9 GENERAL ISSUES AND STRATEGIES FOR THE MZIMVUBU TO MBASHE ISP AREA

9.1 GENERAL

The key feature that applies across the Mzimvubu to Mbashe ISP area is that it is well-endowed with water. The area has pristine estuaries and other areas of high conservation value (for example the Mkambati Nature Reserve on the Pondoland Coast). Making use of this abundance of water offers opportunities for economic development and with it poverty eradication. Water alone cannot leverage development and other resources such as human, physical and financial as well as institutional and management support must be available to support such developments. These aspects require integrated resource management.

The issues discussed in the following sections are important to integrated water resource management (IWRM), which the DWAF is striving to achieve through the development of the ISP. These general issues and proposed strategies are discussed in this chapter.

9.2 SUPPLY TO LOCAL AUTHORITIES

There are a number of possible future bulk water supply schemes in the Mzimvubu to Mbashe ISP area (see Appendix A13). For the source of supply of these future bulk water supply schemes the focus has been on developing surface water resources from run-of-river yield.

The ISP area has a history of unsuccessful groundwater schemes which has led to negative perceptions around its use. As a result, groundwater is underdeveloped as a domestic supply to rural communities. This source of supply is cheap and sustainable if properly sited and managed. Groundwater resources form an integral part of integrated water resources development planning.

In order to ensure long-term sustainability, the overall strategic approach to the development and management of the water resources of the key area must include conjunctive use of surface and groundwater where feasible to maximise the optimal use of available resources. Local authorities must be encouraged to use groundwater where it is practical to do so. This is the case with Lusikisiki where OR Tambo District Municipality is now investigating groundwater as a source to augment water supplies of the area. The Eastern Pondoland Basin Study identified that development of surface water resources will be expensive and there is significant groundwater potential to meet the future water requirements of Lusikisiki and the surrounding villages.The Department intends to undertake a more detailed study of this possibility.

Where groundwater resources cannot meet the future water supplies of the local authorities, surface water resources can be developed to support the high assurance of supply required for urban use. Development of off-channel storage will be considered favourably such as the one developed in the Mngazi River for Port St Johns.

9.3 FORESTRY MANAGEMENT

A detailed forestry management strategy is described in Part 2 of this report (i.e. Strategy 3.2). The Eastern Cape has 10.7% of South Africa's plantation resource. The contribution of commercial forestry includes:

- 4.4% of the R2.5 billion forest industry market contribution to the GDP
- 1.5% of the R12.5 billion timber products market contribution to the GDP.

Table 9.1 shows the areas under forestry and the impact of commercial forestry in the Mzimvubu – Mbashe ISP area. A Strategic Environmental Assessment (SEA) has been commissioned to determine the desirability, potential, extent and impact of forestry within the entire Mzimvubu-Keiskamma WMA. Much is dependent on markets and the construction of transport links and/or large scale processing plant, with a sawmill in Mtata being a favoured option. There is sufficient water from the Mtata Dam to support such development.

Table 9.1: Forestry areas in the Mzimvubu to Mbashe ISP area

Key-area	Area under forestry (ha)	Potential area (ha)	Impact on yield million m^3/a
Mzimvubu	73 000	15 000	11
Pondoland	11 000	35 000	0
Mtata	170 000	8 000	29
Mbashe	24 600	15 000	3
TOTAL	278 600	73 000	43

There is potential for forestry development in the Mzimvubu to Mbashe ISP area particularly in the Mbashe, Mzimvubu and Pondoland key areas. There is sufficient land and water for forestry expansion in the ISP area.

There are a number of issues hampering forestry development in the Eastern Cape, namely

(i) Lack of access to markets when compared to KwaZulu-Natal Province.

(ii) Environmental impact of forestry development. Despite there apparently being ample water available, there is almost no storage and most users are dependent on run-of-river. During low flow periods, there is competition between the users including forestry and the ecological Reserve. Development of commercial and/or community forests will have a negative impact on the assurance of supply of schemes dependent on run-of-river and may require that some storage be provided to allow for compensatory dry season releases. Other environmental concerns include the loss of grassland. The ISP area has significant cattle farming and the carrying capacity of the land is now being exceeded. Further forestry development will exacerbate this problem.

(iii) The period for processing applications for water use licensing for forestry expansion is lengthy. This is attributed to the requirements for determining the Reserve (DWAF responsibility) and the approval required from the DEAT for environmental authorisation.

(iv) There is lack of finance, skills and expertise to expand commercial forests within the region.

(v) Although there is sufficient water resources and an ideal climate for forestry expansion, there is limitation on the available land for expansion at the economies of scale that are sustainable. Development would mostly be in relatively small pockets.

(vi) Most of the land is communally held and the issues relating to the communal holding and sharing of

forestry plantations have not all been resolved.

9.4 AUTHORISING WATER USE

9.4.1 General Authorisation

The purpose of a General Authorisation is to replace the need for a water user to apply for a licence in terms of the National Water Act for the abstraction or storage of water from a water resource, if the abstraction or storage is within the limits and conditions set out in the General Authorisation.

The present General Authorisation is not key area specific. In the Mzimvubu to Mbashe ISP area there is significant potential for community forestry development. However the present General Authorisation do not specify authorisation for streamflow reduction activities because of the potential environmental impact of forestry development. The General Authorisation allows for a person to "abstract surface water at a rate of up to 25 litres per second:

(a) for the irrigation of up to 25 hectares of land, at 6 000 cubic metres/ ha/a; or

(b) for purposes other than irrigation, up to 100 cubic metres on any given day; and

(c) store up to 50 000 cubic metres of water."

The resources of the Mzimvubu to Mbashe ISP area can accommodate a General Authorisation from a quantity perspective. Development of small-scale irrigation schemes, such as the Mngazi scheme will not cause significant degradation of the resource.

However, the nature of other likely water use, which is expansion of commercial and community forestry (a potential strategy for poverty eradication), will cause resource degradation.

Only the following areas are excluded from the General Authorisation in the Mzimvubu to Mbashe ISP area:

- The T11A and B catchments of the Slang and Xuka Rivers
- T20A & B catchments of the Mtata River upstream of the Mtata Dam
- T35A, B, C, D, F & G catchments of the Tsitsa, Pot, Mooi, Inxu, Wildebees and Gatberg rivers (all tributaries of the Mzimvubu River).

The above catchments are excluded from the General Authorisation, because of the high level of development, which are mainly large-scale commercial forests.

Development of community woodlots have not been identified in the General Authorisation as a water use activity that can be generally authorised. The Mzimvubu to Mbashe ISP area has potential for forestry expansion particularly aimed at community upliftment. Catchment specific General Authorisations would provide an enabling environment for forestry expansion.

The SEA study will assist in identifying where expansion can take place without significant environment degradation and what mitigation measures will be required to minimise environmental degradation. This study should be supported and encouraged.

9.4.2 Water-use licensing strategic perspective

The DWAF Regional Office has received a number of water use licences particularly for community water supply schemes and forestry development in the Mzimvubu to Mbashe ISP area. The licence applications are for both large-scale afforestation and small-scale community woodlots. The key water use licensing issues are as follows:

- The processing of these *ad hoc* licences takes a very long time because of the complex administrative process required for streamflow reduction activities as well as extensive hydrological calculations to be performed. The current process is that when the Regional Office receives the licence application, a request is submitted to the Directorate: Resource Directed Measures to determine the Reserve.
- The Reserve has priority over all water uses and the requirements of the Reserve must be allowed for before any use is licenced. Therefore all water use licensing is conditional on a Reserve determination being carried out and taken into account in determining the water available for allocation.
- Water use for SFRA: The Provincial Department of Environment Affairs (PDEA) is also required to evaluate licences for environmental impacts. The PDEA is not willing to consider wattle. These administrative processes are constraining potential investment and economic development in the Mzimvubu to Mbashe ISP which could be contributing to socio-economic upliftment of the area and poverty eradication.
- Water use for Eskom power generation: The continuing availability of electricity throughout the country from the national grid is essential for both social and economic development. All water which is taken from a water resource for all purposes, or stored, at Eskom power generation facilities is a water use of strategic importance. However the economic value of the power generation facilities in the Mzimvubu to Mbashe ISP area compared with the environmental externalities being caused by these schemes has not been quantified.
- Illegal sand mining: There is illegal sand mining in some coastal rivers of the Pondoland key area. According to section 21 of the NWA this is considered as altering the bed, banks, course or characteristics of a watercourse, and is subject to licensing. The regulations are in preparation, or are contemplated in the near future, concerning altering river banks. The illegal sand mining activities should be regulated in order to avoid further environmental degradation.

The proposed approach to streamlining the administrative process particularly for this ISP area where there are significant surpluses is to do block licensing for streamflow reduction activities. The desktop Reserves should be used to initially determine its impact on the block licences. Further refinement of the Reserve can then be implemented while the licences for poverty eradication development initiatives are considered.

DWAF should engage with Eskom to determine the strategic importance of the power generation facilities in the ISP area.

9.5 WATER MANAGEMENT INSTITUTIONAL ARRANGEMENTS

The Department of Water Affairs and Forestry (DWAF) is the custodian of the country's water resources and

is central to setting the regulatory framework for sustainable water resources management. The Regional Office of DWAF is responsible for managing the water resources in the region. This includes water allocation to water users; managing bulk water infrastructure such as the major dams that are owned by DWAF, monitoring and control of water use and discharge of water containing waste, as well as management of solid waste disposal (see Figure 9.1). The other key function of the DWAF Regional Offices is the management of the commercial and natural forests, which are prevalent in this Mzimvubu to Mbashe ISP area.

The Eastern Cape Regional Offfice of DWAF was actively involved in the provision of water supplies to the rural communities until June 2003, although this had been the function and responsibility of local government. This was because of the significant backlog of providing adequate water supplies particularly to the former homeland areas. The water infrastructure assets that DWAF has are now in the process of being transferred to local authorities as required by Section 78 of the Water Services Act. The main problem is that the Section 78 process is taking long and delaying the transfer of assets. Although the transfer of assets is envisaged soon, DWAF needs to consider the implications of such transfer where the local authorities do not have the capacity to take over the schemes. DWAF must ensure that the transfer of assets include the transfer of not only the personnel to operate and maintain these schemes but also the management capacity of the Water Services Authorities (WSAs) to ensure these assets do not become a liability. Transfer of assets with the financial resources for rehabilitation of the schemes may not be the best approach in the long term because of capcity constraints in local authorities.

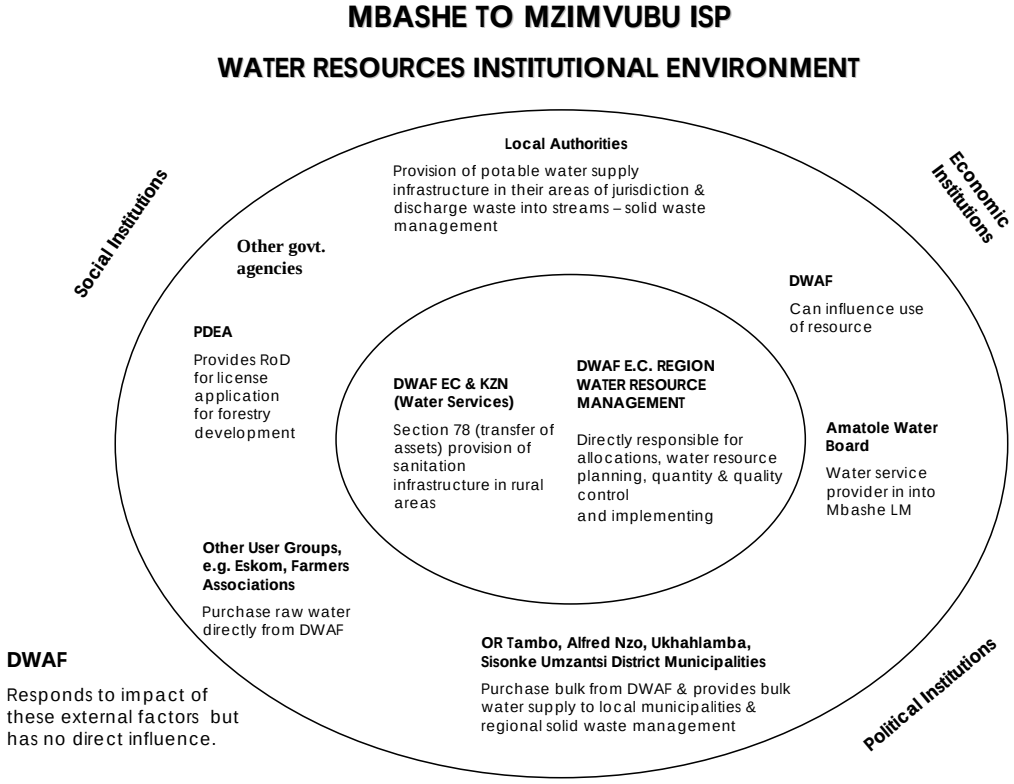

Figure 9.1: Water institutional environment in the Mzimvubu to Mbashe ISP area

9.5.1 Catchment Management Agency–Mzimvubu – Keiskamma WMA

The Mzimvubu to Keiskamma WMA comprises the Amatole – Kei ISP area and the Mzimvubu to Mbashe ISP area. The establishment of the CMA will be for the whole WMA. Although no financial viability study has been conducted for the WMA, the Mzimvubu to Mbashe ISP area is one of the poorest areas. It has a very small revenue base because there are no major industries and the irrigation sector is limited. The main revenue from this area will come from the municipalities and Eskom. The CMA will therefore have to rely on the stronger financial position of the Amatole catchment. The establishment of the CMA cannot be justified on financial sustainability. The establishment of this CMA can only start when there is sufficient cost recovery unless the government subsidises it. This is reflected in the fact that this CMA is expected be the last to be established.

There are stakeholder doubts about the merits and benefits of a CMA for WMA 12. Catchment management charges could be used for cross subsidisation. CMAs are seen as another layer of bureaucratic institution which will not benefit stakeholders.

The strategic approach is for DWAF to demonstrate the importance of decentralising the management of water resources to local level so that issues can be addressed at local level for the benefit of communities in the WMA.

A financial and economic viability study to determine the revenue that can be generated and the administrative costs of operating and maintenance of the CMA must be undertaken.

9.5.2 Water User Associations

The Mzimvubu to Mbashe ISP area is characterised by very few irrigation schemes and related water boards. The main irrigation schemes are Ncora in the Mbashe key area and the irrigation schemes in the Matatiele and Kokstad areas of the Mzimvubu key area. There are no Water User Associations established in the ISP area.

9.6 CO-OPERATIVE GOVERNANCE STRATEGIC PERSPECTIVE

The apparent separate focus and jurisdictions of different Provincial (and National) departments such as DWAF and the Departments of Agriculture, Environment Affairs and Land Affairs is an area of potential conflict. As discussed earlier in Chapter 2, although the Mzimvubu to Mbashe ISP area is largely situated in the Eastern Cape, parts of the Mzimvubu key area is in KwaZulu-Natal. The Sisonke District Municipality falls under the KwaZulu-Natal provincial local government. The situation complicates the management of water resources as the Eastern Cape DWAF Regional Office will have to deal with both provinces on water services issues.

The main co-operative governance issues and proposed strategic approach to addressing them are as follows:

- The main land use is subsistence farming and cattle farming. The carrying capacity for cattle farming is often exceeded resulting in soil erosion. Agricultural practices also result in significant soil erosion. This is increasing the quantities of sediment reaching the Mbashe (as proven by siltation of the Collywobbles weir) leading to loss of storage capacity of the reservoirs and impaired quality of the water resources.

- There is use of marginal land for agriculture, mainly for dryland farming. It is essential that marginal land is not used for agriculture, correct irrigation practices are encouraged and that sustainable rural economic development is achieved through community participation and awareness creation.
- There is very little input from local authorities to ensure co-operative governance is operational. Much more input is needed from the LA's.
- Lack of capacity in all departments hampers effective co-operative governance. The transfer of assets by DWAF should be accompanied with not only the provision of operational capacity through the transfer of staff but also the provision of management capacity.
- A central information system is needed. There is a need for alignment and having an information platform between the DM's and DWAF where programmes from these organisations are available so that an integrated approach to development can take place. There are initiatives to develop such an information platform within the province. This approach will greatly improve co-operative governance between DWAF/CMIP/DM's at all levels in the organizations. CMIP criteria for water supply funding which had been restricting the implementation of properly planned schemes is expected to be resolved through the Municipal Infrastructure Grant (MIG), which will integrate all the funding to local authorities. DWAF's involvement in the MIG is unclear and needs to be clarified.
- Proper planning needs to be done by DM's for water supplies, as this impacts on the water resources including dams. Much effort and financial resources on poor planning of schemes are being wasted at present. This is due to a lack of co-operative governance.
- Water resource protection, particularly groundwater resource protection, and sustainable development will benefit from an alignment of local authority and regional planning with catchment management.
- Co-operative governance is working to some extent in the irrigation sector through the Co-ordinating Committee for Agriculture Water (CCAW).

There is a need for co-operative governance between the Regional DWAF and the various provincial government departments involved in water resource utilisation. Through co-operative governance, DWAF should ensure that all IDPs include soil-conservation measures as well as practical measures for implementing water conservation and demand management. These measures could include contour ploughing, terraces, strip cropping and other techniques that retard overland flow and reduce erosion where dryland agriculture is practiced. Use of irrigated pastures for grazing should be considered to reduce overgrazing which is reducing the vegetation cover in the catchment.

DWAF should embark on awareness campaigns on the impact of soil erosion on the quantity and availability of the water resources of the catchment and also on explaining the exact situation with respect to water supply and availability.

9.7 STAKEHOLDER PARTICIPATION

Water users, water providers and those with an interest in water-related issues such as non-government organisations all have a stake in the decisions that are made in the formulation of the Catchment Management Strategy (CMS), and in the implementation of the identified strategies. Therefore, their

participation in the process of designing and implementing strategies and plans of action is very important. The involvement of stakeholders in the formulation and implementation of the water resources management strategies identified for the key area to address the specific and generic issues, helps in gathering information that will assist in the strategy formulation. Their involvement also creates a sense of commitment or "ownership" that can help to implement the plans of actions and therefore lower the risk of the strategies and plans of actions being unsustainable.

Although the ISP development for the Mzimvubu to Mbashe catchments has been done without the involvement of the other external stakeholders to the DWAF, the institutional stakeholders should now become an integral part of the process for the implementation of the ISP as discussed in Chapter 10. Their involvement during the implementation phase will assist in achieving the following:

- help to gather data or information, identify gaps in data or information and identify new sources of data or information in the future
- provide transparency and accountability regarding both decisions taken and the process by which decisions are taken in the implementation of the ISP
- build a broad base of commitment to options by creating an environment that rewards the realistic discussion of benefits, risks, and costs of options and that provides a meaningful basis for informed consent to recommendations
- lower the risks of implementation of recommendations made for the management of the water resources of the Mzimvubu to Mbashe ISP area. In order to achieve the above aims of stakeholder participation, the plan of action should include at least two activities:

  (i) identifying stakeholders (i.e. people and institutions concerned with or having an interest in water management) that influence or are influenced by decisions on water resource management of the Mzimvubu to Mbashe ISP Area; and

  (ii) securing their participation in the work of developing and implementing a catchment management strategy. There is the substantial risk that involving stakeholders can turn into political conflicts, but if the process is well managed, this risk can be avoided. Strategy 7.1 outlines the situation and the strategic option required to achieve stakeholder participation in the key areas of the Mzimvubu to Mbashe ISP area.

A catchment forum was established for the Mtata River catchment. Other catchment forums should be established in the other key areas to encourage public participation in integrated water resources management.

9.8 MONITORING AND INFORMATION SYSTEMS

The availability of reliable data and information on all aspects of water resources management is fundamental to the success of strategies to implement the NWA. No proper decision on any matter can be made with confidence unless it is supported by reliable, relevant, up-to-date information, which complies with certain standards.

A strategy will need to be developed to collate and develop these systems (see Monitoring and Information Management Strategy No 8). Please refer to Chapter 3: Part 6 of the NWRS for guidance in this regard.

A comprehensive information system is required for the Mzimvubu to Mbashe ISP area, which not only covers the collection and analysis of data, but how it is accessed and disseminated. The need for an information system for these catchments has arisen because of the following:

- The economic values of stream flows are increasing particularly along the coast line to maintain tourism development.
- Environmental and health concerns are increasing in the Mtata River catchments. A database of the health and water quality information is essential for effective management of the resource.
- Effective groundwater management and monitoring is essential for long-term sustainability of the supply and to protect the resource. The NWA requires the Minister to establish national monitoring systems for water resources to collect appropriate data and information necessary for managing the water resources.
- Human resources currently available for monitoring are generally inadequate throughout all existing systems.

The main monitoring and management information issues

- Water Use Monitoring: The information on the functioning of water supply schemes is unreliable and often misleading. There is no validation of the data for the monitoring and evaluation of non-BOT schemes.
- Groundwater Monitoring: There is very little groundwater monitoring taking place in the ISP area.
- Information Management: Monitoring of quantity and quality is not controlled by one section within DWAF. This creates problems because there is no co-ordination. All the monitoring should be under one section in order to streamline sampling of data and processing. DWAF is looking at integrating the Hydrology and Water Management Services sections to improve efficiency in data collation.
- Vandalism of equipment: Vandalism of monitoring equipment is a major problem.
- Data validation: There is no formal data validation process being implemented.
- Management Information System: There is no MIS in the region which integrates the available information systems in the ISP area.
- Database: Data is being gathered by different institutions and departments. There is duplication of effort and confusion as to who the custodian of the information is / should be and how the information can be accessed by ALL institutions.

The strategy for the DWAF is to establish the status of existing monitoring programmes. DWAF must then integrate all monitoring information within the Mzimvubu to Mbashe ISP area as well as the Amatole-Kei ISP area. From a groundwater perspective there is a serious and urgent need to update the relevant database (NGDB). Other databases will also be assessed and update where necessary. The DWAF must then establish a system of data management and identify the organisations responsible for data management. Auditing of

the information is very important in order to ensure the integrity of the information if it is to be useful and relevant.

A database needs to be established / maintained by the responsible management authority, the CMA. This database will record all monitoring data collected in the region. A custodian of the information database is required.

9.9 PUBLIC HEALTH AND SAFETY

The Department's current commitments are associated with the following:

- Managing floods and drought disasters by direct intervention on the ground.
- Reducing pollution and preventing serious or hazardous pollution events.
- Promoting dam safety.

DWAF's (and the CMAs where applicable) commitments under the National Disaster Management Act, which was promulgated in 2002, are:

- DWAF/CMA will be required to support and enforce disaster management planning by all relevant authorities.
- Drafting a National Flood Management Policy (DWAF).
- Dam safety policy (DWAF).
- Co-operating with the Department of Agriculture on drought relief strategies and policy formulation.
- Prevention of pollution of water resources (i.e. limiting health hazards such as water-borne diseases including cholera).

There have been outbreaks of cholera in the upper catchments of the Mbashe and around Mtata.

With the exception of the Mtata Dam there are no major dams in the ISP area. There are therefore no dam safety risks to warrant a strategy specific to the Mzimvubu to Mbashe ISP area.

9.10 WATER PRICING STRATEGY

Chapter 5 of the NWRS outlines the background to the Water Pricing Strategy that DWAF gazetted and which is in force nationally. DWAFs Eastern Cape Regional Office has already levied water resource charges on bulk water users in these catchments.

The Pricing Strategy is intended to achieve the following aspects of water resource management:

- To achieve social equity by setting differential water use charges. This financial assistance (e.g. also to resource-poor farmers) has a sunset clause of five years.
- Finding the direct and related costs of water resources management.
- To achieve compliance with prescribed standards and water management practices according to the "user-pays" and "polluter-pays" principles. DWAF wants to ensure that negative external costs are

internalised.

- Water charges will be used as a means to manage demand in this water scarce country and to encourage reduction in the wastage of water. Provision is made for incentives for effective and efficient water use.

- Non-payment of water use charges will attract penalties, including the possible restriction or suspension of water supply from a waterworks or of an authorisation to use water.

The pricing of water for the Mzimvubu to Mbashe ISP area is mainly centred on provision of raw water supplies to the local authorities and the pricing of water for hydropower generation. DWAF must assess the price for hydropower generation taking into account the negative environmental externalities.

There is a need for the development of wastewater discharge charges particularly for the Mtata key area because of the importance of this if these catchments are to be economically sustainable and viable. A waste discharge charge strategy is currently under development for the country.

9.11 POVERTY ERADICATION

Poverty can broadly be defined in terms of a lack of access to opportunities for a sustainable livelihood. These opportunities can be characterised in terms of income, skills, knowledge, self-confidence and access to capital assets. The Eastern Cape is one of the poorest provinces, particularly the former homeland states of which the former Transkei is situated in the Mzimvubu to Mbashe ISP area. One of the key characteristics of the Mzimvubu to Mbashe ISP area is the abundance of water, a natural capital for contributing to poverty eradication. The availability of water increases the household capacity to combine water with other assets to produce income and create employment opportunities.

The other aspects that are important to contributing to poverty eradication include the following:

- Physical capital: This involves improving the systems to deliver water and to remove the risk and uncertainty of access to water (including maintenance and management of the water). DWAF is rehabilitating the main distribution schemes for the Ncora Irrigation Scheme. However, support is required from the Department of Agriculture to improve on-farm infrastructure.

- Social capital: This requires identification of the poorest households and strengthening participation in, and influence on resource management systems, creating safety-net structures within communities to ensure the poor have access to water.

- Financial capital: This can be secured through small-scale credit to enhance access to water for productive purposes. DWAF has enhanced access to subsidies by the rural poor if they establish Water User Associations (WUA).

- Human capital: One of the key features identified in the case studies conducted for small-scale irrigation systems in the Eastern Cape (e.g. Ncora and Mngazi Irrigation Schemes) is that the average age of people undertaking agriculture irrigation is approximately 70 years (WRC: 2004). Gender mainstreaming is important to improve human capital development.

The four Integrated Sustainable Rural Development Programme nodes cover the bulk of the Mzimvubu to Mbashe ISP area, namely the Alfred Nzo, OR Tambo, Chris Hani and Ukhahlamba District Municipalities,

home to both the deepest poverty and areas of rich natural resources. At least 37 000 hectares can be irrigated from the under-used rivers within the Mzimvubu to Mbashe ISP area, and 73 000 hectares (FEDO: 2002) can be developed for forestry. These figures need to be investigated and confirmed. The SEA study currently in progress should address this issue.

There are other opportunities that can contribute to poverty eradication, such as the area's potential for tourism development. The pristine Pondoland key area can become a major tourist attraction in its own right. Community involvement in tourism should be encouraged.

10 STRATEGY FOR IMPLEMENTATION OF THE MZIMVUBU TO MBASHE ISP

This ISP document recognises that without effective implementation, the best-laid strategies are of little use. Critical to the effective implementation of any strategy is the mobilisation of resources and capabilities within the organisation and/or division assigned the responsibility for implementation of the strategy. This document sees this as part of the development and resourcing of the Regional Office of DWAF. Strategy 9 in Part 2 of this document presents the strategy for implementation of the action plans discussed in this ISP document.

The approach to the development of the Mzimvubu to Mbashe ISP has been based on the understanding that the water resources strategy formulation is primarily concerned with water requirements and availability rather than the organisation of the institutions involved in water resources management. Hence, the focus has been on understanding the water resources issues and the characteristics of the water user sectors (both consumptive and non-consumptive) in the catchments and how the water resources infrastructure is being managed.

The various directorates and regional offices within DWAF identified as responsible for implementing the strategy need to build the strategies into their business plans.