there exist a number of development and services opportunities including the opportunity for local private investors to form consortia to realise the benefits of the larger capital intensive projects.

Important to note is that land based and water surface activities are not specifically defined neither is carrying capacity. The management authority for Inyaka Dam will develop operational rules for these in co-operation with the preferred operators and contractors to optimise business objectives, commensurate with the objectives set for resource management, utilisation and beneficiation and to address the safety factors depicted in Figure 17 (refer Appendix C).

### **2.7.3 Rural Developed Zone Management Interventions**

Prevalence of agricultural practices such as lands, fields and forestry areas characterises this area. Infrastructure is rural in nature, external audio-visual impacts are limited, and there is a moderate sense of isolation.

This zone is central and is located at the confluence of the Ngwaritsane and the Maritsane tributaries that together feed the Inyaka Dam. This area is defined by the dam wall to the east, the road bridge to the west and the construction quarry to the north. It is served by an existing slipway which is accessed from the tar road.

#### **2.7.3.1 Access**

Access to Inyaka Dam will be controlled to ensure equity both from a physical as well as economic perspective.

This zone is set aside for access to the general public access from specific access points. The nature and size of the groups which access this zone will be subject to the operational rules to be compiled for the dam, based on a carrying capacity assessment, industry norms and standards, and RMP objectives, but will be less restrictive in terms of access and conditions.

No public access is allowed within 100m of the dam wall and this area will be managed as a secure area.

#### **2.7.3.2 Utilisation**

The largest contiguous area of open water is located here and would be suitable for general water-based activities such as boating and limited motorised water sports.

#### **2.7.3.3 Development Nodes**

Facilities and activities for using the water and banks for recreational purposes may be provided through PPPs and access agreements and permits. The old quarry from which material was excavated to construct the dam wall provides a relatively large area of permanent deep water which is suitable for an aquaculture PPP opportunity.

A link to the Bushbuckridge Nature Reserve could be established to enhance the character of this area, as well as access and co-management agreements on the peninsula area of the dam. The area from the dam wall including the Marite River to the north of the Coffee Farm towards the Inyaka Dam Water Treatment Works has been earmarked as a possible green corridor and link with the Bushbuckridge Nature Reserve.

All inlets will be managed as conservation areas both on land and water since these host sensitive fish and bird breeding and nursery sites.

## **2.7.4 Rural Natural Zone Management Interventions**

The western area extends from the road bridge in the east along the eastern boundary of Beestekraalspruit and follows the Ngwaritsane tributary upstream to the west across the Beestekraalspruit and Doornlaagte farms. It consists of very narrow waterways and a large number of inlets from perennial and non-perennial tributaries. This area is characterised by Eucalyptus plantations that extend into the water down to the original watercourse. Large parts would only be navigable when the dam is full.

The Rural Natural Zone has a largely natural setting but is not formally protected in terms of the Protected Areas Act (Act No. 57 of 2003), the infrastructure is rural in nature and all external audio-visual impacts are limited, and the sense of isolation is moderate.

### **2.7.4.1 Access**

This zone is set aside for use through tourism PPPs only. While the zone is limited to operators they are not restricted from accessing the public use zone. The management authority retains access and management rights in this zone.

### **2.7.4.2 Utilisation**

The Rural Natural Zone will be utilised as a fishing concession area. All activities will be managed by the concessionaire as part of a comprehensive PPP. Utilisation will include any activities which are based on the objectives of the RMP, but which are of a low intensity nature and have a low-impact on the surrounding area.

### **2.7.4.3 Development Nodes**

The possibility exist to develop a world class fishing lodge with satellite camps along the shoreline, either land or water based. All inlets will be managed as conservation areas both on land and water since these host sensitive fish and bird breeding and nursery sites.

## **2.7.5 Suburban Zone Management Interventions**

The northern area of the dam will be utilised as a Suburban Zone (refer ECHOS, 2006). This zone has a low to medium density residential development and audio-visual impacts are prevalent. It consists of narrower water ways along the Maritsane tributary. The northern shore abuts the Bushbuckridge settlements of Maviljan.

### **2.7.5.1 Access**

Access to the suburban zone will be limited. Direct access to the Inyaka Dam is set aside for the Bushbuckridge community. While this zone is limited to the community and visitors to the proposed community resort, they are not restricted to this zone and may enter the Rural Developed Zone over water. The management authority retains access and management rights in this zone.

### **2.7.5.2 Utilisation**

Inyaka Dam, due to its proximity to the Bushbuckridge community, can and should, play a major role in regional recreation. To achieve this, the utilisation of the northern portion of the dam will be managed as a recreational resort area providing controlled access to both land and water-based recreational facilities and activities. Water-based activities such as cruise boats, waterskiing, parasailing, sailing and canoeing can be offered.



### **2.7.5.3 *Development Nodes***

Facilities such as a function hall, bandstand, restaurant and bar, chalets and picnic facilities, and swimming pools on the land adjacent to the dam are proposed.

All inlets will be managed as conservation areas both on land and water since these host sensitive fish and bird breeding and nursery sites.

### **2.7.6 Water Surface Zones**

With reference to Figure 18, Appendix F, the water surface has been zoned to complement the waterfront zones. Details will be included once the PPPs and co-management agreements have been concluded.

## SECTION 3. THE PEOPLE

### 3.1 INSTITUTIONAL PROPOSAL

To successfully manage the sustainable utilisation of the water resource and State land within the compensation boundary of the Inyaka Dam it is imperative that an institutional arrangement be established which can effectively strive to attain the objectives set out in the RMP.

The stakeholders of the Inyaka Dam RMP process' preferred choice of institution to fulfil the role of management authority was a Water User Association (WUA). A WUA is to be established for the Water Management Area (WMA) and Inyaka Dam should form a sub-area of which a Sub-committee of this WUA would be the management authority for the development and control of and supervision over the dam surface and the surrounding State land within the dam basin (refer Figure 19 and Figure 20, Appendix G).

The NWA empowers water management institutions including WUAs for local water resource management. This institution must be thus established in terms of Section 92 of the NWA and in accordance with DWAF's requirements.

Since the establishment of a WUA for the WMA may take a while, it is proposed that the Sub-committee be established in advance to be later integrated with the broader WUA.

#### 3.1.1 Functions

The Sub-committee's responsibility of control and supervision will include overseeing and facilitating resource management; private sector involvement through service contracts and PPP agreements compliant with the NWA and relevant Treasury regulations, and community development and benefit flow.

It will thus be obligated to and responsible for implementing the RMP including, in terms of Schedule 4 and 5 of the NWA, preparing and submitting business plans, annually reviewed and updated, addressing *inter alia*:

- controlling all access to the dam, both its surface and surrounding State land;
- ensuring that access is equitable;
- managing the utilisation of the water surface through the demarcation of zones, appropriate signage and documentation, and appointment of peace officers;
- ensuring that the utilisation is environmentally, socially and economically acceptable and viable;
- managing the utilisation of the State land adjacent to the dam through agreements and service contracts;
- ensuring that the agreements and contracts are compliant with the objectives of the Inyaka Dam RMP, and any other relevant legislation;
- monitoring the performance of the management agreements; service contracts, and access agreements against set objectives;
- evaluating proposed PPP opportunities against ecological, social, economic and operational guidelines;
- monitoring compliance with the conditions of the allocated PPPs;
- the establishment of an Inyaka Dam BFI, with representation from the surrounding communities, Government authorities and select individuals;
- monitoring community benefit flow on a regular basis;
- measure the ripple effect of the Inyaka Dam on the surrounding environment, and
- report on the successes and failures of the Inyaka Dam as catalyst for community beneficiation.

### 3.1.2 Action Projects

**Action Project:**

Initiate the formation of a Sub-committee and participate in the WUA establishment process.

**Action Project:**

Train and facilitate the appointment of peace officers to assist with policing the requirements of the RMP and relevant regulations.

## REFERENCES

Ackerman, P.B.I., DEPARTMENT OF WATER AFFAIRS AND FORESTRY, November 2000, Zoning for Inyaka Dam for Recreation, Development and Nature Conservation, Pretoria.

Ackerman, P.B.I., pers comm., Inyaka Dam RMP Project Manager, DWAF

Bewsher, P.K., pers comm., Ecotourism Afrika Trust

BUSHBUCKRIDGE LOCAL MUNICIPALITY, IDP, reviewed document 2005/6

Deacon, A.R., 1996. Sabie Sand IFR Workshop Starter Document. Department of Water Affairs and Forestry, Pretoria, South Africa.

DEPARTMENT OF WATER AFFAIRS AND FORESTRY, 2006, Draft Guidelines for the Compilation of Resource Management Plans. Sub-Directorate Environment and Recreation, Pretoria.

DEPARTMENT OF WATER AFFAIRS AND FORESTRY, 2000. Sabie Government Water Scheme: Inyaka Dam Project. Information Brochure, November 2000.

Davies, B. & Day, J., 1998. Vanishing Waters. U.C.T Press, University of Cape Town, South Africa, 487pp

Fick, L., pers comm., Senior Landscape Architect, DWAF

GOVERNMENT OF SOUTH AFRICA, DEPARTMENT OF ENVIRONMENTAL AFFAIRS AND TOURISM, May 1996, White Paper on the Development and Promotion of Tourism in South Africa.

Hannan, J.C. 1984. Mine Rehabilitation: A Handbook for the Coal Mining Industry. Australia: New South Wales Coal Association.

IUCN, The Sabie River: Protecting Biodiversity in an internationally important conservation area. Available from: <http://www.iucn.org/themes/wani/flow/cases/Sabie.pdf> [Accessed 10 March 2006]

Jewitt, G.P.W., Weeks, D., Heritage, G., Görgens, AHM and O'Keeffe, J., 1997. The Ecological Significance of Floods in the Sabie River, South Africa: A Simulation Exercise. In: Proceedings of the 3rd International Conference on River Flood Hydraulics, Nov. 5-7, 1997. Univ. Of Stellenbosch, Stellenbosch, South Africa.

Low, A.B. & Rebelo, A.G. 1996. Vegetation of South Africa, Lesotho and Swaziland. Department of Environmental Affairs and Tourism, Pretoria.

Mackenzie, J.A., Jewitt, G.P.W., Heritage, G.L., & Rogers, K., 1996. The Riparian Vegetation Model.

Marsh, W.M., 1991. Landscape planning: Environmental Application Second Edition. Canada. John Wiley & Sons, Inc.

Mokebe, M, KRP 5344; DEPARTMENT OF LAND AFFAIRS: Commission on Restitution of Land Rights, Regional Land Claims Commission; Limpopo.

STRATEGIC ENVIRONMENTAL FOCUS, Proposal for Work Pertaining to the Compilation of a Resource Management Plan (RMP) for Development, Recreation, Nature Conservation and Institutionalisation for Inyaka Dam (Project number 2005 – 220), September 2005.

Sudlow, B.E., 2004. Birds as Bio-Indicators of the Ecological Integrity of the Sabie River, Mpumalanga. Dissertation submitted in fulfilment of the requirements for the Degree Master of Science in Zoology in the Faculty of Natural Science at the Rand Afrikaans University, South Africa.

<http://www.beeh.unp.ac.za/jewitt/ims/chap6.pdf/execsumm.pdf>

<http://www.dwaf.gov.za/documents/policies/NWRS/Sep2004/pdf/AppendixG>

<http://www.info.gov.za/gazette/acts/2003/a57-03>

[http://www.limpopo.gov.za/about\\_limpopo/districts.html](http://www.limpopo.gov.za/about_limpopo/districts.html)

[http://www.polity.org.za/govdocs/legislation/1998/act\\_98-107.html](http://www.polity.org.za/govdocs/legislation/1998/act_98-107.html) – 139k

## APPENDIX A: RMP PROCESS STAKEHOLDER LIST

NAME	DESIGNATION	ORGANISATION	TEL	FAX	MOBILE	EMAIL
Mr Alsin Matukane		Department of Water Affairs & Forestry (DWAF)	015 290 1200	015 295 3217	082 807 5643	<a href="mailto:matukanea@dwaf.gov.za">matukanea@dwaf.gov.za</a>
Mr Vusi Kubheka		DWAF	013 759 7311	013 759 7525	083 449 2532	<a href="mailto:kubhekav@dwaf.gov.za">kubhekav@dwaf.gov.za</a>
Mr Comrie Werner	Chief Engineer: Water Use Management	DWAF	013 759 7313/09	013 759 7529	082 808 0435	<a href="mailto:comriew@dwaf.gov.za">comriew@dwaf.gov.za</a>
Mr Kobus Pretorius		DWAF				<a href="mailto:Pretoriusk@dwaf.gov.za">Pretoriusk@dwaf.gov.za</a>
Mr Ernest Kubaie		DWAF				<a href="mailto:KubaieE@dwaf.gov.za">KubaieE@dwaf.gov.za</a>
Mr Brancley Shilote	Dep. Director: Post Settlements	Department of Land Affairs	015 293 4300	015 291 4780	082 577 5612	<a href="mailto:bshilote@dla.gov.za">bshilote@dla.gov.za</a>
Mr David Maraba	Project Manager	Department of Land Affairs	015 293 4315	015 291 4780	082 760 7159	
Mr Mashila Moloise		Department of Land Affairs	015 293 4300	015 291 4780	082 457 7120	<a href="mailto:mjmoloise@dla.gov.za">mjmoloise@dla.gov.za</a>
Mr Solomon Baloyi	Senior Manager	Department of Agriculture	013 773 1504	013 773 1632	082 862 4064	<a href="mailto:baloyims@agrigo.nrprov.gov.za">baloyims@agrigo.nrprov.gov.za</a>
Mr Manias Mboweni		Department of Agriculture	013 773 1504	013 773 0336	082 802 7161	<a href="mailto:mbowenimb@agrigo.nrprov.gov.za">mbowenimb@agrigo.nrprov.gov.za</a>
Mr Thomas Dzivhani	Regional Manager	Department of Public Works	015 297 0187	015 293 8022	082 377 2157	
Mr ZGG Mkhabela	Chief of Staff	Office of the MEC	015 295 3091	015 295 1015		<a href="mailto:mthombothik@transport.norprov.gov.za">mthombothik@transport.norprov.gov.za</a>
Mr Roy Mandlazi	Dep. Director: Tourism	Department of Economic Development, Environment and Tourism (DEDET)	013 799 1475	013 799 1476	082 809 8937	<a href="mailto:MandlaziRR@ledet.gov.za">MandlaziRR@ledet.gov.za</a>
Ms Elizabeth Manzini		DEDET	013 799 1477	013 799 1476	082 736 0047	
Mr Bheki Mhlanga		DEDET	013 799 1477	013 799 1476	082 854 7980	<a href="mailto:mhlangawtb@ledet.gov.za">mhlangawtb@ledet.gov.za</a>
Ms Nolia Mogane		DEDET	013 799 1477	013 799 1476	082 627 7126	
Mr Charles Shongwe	Dep. Manager: SMME	DEDET	013 799 1477	013 799 1476	082 880 0532	
Ms Ida Ngobeni	Dep. Manager: Community Env. Dev	DEDET	013 799 1475	013 799 1476	082 882 4507/ 072 674 6536	
Mr Rodwell Mnisi	Municipal Manager	Bohlabelo District Municipality (BDM)	013 773 0337	013 773 0970	082 889 1028	
Mr Jack Maifala	Head PIMS	BDM		013 773 1929	082 889 1040	
Mr Heckson Seoke	IDP Manager	BDM	013 773 0337	013 773 0801	082 884 2921	
Mr Dennis Chavane	IDP Manager	Bushbuckridge Local Municipality	013 708 6018	013 708 6990	082 909 7682	
Mr Charles Mnisi	Local Economic Development Manager	Bushbuckridge Local Municipality	013 708 6018	013 708 6990	072 190 1018	<a href="mailto:pmathebula@bmun.co.za">pmathebula@bmun.co.za</a>
Mr Paul Manaka	Technical Manager	Bushbuckridge Local Municipality	013 708 6019	013 708 6990	082 744 4226	<a href="mailto:pmathebula@bmun.co.za">pmathebula@bmun.co.za</a>
Ms Liz De Beers	Municipal Manager	Maruleng Local Municipality	015 793 2409	015 793 2341	082 389 3088	-

Resource Management Plan: Inyaka Dam

NAME	DESIGNATION	ORGANISATION	TEL	FAX	MOBILE	EMAIL
Ms Nkakareng Rakgoale		Maruleng Local Municipality	015 793 2409	015 793 2341	072 954 6444	
Mr Sam Modiba	IDP Manager	Maruleng Local Municipality	015 793 2409	015 793 2341	082 386 5987	
Mr Lazarus Tshwale	Co-ordinator	The Office of the Traditional Affairs	013 773 1581	013 773 1580	072 711 5110	
Mr Mike Mogane	Co-ordinator	Kgarudi Tribal Authority	013 741 1016	013 741 2940	082 400 4416	
Chief N S Mogane		Kgarudi Tribal Authority			082 408 6018	
Mr Henry Maboa	Co-ordinator	Kgarudi Tribal Authority	013 737 7292		076 473 9780	
Mr Patrick Mogane	Co-ordinator	Kgarudi Tribal Authority			072 489 0722	
Chief M O Mashego		Moreipuso Tribal Authority	013 777 7108		082 064 0409	
Mr S E Mashego		Moreipuso Tribal Authority			073 737 6314	
Chief D G Mashego		Thabakgolo Tribal Authority			083 513 0513	
Chief Eli Matsana		Mathibela Tribal Authority			083 745 0614	
Mr O A Mokoena		Mathibela Tribal Authority			072 965 6881	
Mr Elvis Malele		Mathibela Tribal Authority				
Councillor Thapelo Shabangu	Councillor	Head: LED and Tourism	013 708 6018	013 708 6990	082 303 8748	
Mr Richard Shinenge	Liaison Officer	Ward 10	013 799 1641	013 799 1975	083 516 0100	
Mr Willy Khoza		Ward 10	013 799 1641		083 596 6535	
Ms Sneki Mashego	PR	Ward 10				
Mr Alfred Mnisi	Dep. Chairperson	Mathibela Tribal Authority :Injaka-Waterval Community			072 965 6881	
Mr Enos Mkhonto	Chairperson	Mathibela Tribal Authority :Injaka-Waterval Community				
Chief Eli Matsana		Mathibale Tribal Authority: Injaka-Waterval Community			083 745 0614	
Mr Calias Mnisi	Representative	Mathibale Tribal Authority: Injaka-Waterval Community				
Mr Samuel Shubane	Chairperson: Steering Committee	Inyaka Water Treatment Works			083 771 5925	
Mr Lino Mashile	Maintenance Manager	Bushbuckridge Water Board	013 799 1130/1131	013 799 1129	082 909 9276	<a href="mailto:MashileLM@bbrwater.co.za">MashileLM@bbrwater.co.za</a>
Mr Solomon Mathebula	Acting: CEO	Bushbuckridge Water Board	013 799 1130/1131	013 799 1129	082 909 9270	<a href="mailto:MathebulaRS@bbrwater.co.za">MathebulaRS@bbrwater.co.za</a>
Dr Simon Evered		Wildlife and Environment Society of South Africa	013 750 0808	0866 753 775	083 379 4419	<a href="mailto:slowveld@soft.co.za">slowveld@soft.co.za</a>

Resource Management Plan: Inyaka Dam

NAME	DESIGNATION	ORGANISATION	TEL	FAX	MOBILE	EMAIL
Mr Gerry Schulz		Highlands Meander Committee		013 253 0408	073 157 3031	<a href="mailto:belfast@lando.co.za">belfast@lando.co.za</a>
Mr Morgan Lewele		Kruger- Canyon Biosphere Reserve	015 793 0360	015 793 0360	084 661 7261	<a href="mailto:mtuys@worldonline.co.za">mtuys@worldonline.co.za</a>
Ms Carin Fick		WESSA Lowveld - Hazyview Kieprsol Conservancy			083 676 2084	<a href="mailto:mail@ithura.co.za">mail@ithura.co.za</a>
Mr Malcolm Suttill		Wildlife and Environment Society of SA - Chairman	013 656 5932		083 225 1878	<a href="mailto:malcolms@lantic.net">malcolms@lantic.net</a>
Mr PG Tshivhalavhala		South African Heritage Resource Agency Mpumalanga	013 713 3051	013 712 6503		<a href="mailto:sahramp3@mweb.co.za">sahramp3@mweb.co.za</a>
Mr Charles Ngobeni		Mpumalanga Parks Board - Head Office	013 759 5300	013 755 3807	082 448 3113	<a href="mailto:charles.ngobeni@pboard1.agric.za">charles.ngobeni@pboard1.agric.za</a>
Mr Richard Simelani		Mpumalanga Parks Board - Head Office	013 235 2395	013 235 1674	083 727 3566	-
Mr Frans Krige		Mpumalanga Parks Board	013 254 0279		084 356 2777	<a href="mailto:franskrige@telkomsa.net">franskrige@telkomsa.net</a>
Ms Annamie van Jaarsveld		South African National Parks (Sanparks)	012 426 5027		082 888 1455	
Ms Cynthia Smith		World Wildlife Fund	021 888 2831			<a href="mailto:csmith@wwf.org.za">csmith@wwf.org.za</a>
Ms Yolán Friedman		Endangered Wildlife Trust	011 486 1102	011 486 1506	082 990 3534	<a href="mailto:yolanf@ewt.org.za">yolanf@ewt.org.za</a>
Mr Bob Dehning		National Conservancy Association	011 316 1426	011 316 1095	082 651 1501	<a href="mailto:dehning@mweb.co.za">dehning@mweb.co.za</a>
Mr Henry Maboá	Chairperson: Mapulana Community Trust	Sabie River Water Association		013 737 7143	076 473 9780/ 072 539 7738	
Mr Ben Mandla Sibuyi	CEO	New Forex Bentar Leisure Resort			082 358 8101	<a href="mailto:bentar@webmail.co.za">bentar@webmail.co.za</a>
Mr Walter Buna	Programme Manager	Independent Development Trust (IDT)	013 752 4955	013 755 4396	083 604 3029	<a href="mailto:walterb@idt.org.za">walterb@idt.org.za</a>
Mr Petro Malele		Independent Development Trust (IDT)				<a href="mailto:petrom@idt.org.za">petrom@idt.org.za</a>
Mr Tony Scheckle	Group Environmental Manager	Mondi	013 451 2246		082 809 3642	<a href="mailto:tony.scheckle@mondibp.com">tony.scheckle@mondibp.com</a>
Ms Ciska Terblanche	Richards Bay	Mondi	035 902 2322		082 898 5750	<a href="mailto:ciska.terblanche@mondibp.com">ciska.terblanche@mondibp.com</a>
Mr Rafiq Gafoor		Mondi	031 451 2319		082 804 9203	<a href="mailto:rafiq.gafoor@mondibp.com">rafiq.gafoor@mondibp.com</a>
Mr Sakkie van der Westhuizen		SAPPI	011 407 8367	011 339 6869		<a href="mailto:sakkie.vdwesthuizen@sappi.com">sakkie.vdwesthuizen@sappi.com</a>
Mr Hennie Du Plooy		SAB	013 753 2631	013 753 2638	082 924 1482	<a href="mailto:hennie.duplooy@za.sabmiller.com">hennie.duplooy@za.sabmiller.com</a>
Mr Moses Moloi		Moloi Trading	012 325 1405	012 325 1405	082 419 0857	<a href="mailto:moloim@ananzi.co.za">moloim@ananzi.co.za</a>
Mr Jeffrey Lukheleni	Project Manager	Jesifa Business Enterprise	013 741 4908	013 741 4908	072 714 7733	
Dr Sharon Pollard	Researc Manager	Association for Water and Rural Development - AWARD	015 793 7526	015 793 7509	082 944 4775	<a href="mailto:sharon@award.org.za">sharon@award.org.za</a>



Resource Management Plan: Inyaka Dam

NAME	DESIGNATION	ORGANISATION	TEL	FAX	MOBILE	EMAIL
Mr Derick Du Toit	Public Participation/ Project Management	Association for Water and Rural Development - AWARD	015 793 7526	015 793 7509	082 944 4774	<a href="mailto:derick@award.org.za">derick@award.org.za</a>
Mr Wayne Twine	Director: SUNRAE	SUNRAE: Sustaining Natural Resources in African Ecosystems	015 793 7528	015 793 7509	082 826 3161	<a href="mailto:rcrd@global.co.za">rcrd@global.co.za</a>
Mr Tommy Noonan		Pink Tibouchina Lodge	013 767 1157	013 767 1157		<a href="mailto:info@pinktibouchina.com">info@pinktibouchina.com</a>
Mr Leon Theron		South African Crane Working Group	013 254 0191	013 254 0191		
Mr Jan de Beer		Waterval Boven Trout Association: Mpumalanga SA	013 257 0252	013 257 0252	083 227 3756	<a href="mailto:erfs@netactive.co.za">erfs@netactive.co.za</a>
Mr Ged Buffee		African Organic Farming Foundation	011 215 2556	011 268 6870	082 858 8479	<a href="mailto:ged@africanorganics.org">ged@africanorganics.org</a>
Mr Mshoza Malatjie	Communication Officer	Emgwenya Tourism Association	013 253 1121		073 253 5965	<a href="mailto:malatjiel@emakhazenilm.co.za">malatjiel@emakhazenilm.co.za</a>
Mr Sipho Maseko		Emgwenya Tourism Association	013 253 0057		083 688 0585	<a href="mailto:malatjiel@emakhazenilm.co.za">malatjiel@emakhazenilm.co.za</a>
Ms Eva Bohm	General Manager	Hazyview Tourism Association	013 737 7414			<a href="mailto:info@goldenmonkey.co.za">info@goldenmonkey.co.za</a>
Mr Makhosonke Nkosi		Khosi Tours	013 752 4592		072 347 6349	<a href="mailto:khosi@cybertrade.co.za">khosi@cybertrade.co.za</a>
Ms Tsakane Maloke		Wisani Travel Agent & Safari	013 708 6502	013 708 6502	072 215 4027	Contact Phillipine: 072 241 1680
Mr Jan Hosana	General Manager	JN Travel	013 773 1893		083 438 7759	<a href="mailto:jan@jntavel.co.za">jan@jntavel.co.za</a>
Ms Adette Louwrens		Infoworx Waterval Boven	013 257 0444			<a href="mailto:infoworx@worldonline.co.za">infoworx@worldonline.co.za</a>
Ms Petra Devereux	General Manager	Lowveld Tourism	013 755 1988	013 753 2986		<a href="mailto:petra@lcbt.co.za">petra@lcbt.co.za</a>
Mr Mimi Ntuli	Assistant Director	Provincial Local Government	013 766 6614	013 766 9616	083 259 9576	<a href="mailto:mntuli@nel.mpu.gov.za">mntuli@nel.mpu.gov.za</a>
Mr Elphas Tsebogo	Chairperson	Youth Development	015 793 2469	015 793 2469	084 304 4665	
Mr Selby Ndlovu		Department of Labour	013 753 2844	013 752 3270	082 907 7268	<a href="mailto:cicilndlovu@labour.gov.za">cicilndlovu@labour.gov.za</a>
Mr A R McQueen		Angus Engineering	013 750 0700	013 750 0722	082 753 6019	<a href="mailto:angus@lantic.net">angus@lantic.net</a>
Mr Ernest Toy Monareng		Limpopo Business Support Agency	013 799 0095	011 799 1962	082 888 9362	<a href="mailto:ernestm@libsa.co.za">ernestm@libsa.co.za</a>
Mr Owen Inama		MOAS Investments Pty Ltd	013 795 5019	013 795 5574	083 299 4677	<a href="mailto:pududu@cybertrade.co.za">pududu@cybertrade.co.za</a>
Ms Constance Monareng		Mogale Trading CC	013 797 0143	013 797 2014	082 460 0247	
Ms Lizzy Mthethwa		Mogale Trading CC	013 797 0143	013 797 2014		
Mr Mohamed Vally		Gardees Cash Store	013 799 0191	013 799 0283	084 521 1542	<a href="mailto:gardees@lantic.net">gardees@lantic.net</a>
Mr Sidwell Mokoena		Builder/ Construction	013 799 0114	013 799 0114	082 505 9310	
Mr Velly Mokgotho		SANCO		013 799 0380	082 560 7469	
Ms Soz Henning		Pam Golding Propoerties	013 737 7506	013 737 7506	084 511 1811	<a href="mailto:soz.henning@pamgolding.co.za">soz.henning@pamgolding.co.za</a>
Mr Lucky Malamule		XYLO Trading 207 CC	013 773 1244	013 773 1244	072 275 7087	<a href="mailto:thembimbe@webmail.co.za">thembimbe@webmail.co.za</a>

Resource Management Plan: Inyaka Dam

NAME	DESIGNATION	ORGANISATION	TEL	FAX	MOBILE	EMAIL
Mr Neil Roomer		Sabie NRI	013 764 2044	013 764 2044	082 093 9997	
Mr Henry Chawane		Community Member			072 325 4717	
Mr Bennett Alali	Managing Director	Desert Eagle Projects	013 773 1292	013 773 0071	072 189 0409	<a href="mailto:bernardalali@ananzi.co.za">bernardalali@ananzi.co.za</a>
Mr Thulani Sikonela		Ndyangu Investments	012 991 0159	012 991 0159	082 498 6077	<a href="mailto:tdsikonela@webmail.co.za">tdsikonela@webmail.co.za/</a> <a href="mailto:thulani@nld.org.za">thulani@nld.org.za</a>
Mr Andrew Thulare	Practicing Attorney	Personal Capacity	011 530 5864	011 530 6864	073 281 1065	<a href="mailto:andrewt@wwb.co.za">andrewt@wwb.co.za</a>
Mr Patrick Khumalo		Ndyangu Investments		013 766 4614	082 378 7252	<a href="mailto:dvundvubala@yahoo.com">dvundvubala@yahoo.com</a>
Mr Tommy Sikonela		Ndyangu Investments			082 338 9931	
Mr John Mdluli		GTK & Golf Club	013 7955191	013 7955191	0723378698	
Mr Tshepiso Makhubedu		Ilanda Consulting Engineers	013 755 2071	013 755 2061	073 308 0343	<a href="mailto:ilanda@mweb.co.za">ilanda@mweb.co.za</a>
Mr Peterson Mabunda		Kwetsima Investments CC	013 797 1473	013 797 2014	082 731 5598	<a href="mailto:kwetsima@ananzi.co.za">kwetsima@ananzi.co.za</a>
Mr Bongani Phakati		Interested and Affected Party	011 805 2111	011 805 9912	082 762 0093	<a href="mailto:duncan@tth.co.za">duncan@tth.co.za</a>
Mr Reuben Sibuyi		Department of Labour	013 753 2844	013 752 3276	084 880 7692	<a href="mailto:reuben.sibuyi@labour.gov.za">reuben.sibuyi@labour.gov.za</a>
Mr Hannes De Lange		Sabie River Coordinating Committee (SRCC)	013 751 3539	013 751 3537	082 908 4801	<a href="mailto:w4wnsp@dwaf.gov.za">w4wnsp@dwaf.gov.za</a>
Mr Lesedi Dibakwane		Pulaneng Business Consultants	011 266 6051	011 266 6089	083 562 8381	<a href="mailto:dibaks@hotmail.com">dibaks@hotmail.com</a>
Mr Siphon Nxumalo		Cross The Bridge PD CC	013 797 1375	013 797 1375	082 975 8624	
Ms Phindile Mkhathshwa		Desert Eagle Projects		013 773 0071	078 324 6573	
Ms Eunice Mnisi		Jacob Printing and Business Enterprise	013 797 1358	013 797 1458	082 705 0915	
Mr Davis Milton Masinga		Tekaxuma Property Development	013 797 1327	013 797 1327	083 282 2054	
Mr Iris Gana		Interested and Affected Party	013 708 0114	013 708 0949		
Mr SJ Phasha		Department of Water Affairs & Forestry	015 307 8600	015 307 2823	082 802 7735	<a href="mailto:phashaj@dwaf.gov.za">phashaj@dwaf.gov.za</a>
CIlr Lucky Malatule		Ward Councillor	013 708 6140	013 708 6990	082 303 8479	<a href="mailto:luckymalatule@yahoo.com">luckymalatule@yahoo.com</a>

**APPENDIX B: RMP PROCESS SCHEDULE**

<b>NO.</b>	<b>WORKSHOP</b>	<b>MEETING DESCRIPTION</b>	<b>DATE</b>	<b>VENUE</b>
1.	Initiation meeting	Introduction of the development of a RMP for Inyaka Dam	12 & 13 December 2005	Bohlabelo District Municipality
2.	1 <sup>st</sup> Broad stakeholder meeting	Introduction to the RMP process; Technical Task Team member appointment	15 February 2006	Mapulaneng College, Bushbuckridge
3.	Technical Task Team Meeting 1 – The Place (half day meeting)	Inyaka Dam vision; mission and objectives; legal framework; encumbrances; background to the dam; challenges; role players	14 March 2006	Mapulaneng College, Bushbuckridge
4.	Technical Task Team Meeting 2 – The Plan (full day workshop)	Sustainability planning – Key Performance Area (KPA) 1: Resource Management; KPA 2: Private Sector Involvement;	4 April 2006	Department of Economic Development, Environment & Tourism (DEDET)
5.	Technical Task Team Meeting 3 – The People (half day workshop)	Institutional options and institutional structure for resource management authority.	9 May 2006	Department of Economic Development, Environment & Tourism (DEDET)
6.	2 <sup>nd</sup> Broad Stakeholder Meeting	Presentation of the Draft RMP document with progress to date; for broad stakeholder comments and inputs.	18 October 2006	Mapulaneng College, Bushbuckridge
7.	Open Day 1	Public review of the Draft RMP document; stakeholder comments and inputs.	23 November 2006	Bushbuckridge Water Treatment Works
8.	Technical ask Team Meeting 4	Review of comments received from public review.	24 November 2006	Mapulaneng College, Bushbuckridge
9.	3 <sup>rd</sup> Broad Stakeholder Meeting	Presentation of the Final RMP document incorporating stakeholder comments to date; for broad stakeholder review.	17 January 2007	Mapulaneng College, Bushbuckridge
10.	Technical ask Team Meeting 5	Review of Final RMP document based on comments received from public review.	17 January 2007	Mapulaneng College, Bushbuckridge
11.	Document submission to DWAF	Submission of final RMP document to DWAF for review and comments	March 2007	Inyaka Dam

## **APPENDIX C: BACKGROUND INFORMATION**

Figure 6: Sabie River Catchment

Figure 7: Inyaka Dam Drainage Region

Figure 8: Geology

Figure 9: Elevation Model

Figure 10: Slope Categories

Figure 11: Hydrology per Catchment

Figure 12: Photos of Inyaka Dam

Figure 13: Existing Infrastructure

Figure 14: Land Cover

Figure 15: Educational and & Health Facilities

Figure 16: Sections through Inyaka Dam wall structure

Figure 17: Safety Factors

## Drainage Region X



### DAMS IN REGION X

- |                        |                           |
|------------------------|---------------------------|
| 1 - Burgers Hall Dam   | 15 - Newu Dam             |
| 2 - Da Gama Dam        | 16 - Ngodwana Dam         |
| 3 - Edinburgh Dam      | 17 - Nootgedag Dam        |
| 4 - Friedenheim Dam    | 18 - Orinoco Dam          |
| 5 - Gudzani Dam        | 19 - Orpen Dam            |
| 6 - Jones Dam          | 20 - Primkop Dam          |
| 7 - Klipkoppie Dam     | 21 - Sand River Reservoir |
| 8 - Kweña Dam          | 22 - Shiyalongubo Dam     |
| 9 - Langmere Dam       | 23 - Stolznekspruitdam    |
| 10 - Manzimahle Dam    | 24 - Van Graan se Dam     |
| 11 - Mestel Dam        | 25 - Vygeboom Dam         |
| 12 - Mhlanganzwane Dam | 26 - Witklip Dam          |
| 13 - Mpondo Dam        | 27 - Xilolweni Dam        |
| 14 - Mtshawu Dam       | 28 - Driekoppies Dam      |

### REFERENCE

- International boundary
- Provincial boundary
- Drainage region boundary
- River
- ▲ Dam
- Town

Drainage Region X - Inyaka Dam

Figure 6: Sabie River Catchment

# Sabie River Government Water Scheme Inyaka Dam and Bushbuck Ridge Transfer Scheme

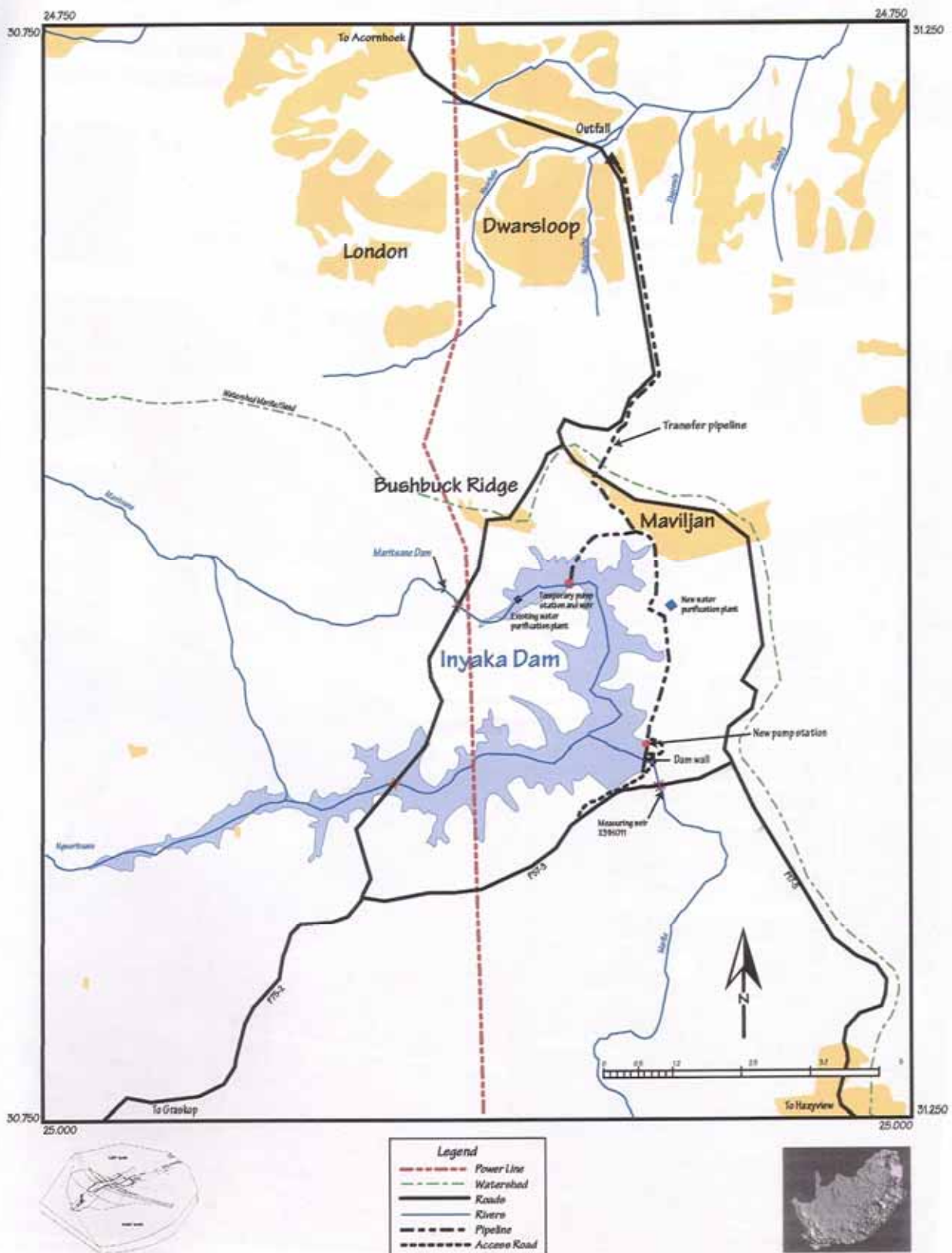


Figure 7: Inyaka Dam Drainage Region

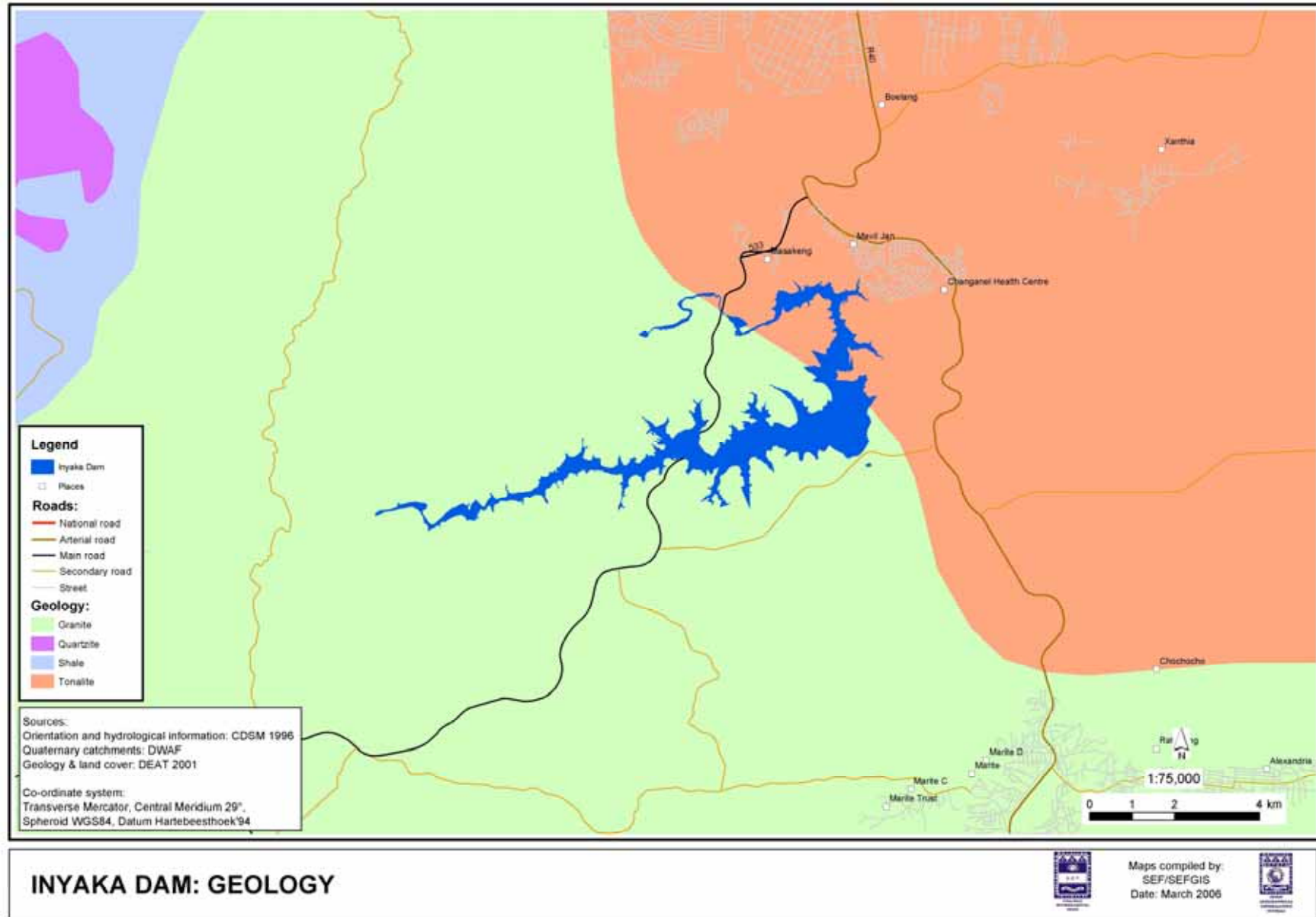


Figure 8: Geology

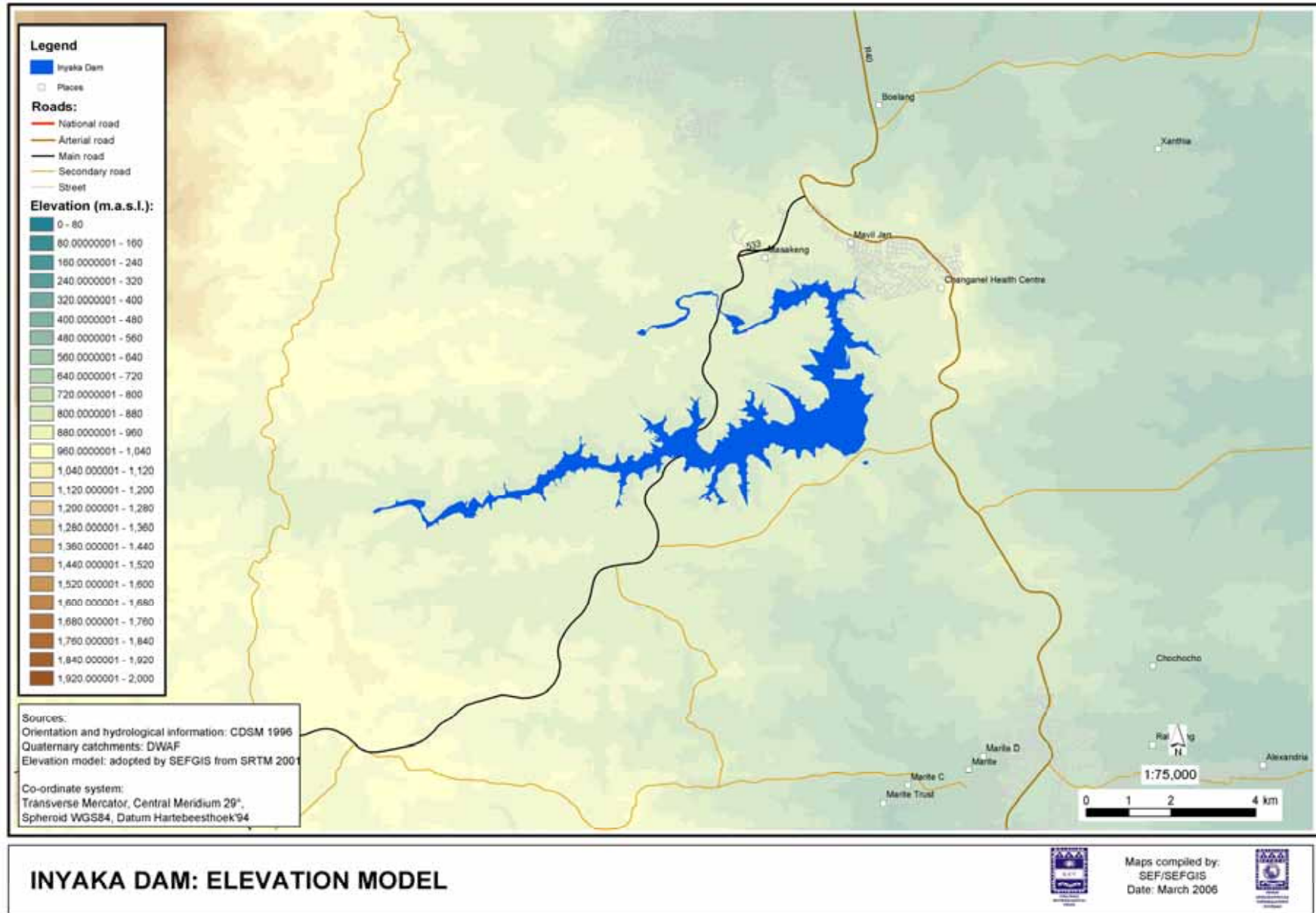


Figure 9: Elevation Model



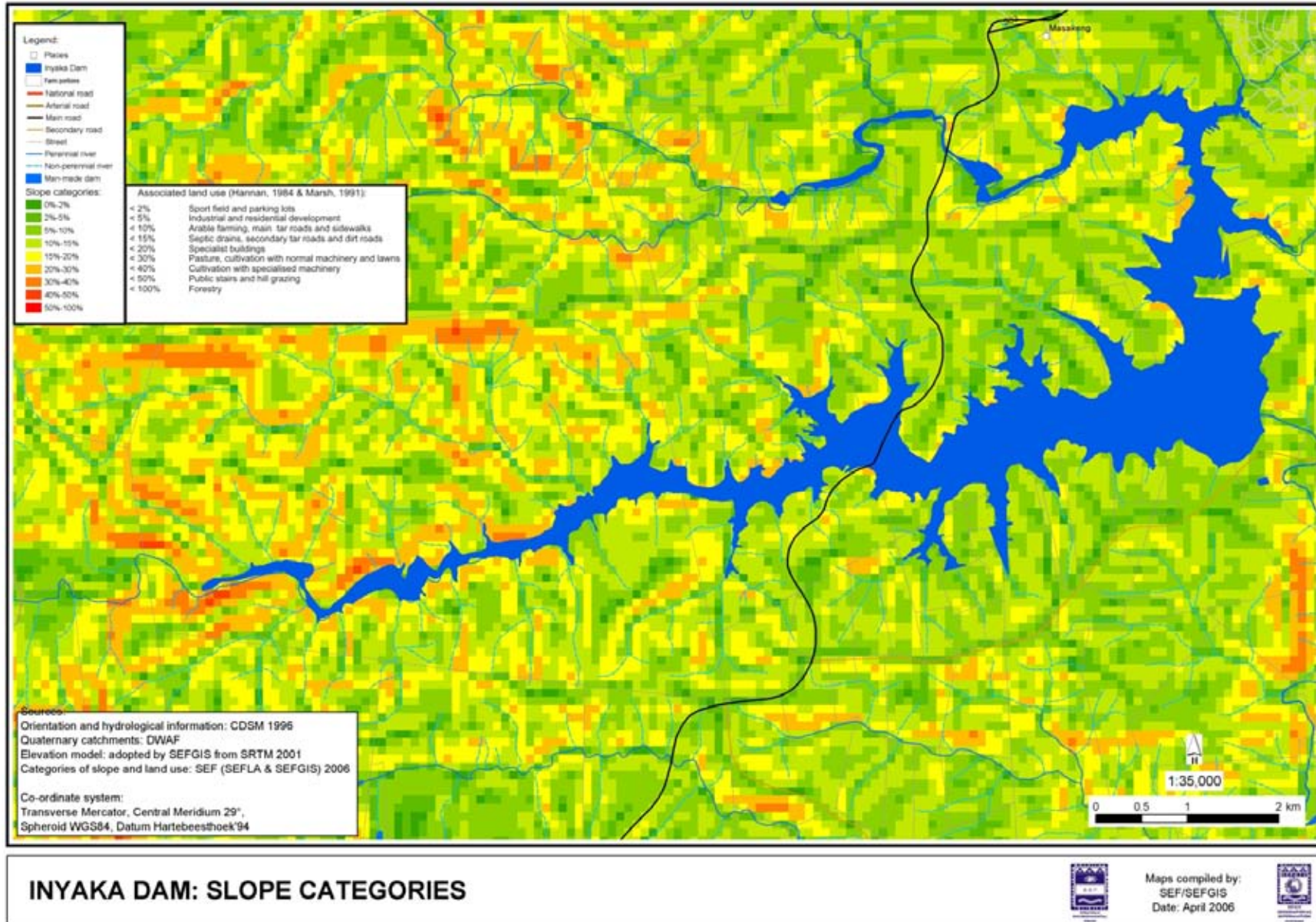


Figure 10: Slope Categories

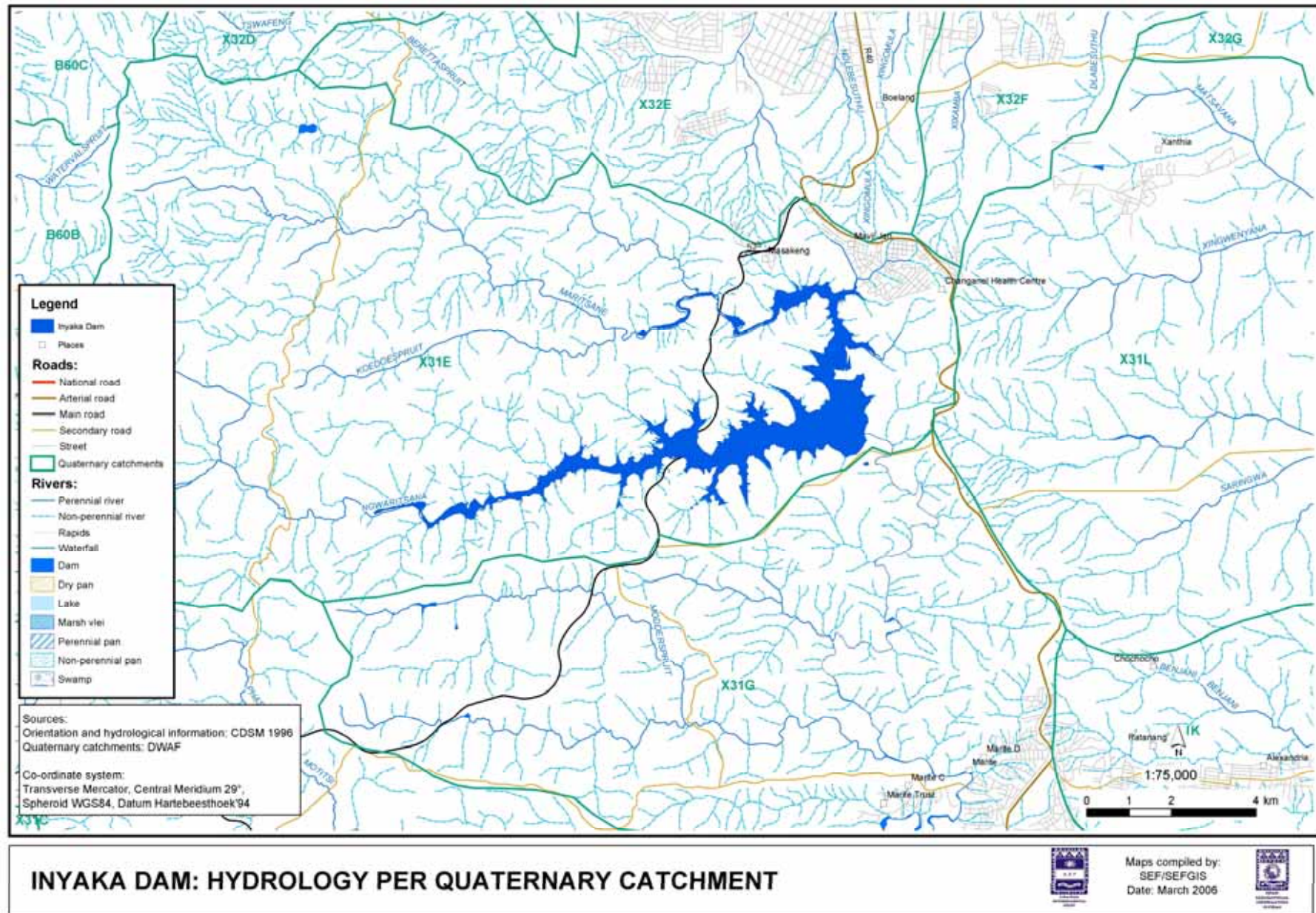


Figure 11: Hydrology per Catchment



Trough Spillway



Inyaka Dam during Construction



View from Water Treatment Works to Aquaculture Site



Inyaka Dam after Construction

Figure 12: Photos of Inyaka Dam

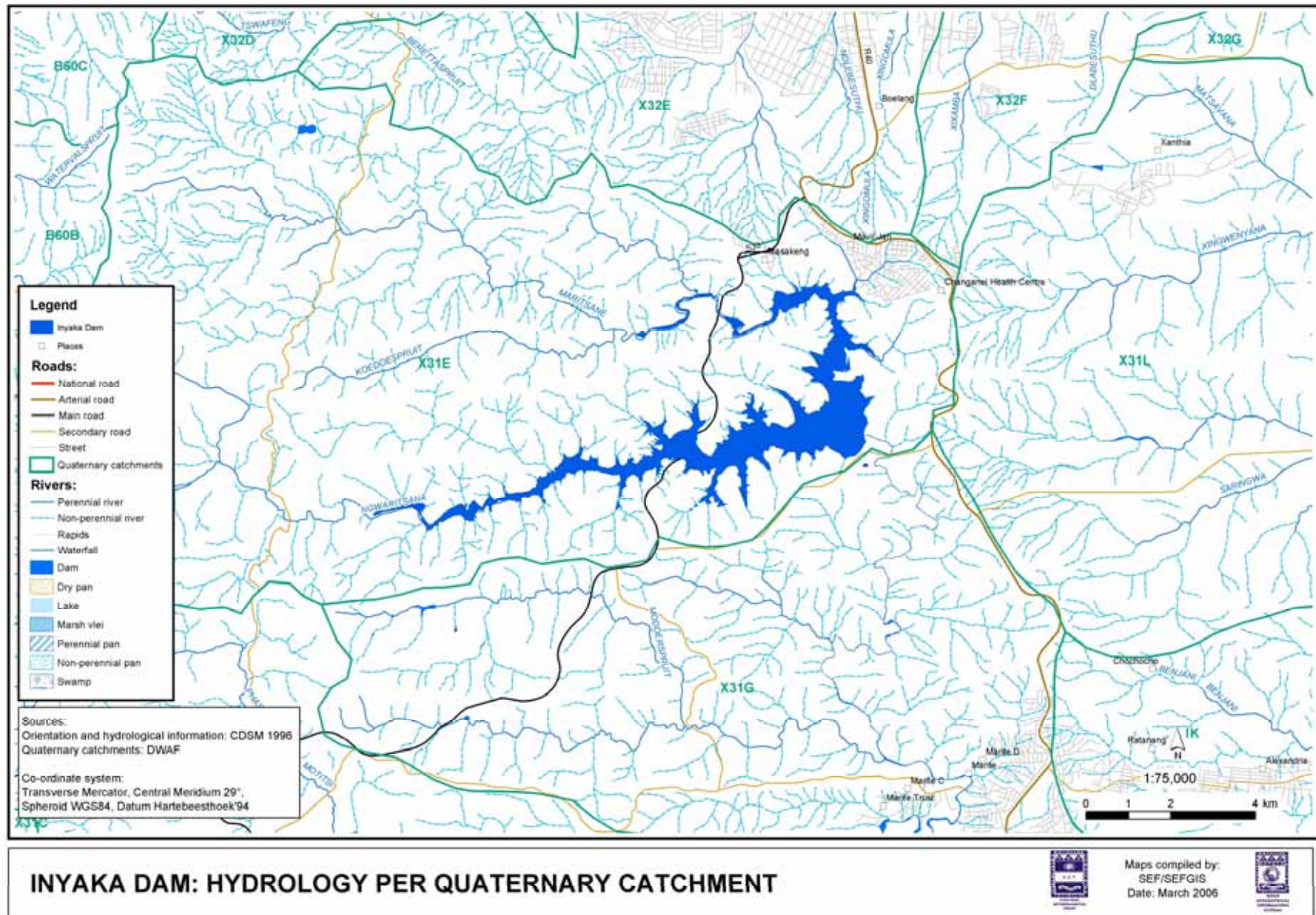


Figure 13: Existing Infrastructure

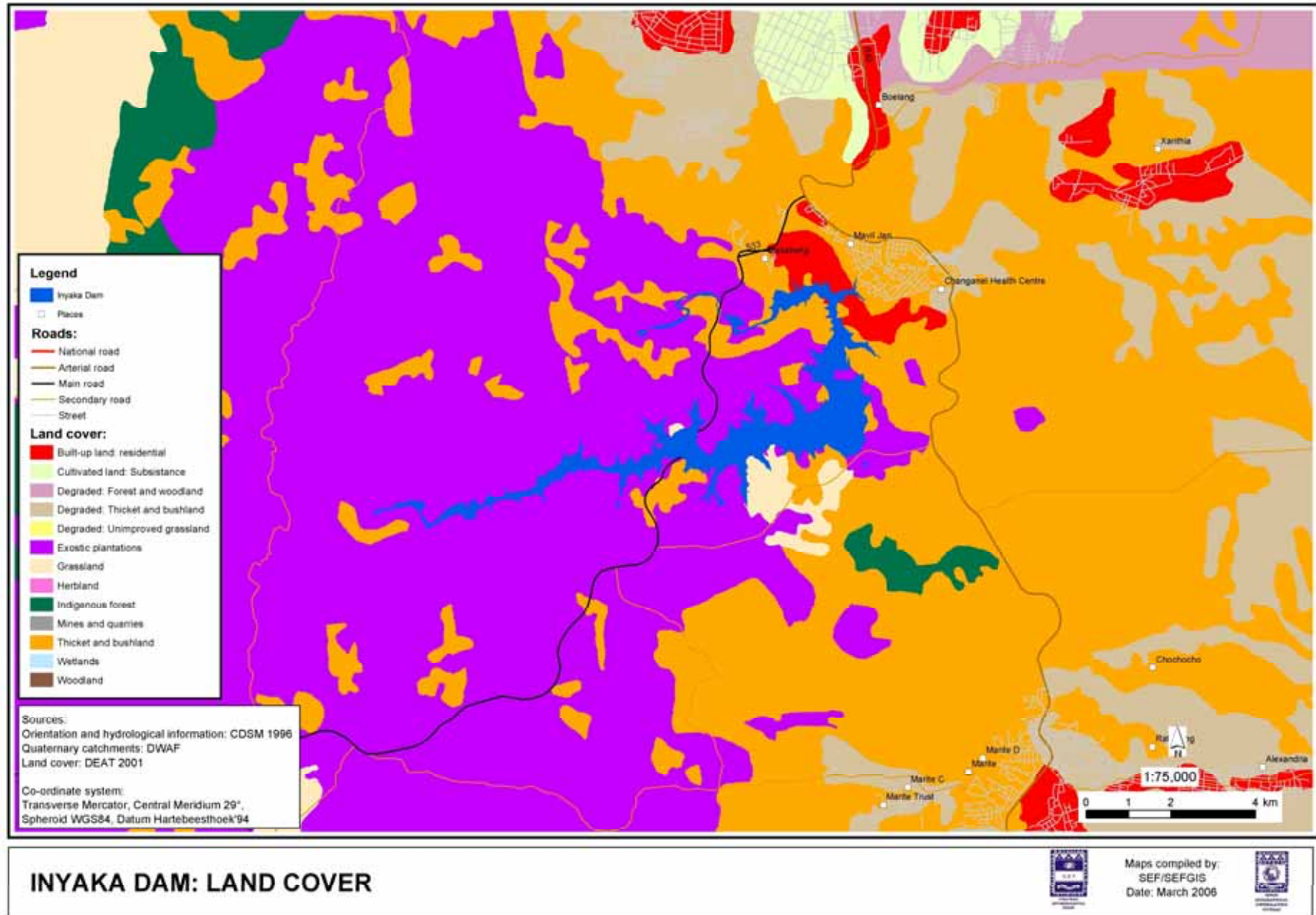


Figure 14: Land Cover

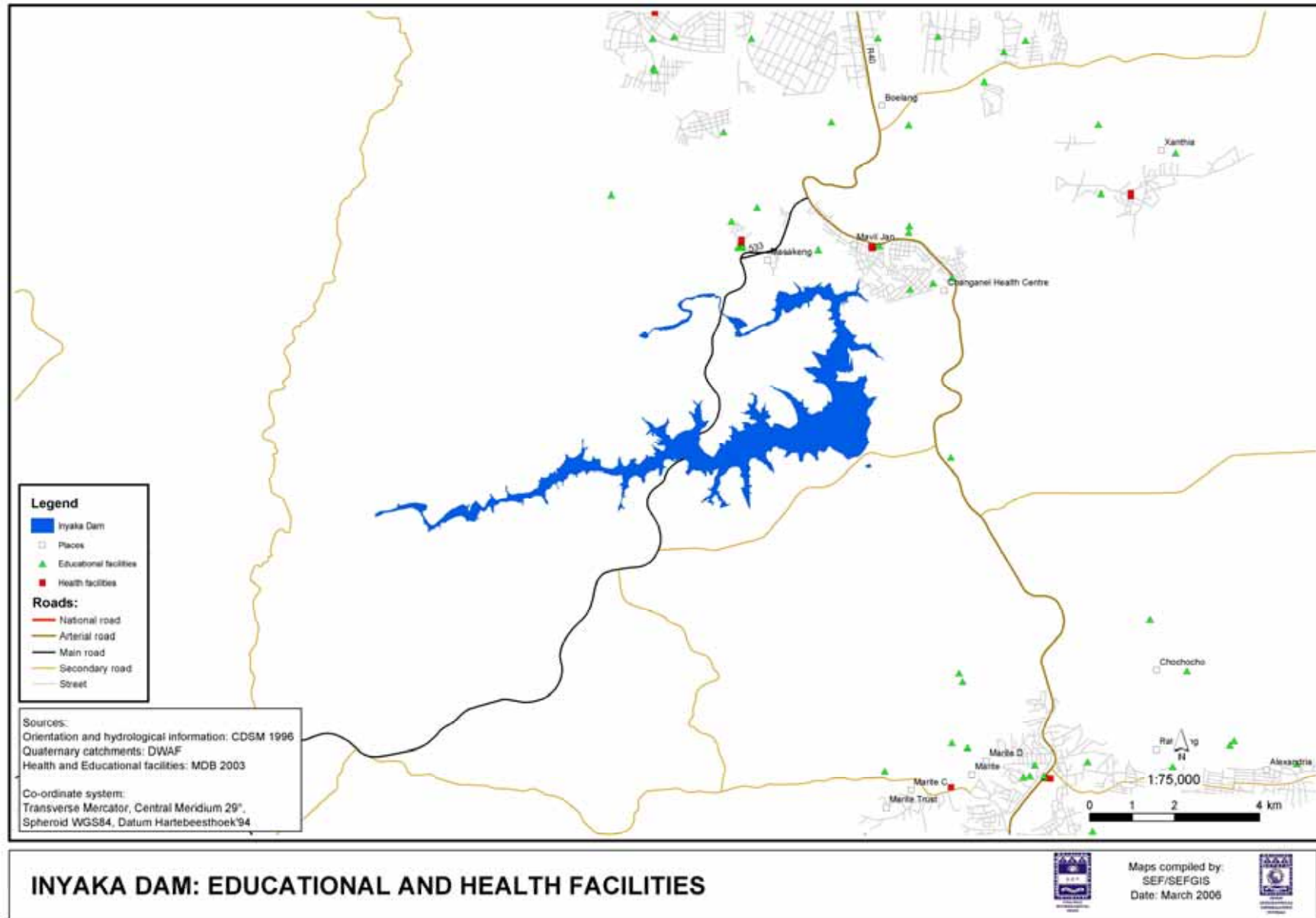
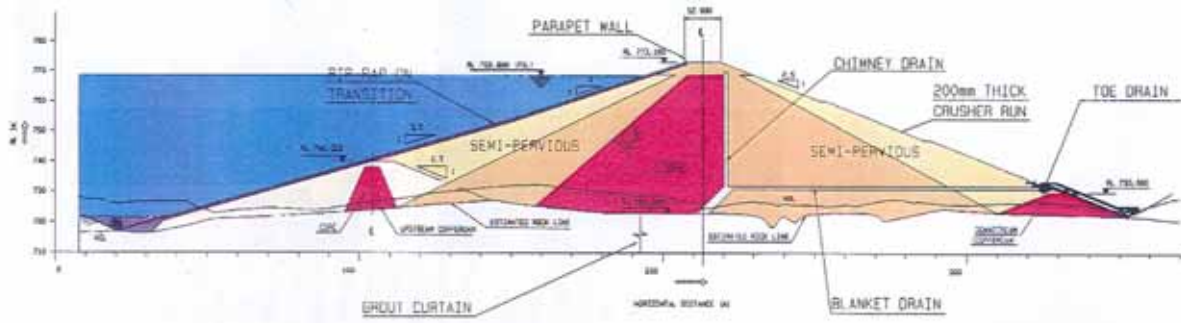
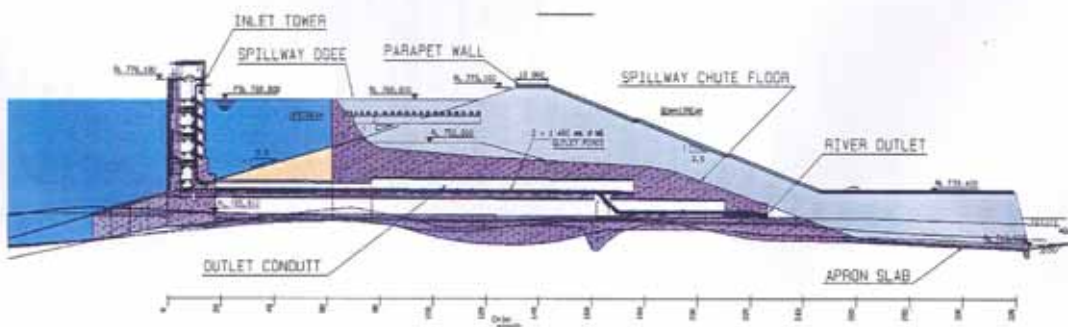


Figure 15: Educational and & Health Facilities

**Section through Main Earth Embankment**  
Not to Scale



**Section through Centre Line of Spillway**  
Not to Scale



**Section along the Main Earth Embankment Centre Line**  
Not to Scale

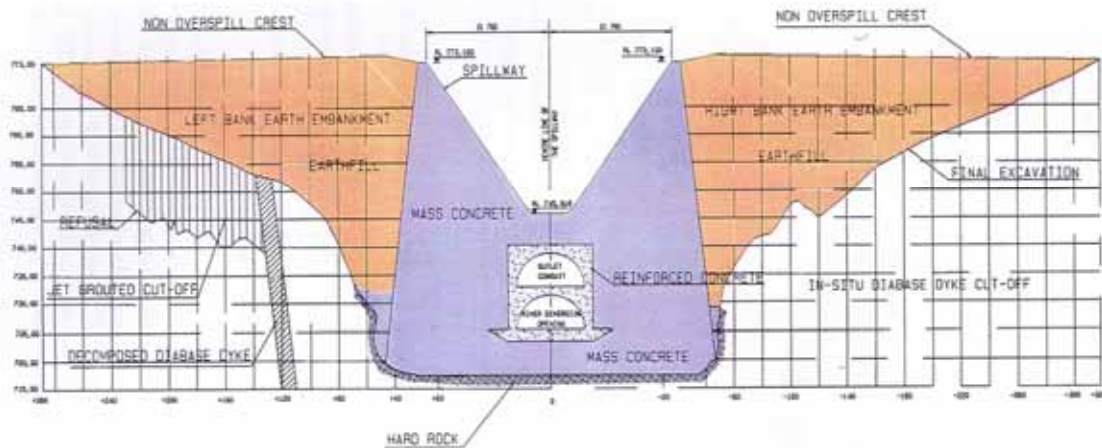


Figure 16: Sections through Inyaka Dam wall structure

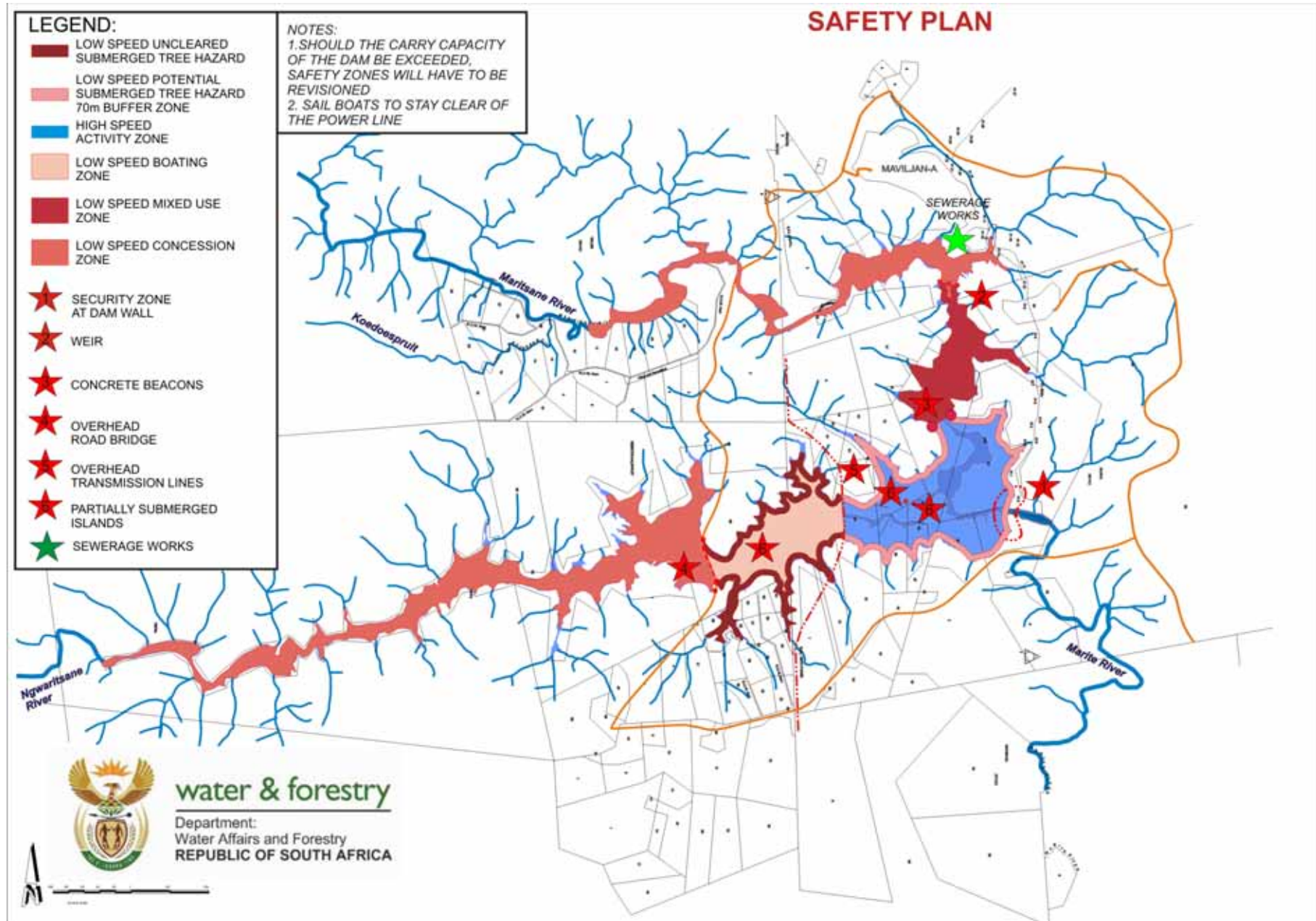


Figure 17: Safety Factors



## APPENDIX D: STAKEHOLDER OBJECTIVE MATRIX

RESOURCE MANAGEMENT	COMMUNITY BENEFICIATION	OPERATIONS / RECREATIONAL WATER USE	INSTITUTIONALISATION
<ul style="list-style-type: none"> <li>• Keep corruption out of the system (there should be concessions when tenders are awarded)</li> <li>• Compliance to the environmental legislation</li> <li>• Proper environmental assessment</li> <li>• Proper waste management planning</li> <li>• Adequate involvement in catchments management planning</li> <li>• Protection of indigenous forest</li> <li>• Protection of biodiversity according to all applicable acts and regulations</li> <li>• Aggregate water conservation for the dam (ecosystems and habitats for the systems)</li> <li>• Soil conservation</li> <li>• Mining interest ((Monitoring functions outside the area of specialty)</li> <li>• Watchdog and environmental officer to be appointed</li> <li>• Contribution on scarce resources for the dam</li> <li>• Protection of fish. Birds and animal life</li> </ul>	<ul style="list-style-type: none"> <li>• Development of infrastructures and skills:               <ul style="list-style-type: none"> <li>– Hotels</li> <li>– Guest Houses</li> <li>– Flee Markets</li> <li>– Tourisms Centres</li> </ul> </li> <li>• Land claims must be speed up</li> <li>• Water must be affordable and accessible to all</li> <li>• Trees must be developed for economic purposes</li> <li>• Local people should be able to have access to fishing on the dam</li> </ul>	<ul style="list-style-type: none"> <li>• Determine means to build and bring about business around the Inyaka Dam (i.e. plan recreational facilities)</li> <li>• Development of a forum business, to assist in the negotiations</li> </ul>	<ul style="list-style-type: none"> <li>• Policies are put in place, outstanding is the implementation</li> <li>• Institution to comply with these policies (compliance with relevant pieces of legislation)</li> <li>• Need to promote investment (LED for Inyaka Dam to boost local economy)</li> <li>• Government in the eyes of the public should conduct itself as one voice</li> <li>• Ensure that there is equitable access to the development (development should not be seen as a separate entity)</li> </ul>

## APPENDIX E: CONSOLIDATED LIST OF ACTION PROJECTS

KEY PERFORMANCE AREAS	ACTION PROJECTS
Natural Resource Management	<p>Develop and implement a removal and remediation programme alien invasive vegetation within a buffer of 30 m of the High Flood Line (shore line) of the dam in partnership with the Working for Water programme.</p> <p>Conclude co-management agreements regarding the management and exploitation of the remaining trees within the purchase boundary.</p> <p>Initiate an aquatic biodiversity assessment study.</p> <p>Prepare a management plan for crocodile, hippo and fish in co-operation with Mpumalanga Tourism and Parks Agency and the Kruger National Park.</p> <p>Prepare a strategy regarding the trees inundated by the dam to address public safety concerns.</p> <p>Lobby to include Inyaka Dam on the State Dams Eutrophication Project List and initiate a limnology study with a view on understanding the water quality changes of the dam.</p> <p>Prepare resource quality objectives (RQOs) and set carrying capacities for resource utilisation.</p> <p>Establish water sampling points within the dam basin as well as up- and downstream of the dam.</p> <p>Facilitate a process to link the Inyaka Dam with the Bushbuckridge Nature Reserve.</p> <p>Prepare biodiversity management provisions and include together with landscaping specifications as conditions of contract in access and use agreements.</p> <p>Prepare and implement a soil erosion management plan, especially at old mining sites.</p> <p>Participate in decision-making regarding down stream releases and operational plans for the dam and communicate relevant information to stakeholders.</p>
Cultural Resource Management	<p>Formalise a co-operation agreement and relations with the relevant provincial heritage authority or the South African Heritage Resource Authority (SAHRA).</p> <p>Identify cultural projects in the region and possible links with Inyaka Dam.</p> <p>Develop an operational guideline that clarify the involvement of the traditional authorities in the area utilising existing community structures and forums.</p>
Land Expansion and Incorporation	<p>Conclude co-management agreements with neighbours.</p> <p>Facilitate the incorporation of the RMP in the IDP for Bushbuckridge.</p>
Public Private Partnerships	<p>Prepare a local strategic plan for commercialisation and a detailed master plan for the opportunities identified in the zoning plan for the dam (Section 3 and Appendix F, Figure 18).</p>
Public Access and Use	<p>Procure public access contracts.</p> <p>Conclude access agreements for private use and organised events (e.g. angling competitions).</p> <p>Prepare operating rules and set carrying capacities based on the environmental and safety encumbrances of Inyaka Dam (vide Appendix C, Figure 17) in co-operation with contractors and operators.</p> <p>Develop a permit system for subsistence fishing together with the relevant Provincial environmental authority.</p>

KEY PERFORMANCE AREAS	ACTION PROJECTS
Infrastructure	Compile and implement an awareness strategy.
	Compile and manage a database of all infrastructure and approvals.
	Develop norms and standards and application procedures for infrastructure development.
	Conclude an infrastructure development agreement with the Local Municipality.
Marketing	Prepare and implement a marketing strategy.
	Conclude co-operation agreements with local and provincial Government and relevant tourism authorities and organisations.
Benefit Flow Management	Facilitate the establishment of a BFI, specifically recognising existing structures, institutions and organisations.
	Compile an awareness strategy and action plan.
	Compile a communication strategy and action plan.
	Compile a database of local service providers in conjunction with Local Government.
Institutionalisation	Initiate the formation of a Sub-committee and participate in the WUA establishment process.
	Train and facilitate the appointment of peace officers to assist with policing the requirements of the RMP and relevant regulations.

**APPENDIX F: ZONING PLAN**

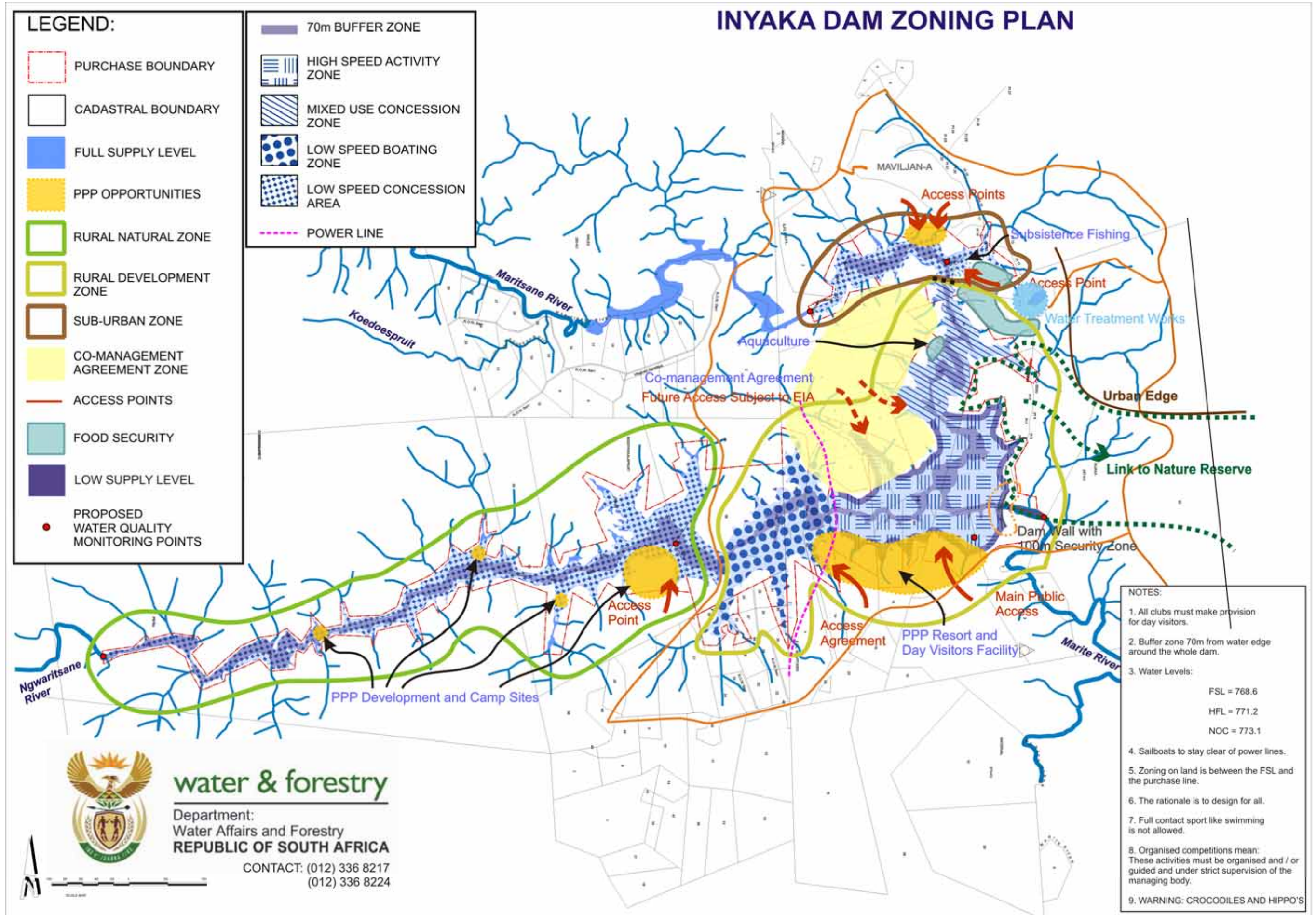


Figure 18: Inyaka Dam Zoning Plan

## APPENDIX G: INSTITUTIONAL ARRANGEMENTS

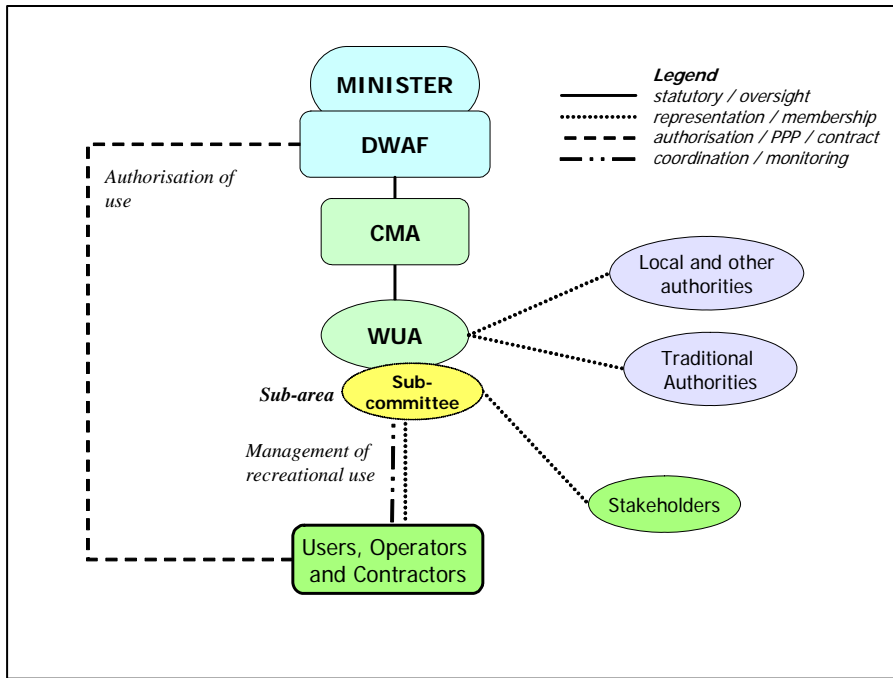


Figure 19: Proposed Water User Association Structure

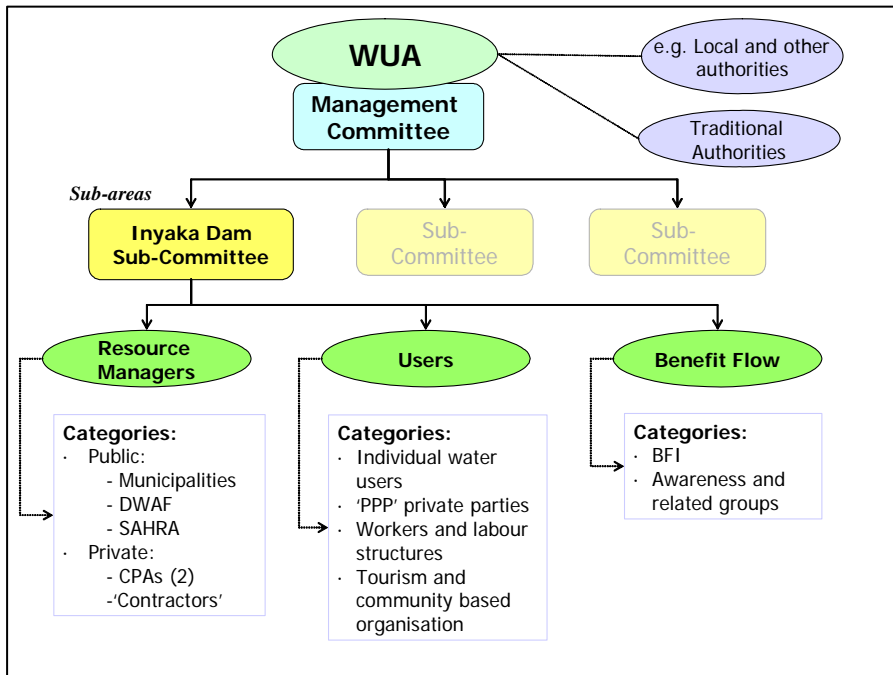


Figure 20: Proposed Sub-area Structure

## **APPENDIX H: REGISTERED SERVITUDES**

The following notarial deeds of servitudes in favour of the State land (previously known as the Government of Lebowa and South African Development Trust) are found on the Farm Injaka, namely:

- K3427/1991 RM (registered against title deed T44494/1980);
- K3443/1991 RM (registered against title deed T39357/1980);
- K3446/1991 RM (registered against title deed T45494/1980);
- K3511/1991 RM (registered against title deed T11573/1981);
- K3426/1991 RM (registered against title deed T25672/1983);
- K3482/1991 RM (registered against title deed T664/1981);
- K3481/1991 RM (registered against title deed T41050/1980);
- K3445/1991 RM (registered against title deed T43772/1989);
- K3895/1999S;
- K571/1964S;
- K3795/1999S;
- K850/1964S, and
- K994/1973S.

The above indicate that the State has rights on contract servitudes, mineral rights, leases, and prospecting contracts.

# ATTENDANCE

Date 23 March 07

NAME	Cell/Email	Postal Address
Mabunda JH	mabundaj@inkomati.coma.co.za	ICMA
Siguet Mashogo	151/11A · Siguet@idit.org.za	
M.K. Mimi	0828310198	Waterfall
MRANCANE JC	0783834272	INJAKA/WATERVAL CPA
MATSAHE A	0834364487	" CPA
SHABANGU M.	082 5178846	" CPA
M.L. Makhosha		" CPA
SK MALABANE KRISYBS MAPULANE TRIBE	083979459	MARITE
MOMASHILE TRC MPAMALANGA TRIBE	0739724084	
MABUNDA P.	0795925961 twetlimu@ananci.co.za	Business
Constance Singoie	072 436 9129	CPF
Indith Khozo	0829099271	Bush Water
Petro Malle IDT	0828859818	petrom@idt.org.za
Ine Gana BBLM	082 2556702	
Obed Mqomo WFW	0828057879	
Dusty Mabane	0827443394	C.P.A
Ray Mandlazi	082 8098937	DEDP.
M.S. Mshube	(013) 7990369	C.P.A
Mr Isaac Khumalo	0762598122	CPA INJAKA
Mr P. Mabelani	0732062 798	C.P.A
Miss IDAH L. Nyatwi	013 797 1831	
M.J. Mzimba	013 797 9358	C.P.A.
Marta Khumalo	N/A	C.P.A
Henry Chansane	0723254717	BOX 2066 HILLSVIEW/1242
L334 Mashogo	072271 4653	



# ATTENDANCE

NAME

CELL/FEMAL

Address

Elma Khumalo

079 538 4878

Thulamasho ZCC  
PO Box 668  
Thulamasho 1365

ENOS Mkhonto

0733040602

DWARSLoop

CHRISTINA Mashigo

MARITE

Grace Matsane

VIOLGIBank.

MORRIS MRISH

SIHLABELA 0722588811

MARITE

ENOK TIMBA

0743160681

DWARSLoop

LAMANG MELLIE

MATSANE —

MARITE

NGWAKHWIABI

ENNAH MNGOMASI —

MARITE

BAGAMETSIE

ELLA MATSANE 0727303893

MARITE

INWIAMAPINZEMI

LEAH MASHABANE 0727303893

MARITE

MORUREN

SEYA MATSANE 0727303893

MARITE

NKUHENI

LETTIE MGWENYA 0727303893

MARITE

MAHOLEBELA

DANIEL MKHABELA —

DWARSLoop

BACHEBILE

MELIGIA NONYANE —

MARITE

NGDIBE LOBI DOROTHY - XANDIA

MOKOENA ML 0761391615 MARITE

NTSILA LOWE 0722990954 MARITE

Mofiqi JACK 0822288423 Rabeni

Plet Marele 0725344426 RALAH!

SHABANGU SHROMBE ASSA - NKANING

NDOBELA NOMSA QOSHINE - NKANING

NONYANE MAGGY MOKGEKUM 0738237667 →

MARITE

Thandi Mthembu	082 888 4998	DWAF (Nelspruit)
LOVE SHABANE	013-7551420	DoA (Nelspruit)
SIBONGILE MAVIMBELA	0729913534	DWAF (NELSPRUIT)
Tshepo LEFI FI	032880 6259	DWAF (NST)
Franki MKHANTSWA	076 417 0254	DWAF NST
Lawrence M. Khuzo	072 823 5675	Waterval

SIFUMAZA R D  
 QUBE M WILLIAM 0731938801  
 0727157560 CPA (WATERVAL & BAKA)

MASINGA SIMON	0836627750	DWARSLOOP
MATURANE KHASHOMIE EMMA	0834030435	RELANE
EDMBIZA EDWELL	—	MARITE
ALFIYOSI MASHELA	0795837598	MARITE
MASHIGO RP	0720580468	MARITE
NONYANE SAMSON BOYISI	—	MARITE
MONARENG VELAPHI ELDAH	0720580468	NEANGE
MOKONTO PRINCE	0733839356	ALXENDER

DUBE Denky 0848436048 Springs  
 MASHGO MOLWANTINA ROBINSON 0765147760 →  
 RELANE

NGOBENI RHODA BETTY 07330701055 DWARSLOOP  
 SIGAKIUKU SIMON MADALA 07330701055 DWARSLOOP  
 083-2399386 Montie

P Mgeba

WILLIAM MATSABE	0828023447	KWENA DAM
JANE QWAKI	082 880 1219	Mapochs Grond

Charles Shongwe	082 8800532	SEDP.
Layele Sinda	0834030435	Marite-

Winnie Oly Sunday	076 400 7821	Uyale/Waterval
Maibor Xaxaxa Maria		Uyale/Waterval

Vusi Nsimango	0760593540	KANHAMAZANE
---------------	------------	-------------

HLATSHWATO TSHONBI EPINA	0834030435	MARITE
Alali, Ben	0721890409	Desert Eagle Projects.