

SWAZILAND NATIONAL IRRIGATION POLICY

Developed by the Ministry of Agriculture and Cooperatives,
Relevant Ministries, Non Governmental Organisations and
other stakeholders in collaboration with the Food and
Agriculture Organisation

MINISTRY OF AGRICULTURE AND COOPERATIVES

MBABANE, SWAZILAND

JULY 2005

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List of Acronyms and Abbreviations

DLPD	Department of Land Use Planning and Development
FAO	Food and Agriculture Organization
GDP	Gross Domestic Product
IDB	International Development Bank
IWRM	Integrated Water Resource Management
LIDS	Land and Irrigation Development Section
MOAC	Ministry of Agriculture and Cooperatives
NDS	National Development Strategy
NGOs	Non Governmental Organisations
RBA's	River Basin Authorities
SWADE	Swaziland Agricultural Development Enterprise
SNL	Swazi National Land
TDL	Title Deed Land
WAB	Water Apportioning Board

CHAPTER 1: PREAMBLE

1.1 Background and Introduction

1.1.1 Purpose

This document is the National Irrigation Policy of the Kingdom of Swaziland, and is intended to provide policy direction in the irrigation sub-sector. It provides clear guidance regarding the measures that must be adopted in order to increase the national irrigated area and to improve agricultural water management and existing irrigated agriculture thereby adding increased value to the productivity of labour and natural resources in Swaziland. This will lead to the promotion and development of specific irrigation practices that are contingent upon the realities of internal and external markets and development of value added food processing. The policy and its implementation strategy ensure that development is guided and facilitated within a structured and balanced framework that respects physical limits, equity concerns and institutional capacities.

1.1.2 Rationale

The pressing need for an irrigation policy and strategy framework is shared by all stakeholders in both the public and private sectors and has become more acute as a result of persistent drought conditions in the country. Yet the chronic vulnerability of rain-fed agriculture to climatic events persists side by side with an already productive and resilient irrigation sector. Furthermore, a comprehensive agricultural policy for the country is being prepared with the goal, inter-alia, of promoting smallholder agriculture on the Swazi National Land (SNL). Furthermore, given the ongoing reform of the water sector, it is necessary that a national irrigation policy and strategy together:

- result in sustainable natural resource utilization and service delivery;
- guide regulation of existing commercial irrigation initiatives
- promote uptake of smallholder irrigation initiatives and;
- are included in the Water Resources Master Plan.

The Swaziland Government recognizes the importance of attaining a broad based consensus on how irrigation development should proceed and the need for any resulting document to reflect national aspirations.

1.1.3 *Process followed.*

This policy document was developed through a comprehensive consultative process involving all major stakeholders in the water and irrigation sub-sectors. A task team was established by the Ministry of Agriculture and Co-operatives (MOAC) to lead the process and was supported by local and international consultants mobilised in response to Government's request for support from Food and Agricultural Organization (FAO). This was done in order to benefit from FAO 's expertise and worldwide experience in irrigation. Several workshops were conducted at regional and national levels to gather the views of stakeholders. In addition a number of relevant documents including policy documents from other countries were reviewed. The process was undertaken in a manner that ensured gender balance in the views expressed. FAO and the Government of Swaziland funded the whole process.

1.1.4 *Key players consulted.*

The key players that participated in the process included those in the public and private sector namely University of Swaziland, NGOs, FAO staff, Government ministries, extension officers and farmers.

1.2 Problem Statement

Swaziland's agriculture sector is dualistic. A dynamic commercial sector on Title Deed Land (TDL) occupies 40 percent of the land. It holds an estimated 97 percent of irrigated agriculture and uses modern technologies to produce mainly cash crops, principally sugar cane. A traditional, communal tenure based mainly in the SNL focuses on subsistence, semi commercial smallholder agriculture with communal grazing. Maize is the dominant crop with cattle herding on communal pastures and some commercial production of sugar cane, cotton and vegetables with limited use of water. The structural divide between large-scale Title Deed Land (TDL) and small-scale Swazi Nation Land (SNL) has been sustained, in part, by differential access to and allocation of Swaziland's water resources. The predominantly smallholder SNL (where 78 percent of the population live) is marked by low productivity, insufficient commercialization, relatively low income and widespread, abject poverty. The agricultural commercial sector in Swaziland has however, both depended on and benefited from irrigated agriculture, and by its means taken advantage of regional and international trade agreements. The regional and international economic integration is important not only for trade but also for technical cooperation. Although diversification of industrial sectors of the economy has been slowed by changes in regional trade flows, irrigated agriculture still contributes to Swaziland's comparative advantage in key crop sectors. As international trade agreements tend toward the lifting of export subsidies, notably for sugar, it is time for Swaziland's irrigated sub-sector to be in a position to spread risks and diversify both its commercial and

smallholder operations in response to these changing market conditions.

Most important, the issue of the productivity of SNL and its relation to the commercial sector needs to be addressed. In this regard, MOAC is developing smallholder irrigation projects such as the Lower Usuthu Small-Holder Irrigation Project. This project is located on the Usuthu and is managed by a parastatal which government has set up on the basis of experiences with SWADE and the Downstream Development at Maguga dam.

Unlined canals and poorly drained schemes with poor water management practices are heavily infested with water borne disease vectors. It must be ensured that health and environmental requirements are adhered to in irrigation development.

Poverty has risen steadily in the country, with predictions that it will continue to increase at its current rate. In addition food security appears to have deteriorated significantly in the last 5 years. The People's standard of living must therefore be improved, and increased agricultural productivity of water is a key achieving this. Yet in many parts of the country, inadequate water supplies, and deteriorating soil moisture characteristics actually remain a major contribution to seriously constrained food production. Even so poverty alleviation will require reliable crop production, which relies on, among other factors, reliable access to irrigation water. Water shortages are a serious impediment to intensified and diversified agriculture and bringing new land into production; but as crop production via irrigation places a high demand on both water and human resources, a careful and strategic approach is required.

Despite several initiatives and programs by the MOAC, the existing land tenure and water administration systems tend to hinder smallholder development and the transition from subsistence to emergent commercial farmers. This much-needed transition is also severely compromised by the impact of HIV/AIDS on the agriculturally productive population. Such constraints can only be tackled through comprehensive sector-wide policies that take account of changing market pulls and the evolution of population structures in rural areas. But an irrigation policy in Swaziland has to be clear about the room for manoeuvre. There is intensifying competition for the renewable water resource base and land that is available and suitable for irrigation. Equally the experience of publicly managed irrigation in Swaziland has, in common with many other areas of the world, shown desultory performance.

Accordingly, the lack of clear policy guidelines with regard to irrigation threatens to constrain the sub-sector in achieving the national economic growth and poverty alleviation priorities. In particular, there is a need to balance the cash crop dominated irrigation sub-sector with enhanced opportunities in well distributed small scale

irrigated production and improved soil moisture conservation to boost local food security and promote diversification into changing regional markets.

1.3 Development Context

1.3.1 National Development Goals

All policies in Swaziland should be relevant to the Government's stated vision, which is as follows:

"to provide a climate and infrastructure that will progressively maximize the quality and security of life of the people of Swaziland and make the best use of the country's natural and human resources"

To this end, The National Development Strategy (NDS - 1999) includes a subsidiary Vision and Mission Statement which is intended to inspire socio-economic development for 25 years (from 1997) and to provide a guide for the formulation of development plans and for the equitable allocation of resources:

"..by the year 2022, the Kingdom of Swaziland will be in the top 10% of the medium human development group of countries founded on sustainable economic development, social justice and political stability"

The NDS was designed to strengthen the Government's development planning and management capacities and to result in a national consensus on the direction of future developments in the country. It addresses the issue of water resources development and gives several recommendations among which are:

- the development of an overall policy to cover all water uses, the expansion of smallholder irrigation within a national irrigation development strategy
- the encouragement of farmers to utilize all available water to intensify and diversify their production; and
- the planning and construction of small to medium sized dams to provide a reliable source of water for irrigation, livestock, fisheries and domestic use.

1.3.2 Policy and Legislative Framework

Overall management of water resources hitherto has been on an ad-hoc basis through several uncoordinated pieces of legislations, spread amongst a number of Ministries as well as other institutions outside government. These Acts included the Protection of Freshwater Fish Act of 1938, the Swaziland Electricity Act of 1963, the Water Act of 1967, the Water Services Act of 1992, the Komati River Basin Water Resources Development and Utilization Act of 1992, the Joint Water Commission Act of 1992, the Swaziland Environmental Authority Act of 1992, the Environmental

Management Act of 2002, the Swaziland Administrative Order of 1950 and that of 1998, and the Borehole Act (year) of the Geological Surveys and Mines, to name a few. However, a groundbreaking Water Act promulgated in 2003 is intended to harmonize the management of water resources in the country.

The provisions of the Water Act of 2003, include the establishment of a National Water Authority, an interim Water Apportionment Board and River Basin Authorities together with Irrigation Districts and Water User Associations. The Water Apportionment Board is intended to be dissolved when the last of the five river basin authorities becomes established. The Act introduces a water permit based system for water allocation that will be administered first by the proposed Water Apportionment Board and later the River Basin Authorities. The Authority will have to prepare and adopt a Water Resources Master Plan and recommend incorporation of irrigation districts. The Department of Water Affairs will be established and be the Secretariat for the Authority. The Water Act of 2003 states that an individual who uses water to irrigate less than a quarter of a ha or to water less than 30 head of cattle will be considered to be using the water for customary purpose, and will not be required to hold a permit for the use of the water.

The Swaziland Environmental Authority Act, 1992 addresses the issues of water for the environment and pollution control and provides for the establishment of standards and guidelines related to the pollution of air, water and land, as well as for the control of all forms of environmental pollution including pollution caused by the discharge of toxic wastes into the air, water and land. The Environment Act of 2002 repealed the Swaziland Environmental Authority Act of 1992. The purpose of Environmental Management Act of 2002 is to provide for and promote the enhancement, protection and conservation of the environment and where appropriate, the sustainable management of natural resources. It established the Swaziland Environmental Authority as a body corporate

The Swaziland Administration Order of 1998 was nullified by the Swaziland Court of Appeal in 2002 and replaced by the Swaziland Administrative Order of 1950. The Swaziland Administration Act 79/1950 principally deals with administrative matters, and also with responsibility for the production of food. The purpose of the 1950 Act is to amend and consolidate the Law relating to the administration of Swazi Affairs. Section 10 gives power to the Ngwenyama to issue orders, including - under iv) - those requiring any Swazi to cultivate land to such an extent and with such crops as will secure an adequate supply of food for the support of such Swazi and of those dependent upon him. Section 11 gives power to chiefs in the event of famine.

CHAPTER 2: SCOPE, OBJECTIVES AND TAGETS OF THE IRRIGATION POLICY

1.4 Scope

Any irrigation policy is primarily a response to national agricultural objectives and opportunities. The national agriculture development objective is to:

“Facilitate and support the development of a sustainable and competitive agricultural sector that assures food security at household and national levels, and maximizes the sector’s contribution to Gross Domestic Product.”

In particular it is targeted at ensuring food security, maintaining the existing agricultural resource base, generating income and employment, contributing to industrial development and increasing agricultural exports. While the irrigation policy and strategy document cannot be expected to address all constraints it will provide, together with other statutory instruments and sectoral policies, the fundamental and requisite framework to guide the development of commercial activities; stimulate accelerated investment in smallholder irrigation initiatives and engender the sustainable use of irrigation facilities and wise use of the country’s fragile natural resources.

The policy will do this by facilitating and regulating irrigation sub-sector activities while creating the conditions to attract public and private sector investment and donor assistance. Specifically the irrigation policy recommendations and strategy will provide the essential framework that will:

- Guide future irrigation development and the allocation of water for irrigation purposes within the framework of the Water Act 2003.
- Strengthen the national capacity in planning, implementation and management of smallholder irrigation development.
- Improve current management and operation of existing irrigation schemes
- Facilitate the empowerment of smallholder irrigators on Swazi National Land.
- Create an enabling environment for, and stimulate increasing investment in the irrigation sub-sector.

And thereby raise the contribution of the agricultural sector to GDP.

These objectives will be achieved with the full participation of the relevant stakeholder groups, notably the private sector, local leaders and farmer groups on SNL lands. Recommendations will need to establish a clear direction for irrigated agriculture within the National Agriculture Policy. This will depend very much upon

achieving a balanced approach to increased macro-economic growth and poverty alleviation and hence an appropriate mix of irrigation practices.

Accordingly, any strategy for implementing this policy must be based on a thorough and pragmatic diagnosis of the existing status of irrigated agriculture; the underlying trends (including market trends) and convincing projections for water use in agriculture. Furthermore, these issues must be analyzed in comparison with other sector trends to establish the nature and extent of competition for water that is currently experienced and which can be anticipated in the medium to long term. Decisions on the scale and styles of irrigation to be promoted will be contingent upon this analysis.

1.5 Objectives

1.5.1 Overall Objective

The overall goal of this policy is:

“To ensure that the irrigated agriculture sub-sector in Swaziland contributes fully to economic growth and poverty alleviation in accordance with the Government’s Stated Strategy; the National Development Goals, the Water Act of 2003 and the need to use the country’s limited natural resources in a sustainable fashion.”

2.2.2 Specific Objectives

To address the problems identified in Section 1.2 in a way that is consistent with the development context of the country as described in section 1.4, the Irrigation Policy has three specific objectives.

The first reflects the need for equitable, sustainable and productive use of water in the Swaziland agricultural sector. For this, the specific objective is:

“To optimize the productivity of water in the country’s agricultural sector and broaden the scope for agricultural intensification and diversification”

The second reflects the need for strong and accountable institutions that facilitate and regulate the development of the sector while ensuring that its assets are used sustainably and for the benefit of the nation at large. For this the specific objective is:

“To establish an irrigation sector institutional landscape characterised by transparent regulation and strong, participatory and/or responsive

and accountable institutions in Swaziland”

The third reflects the pressing need to increase the number of irrigating farmers in the country particularly, but not exclusively, the poor farmers in the SNL. For this, the specific objective is:

“Enhance the structure of the irrigated subsector by promoting new public and private investment opportunities for emerging farmers.”

1.6 Targets

The policy objectives will apply to a specific set of policy targets that will be directly impacted, supported or involved in agricultural water management. Broadly these can be clustered under following three groups:

- User groups, including potential irrigators on the SNL
- Public/Private service providers
- Regulatory institutions including those responsible for natural resources

This policy will address all groups in a balanced manner.

1.6.1 Principles

The achievement of policy objectives is not simply a matter of expediency. Certain development principles have to be accepted in reaching the stated objectives to maintain equity and to protect the public interest in land and water resources. A sub-sector policy in irrigation and drainage will therefore need to be predicated on the following principles of natural resource management.

- Equitable allocation of water rights and land ownership,
- Beneficial use of water within the agricultural sector, including optimising use of stored water and the mobility of rights to use in water and land,
- Environmental responsibility in irrigation and drainage and the application of good practice,
- Clear operation and regulatory roles between agriculture in production and water in supply and establishment of a working interface between them,
- Engagement of private and public sector agencies where they are most effective
- Functional (systemic) inter-sector management of water across river basins,
- Clear alignment of policies and plans between public agencies
- Coherency of planning and budgetary lines
- Attention to scale – let technology and institutions match their respective purpose

Some of these principles are already covered in the draft national constitution, environmental legislation and the provisions under the proposed Land Policy and the

Water Act of 2003, notably the mobility of rights in use. These principles need to be clarified. Other, mainly institutional principles are not and need to be elaborated.

First, key provisions of the Water Act do need clarification in this policy. This is particularly the case for the allocation of water within agriculture and between other sectors and the relative mobility of rights in land use and water use. The Water Act is also categoric on the evolution of an institutional hierarchy with the establishment of a National Water Authority and Department of Water Affairs (at national level) and the transition from a Water Apportionment Board to River Basin Authorities and the formation of Irrigation Districts and Water User Associations. This institutional framework for water resource management has yet to mature. The Act has set a period of five years from March 2003 for full implementation of these institutional provisions.

Second, the respective roles of the public and private sector in relation to operational and regulatory function need elaboration particularly with respect to agricultural water management. The proposed river basin authorities will be responsible for implementation of a water resource management plan (under the Water Resources Master Plan) across Swaziland's five river basins. They will retain all the present powers of the Board within their basin jurisdiction and have "authority" over Irrigation Districts, Project Boards and User Associations i.e. a regulatory function only. It is assumed therefore that operational functions are left in the hands of Irrigation Districts, Project Boards and User Associations. The support in the application of irrigation technology will continue to be provided by MOAC and the private sector.

CHAPTER 3: THE POLICY

3.1 Water Productivity in Agriculture

3.1.1 *Water Productivity*

3.1.1.1 *Catchment Management Issues and policy statements*

A. Erosion of catchments

Issue: Most catchments are heavily eroded resulting in the siltation of water bodies

Policy: Identify, evaluate, demonstrate and promote effective catchments management practices.

Policy: Promote soil amelioration and management approaches to improved soil moisture holding capacities.

Policy: Promote agro-forestry as a soil management, micro-climate amelioration and household productivity measure.

Strategies:

- i. Develop appropriate programs on integrated catchment management.
- ii. Develop catchment management plans.
- iii. Rehabilitate degraded catchment areas.
- iv. Protect water bodies and dam sites from activities that have an adverse effect.
- v. Enforce the stipulated distance of cultivated lands from the watercourses.
- vi. Conduct appropriate research program on catchment management

B. Erosion of soil due to irrigation practices

Issue: Some irrigation practices degrade the soil through erosion.

Policy: Enforce soil conservation measures in irrigated areas.

Policy: Adopt soil erosion mitigation measures in areas with a risk of land degradation.

Strategies:

- i. Develop and apply irrigation strategies according to land characteristics
- ii. Prepare appropriate information packages for farmers/land users on sustainable irrigation management

C. Accumulation of salts in poorly drained areas

Issue: Production is compromised by the accumulation of salts in poorly drained areas.

Policy: Require that irrigated areas be properly drained in order to avoid risks of salinization

Strategies:

- i. Develop and apply appropriate irrigation schedules
- ii. Installation of drainage lines/ditches.
- iii. Proper layout of surface and sub-surface drainage systems should be incorporated in the irrigation design.

D. Exploitation of wetlands

Issue: Wetlands are not exploited in a manner that is sustainable.

Policy: Protect wetlands and allow them to be used as sources of irrigation water only when compatible with existing and future environmental Rules and Regulations.

Strategies:

- i. Identify wetlands with irrigation potential
- ii. Develop and utilize wetland for irrigation

E. Depletion of environmental flows

Issue: Occasionally, the water available is less than the water allocated resulting in the depletion of environmental flows.

Policy: Recognize environmental flow requirements as the priority use of water in a catchment.

Strategy: Determine and avail required water for the ecological environment.

F. Spreading of alien invasive species

Issue: Water consuming alien invasive plant species are spreading in some catchments resulting in the reduction of water resources available for irrigation, and causing siltation as it encourages erosion because there is no undergrowth.

Policy: Enforce the removal of alien species from watersheds by either government agencies or civil society entities as appropriate.

Strategies:

- i. Conduct public awareness campaigns on the effects of invasive alien plants
- ii. Develop and implement a programme of eradication and controlling the spread of alien invasive plant species.
- iii. Enforce screening measures for plant material being introduced into the country.
- iv. Periodically update the inventory of foreign and invasive plant species
- iv. Carry out research programmes on alien and invasive plant species.

3.1.1.2 Water Quality and Quantity Issues

A. Taking into consideration of water quality

Issue: Water quality is currently not taken into consideration in the issuance of water permits for irrigation.

Policy: Consider both the water quantity and quality when issuing water permits for irrigation.

Strategies:

- i. Carry out analysis of the water quality in a river reach for use in considering an application for an irrigation permit.
- ii. Regular monitoring of the water quality in storage and at effluent discharge points especially during times of high evaporative demand.
- iii. Review and enforce effluents and receiving water standards for all water in the country.

B. Deterioration of water quality due to agricultural chemicals

Issue: The use of water for irrigation can result in the deterioration of the water quality in the river system due to agricultural chemicals affecting downstream users and health standards.

Policy: Review and enforce water quality standards, and monitor compliance of the return flows from irrigation.

Strategies:

- i. Water permits holders should abstract the right quantity to avoid having contaminated return flows.
- ii. In case the production of contaminated tail water is inevitable, the return flows should be treated before being returned to the river.

- iii. Charges for pollution should be introduced and enforced.
- v. Irrigators must indicate in their application for a permit as to how they will deal with contaminated tail water.

C. Water harvesting

Issue: The full potential of water harvesting is not realized in the country

Policy: Water harvesting techniques and technologies must be exploited to the fullest.

Strategies:

- i. Develop, demonstrate and disseminate information on appropriate water harvesting technologies.
- ii. Undertake programs to develop water-harvesting structures.

D. Utilization of allocated water.

Issue: There are a number of permit holders who are not fully utilizing their allocation of water, creating scenarios where water seems to be fully utilized while in reality it is not the case.

Policy: To ensure that all allocated water is fully utilized and any unutilized water shall be reposed.

Strategy:

- i. There should be regular monitoring and reporting by responsible authorities on the utilization of the permits.
- ii. Enforce the Water Act of 2003 on the repossession of unused water

3.1.1.3 Water Use Efficiency Issues

B. Efficiency of irrigation systems

Issue: Low efficiency irrigation systems account for a bigger portion of the irrigation sub-sector. Poor designs, operations and management result in low water productivity.

Policy: Advocate for the use of water saving irrigation technologies and have incentives for the use of water saving irrigation technology and proper management practices.

Strategies:

- i. Irrigation designs must take into account crop water requirements and soil characteristics.
- ii. Promote irrigation Systems with control structures for water regulation and distribution.
- iii. Promote incentives to farmers for efficient water utilization.

- iv. Promote the lining of water conveyance systems
- v. Irrigation scheduling should take into consideration soil moisture content.
- vi. Train farmers on irrigation and operations and maintenance.
- vii. Put in place a system of economic water pricing that discourages water wastage by means of volumetric charges.
- viii. All irrigation abstraction points must have measuring devices of water used and records of which are to be submitted upon request by the river basin authority.

3.1.1.4 Water Allocation Issues

A. Adequacy of water

Issue: Water is not adequate for everyone interested in irrigation and yet the public is not aware of this.

Policy: Public information campaigns shall be undertaken to appraise all stakeholders of the prevailing situation in the country and also on the provisions of the Water Act 2003.

Strategy : conduct campaigns on the water situation in the country

B. Water allocation versus available water

Issue: During the months of peak irrigation demand, the water allocations outstrip the available amount of water in the river.

Policy: Irrigation water abstractions shall be regulated through the appropriate agencies.

Strategy:

- i. Compile periodic requirements for irrigation water together with river flow levels during the different months of the year and regulate abstraction to ensure equitable usage while allowing for environmental flows.
- ii. Training of farmers in water saving technology.

C. Illegal trading with permits

Issue: There is a lot of illegal trading with permits leading to disputes. At times one permit is used in more than one irrigation area resulting in over abstraction.

Policy: Water permits are to be used by the registered owner and will be tied to the land which is in the application.

Strategy: Any permit holder found trading with a permit would have his/her permit withdrawn.

D. Mechanisms for allocation of water

Issue: Inappropriate mechanisms for the equitable and economically efficient allocation of water

Policy: Water allocation shall be based on economic, equitable and efficient utilization.

Strategy:

- i. Investigate and promulgate mechanisms for equitable and economically efficient allocation of water.
- ii. Introduce a water pricing system that will ensure efficient and economic use of the scarce resource.

E. Guidelines concerning use of water saved within permit

Issue: There are no guidelines, regulations or mechanisms concerning how or where water saved within a permit as a result of improved practices will be utilized

Policy: Water saved within a permit as a result of improved irrigation technology and practices or crop diversification shall be reallocated in a way that best serves the common objectives of economic efficiency, social equity and environmental sustainability.

Strategy:

- i. River Basin Authorities (RBAs) should develop incentives for encouraging permit holders into water saving technology so as to expand irrigation area.
- ii. Introduce a water pricing system that will ensure efficient and economic use of the scarce resource.
- iii. Buy back water saved by farmers who are unable or unwilling to expand their irrigated fields.

3.2 Institutions

3.2.1 Institutional Issues and Policy Measures

3.2.1.1 Gender and Social Issues

A. Women as majority of farmers in SNL

Issue: A significant number of farmers on SNL in the irrigation sub-sector are women yet they have constrained access to factors of production such as land allocation and credit facilities.

Policy: Women shall have equal access to irrigation facilities and services including credit services and shall participate fully in the leadership of irrigation water user associations and districts.

Strategies:

- i. Tailor training initiatives in the irrigation sub-sector that take into account the specific needs of women.
- ii. Irrigation technology development should take into account gender issues.
- iii. Access to irrigation development loans should be non-gender discriminatory.
- iv. Create conducive environment for women to be fully involved in irrigation development.

B. The youth forming large portion of rural population

Issue: The youth form an increasingly large portion of rural populations yet their participation in irrigation development is limited.

C. Other vulnerable groups

Issue: Other vulnerable groups such as the elderly and handicapped are marginalized in terms of accessing resources and technology for irrigation development.

Policy: The youth shall be encouraged to participate in irrigation farming and shall have access to irrigation facilities and services, including appropriate credit services.

Strategies:

- i. Tailor training initiatives in the irrigation sub-sector that take into account the specific needs of the youth.
- ii. Train the youth in irrigated farming activities.
- iii. Provide incentives for the youth to participate in farming activities.

3.2.1.2 Water User Organization Issues

Involvement of farmers in planning of irrigation schemes

Issue: Irrigators are not fully involved in all stages of irrigation projects development of their irrigation schemes.

Policy: Farmers participation shall be encouraged in all stages of stages of irrigation projects cycle which include; identification, planning, implementation, financing, operation, maintenance, monitoring and evaluation.

Policy: The formation and strengthening of Water User Associations and Irrigation Districts as required by the Water Act of 2003 shall be facilitated.

Strategies:

- i. Provide information packages for farmers on project development and management.
- ii. Ensure that all developmental activities will be implemented with the participation of farmers.
- iii. Employ participatory methods in all irrigation development stages.
- iv. Build capacity through training and information distribution.

3.2.1.3 Service Delivery Issues

A. Organisations and institutions servicing irrigation sector

Issue: Organisations and institutions in the country servicing the irrigation sub-sector have limited capacity.

Policy: Action shall be taken to ensure that organizations and institutions servicing the irrigation sub-sector have appropriate capacity.

Strategies:

- i. Analyse the demands on the irrigation sector in the short, medium and long terms.
- ii. Determine where public agencies will continue to give support to smallholder irrigators
- iii. Extend incentives to start-up entrepreneurs in irrigation services.

B. Market institutions and services

Issue: Market institutions and services are inadequate and lack capacity to absorb irrigation products at all times.

Policy: Mechanisms shall be put in place for improvement of marketing and processing institutions to respond to the output of irrigated agriculture.

Strategies:

- i. Improve access to post harvest and agro-processing technology.
- ii. Construct and provide access to strategically located storage and marketing facilities.
- iii. Removal of all monopolistic barriers to all forms of marketing and processing.
- iv. Advocate for the production of marketable products i.e. high value crops.

3.2.1.4 Regulation, Monitoring and Evaluation Issues

Issue: Improperly regulated water abstraction mechanisms end up affecting existing users with customary rights.

Policy: Customary water use shall not be compromised as a result of irrigation development.

Strategies:

- i. Draft, enact and promulgate an appropriate legal framework to protect customary water users.
- ii. Review and revise the Irrigation Act on a regular and demand driven basis
- iii. Develop in a participatory and consultative fashion a system of regulations addressing inter-alia, service delivery standards, return flow quality, the prevention and mitigation of soil erosion and siltation hazards, the rights and obligations of irrigators, the rights and obligations of service providers and any other issues that may be identified
- iii. Enforce the said regulations in an objective and transparent fashion.

Issue: Improperly managed irrigation schemes end up performing below expected levels.

Policy: Irrigators shall be assisted in the monitoring and evaluation of their schemes to ensure sustainability.

Strategies: i. Develop guidelines for the monitoring and evaluation of irrigation schemes

- v. Enforce the implementation of the guidelines.
- vi. Conduct frequent visit and inspection of irrigation schemes.

3.3 Investment Opportunities for emerging farmers

3.3.1 Investment Opportunity Issues and Policy Measures

3.3.1.1 Infrastructure Issues

A. Dams and water harvesting

Issue: There are not enough dams to harvest excess runoff from the rivers leading to a low assurance of supply of irrigation water.

Policy: Where environmentally acceptable, develop and implement a program on dam construction.

Strategies:

- i. Prepare an inventory of affordable (in economic, social and environmental terms) irrigation development opportunities in the country.
- ii. Develop a strategy for their implementation and incorporate this strategy into the Water Master Plan called for by the Water Act.
- iii. Encourage the participation of donors and the private sector in the construction of dams.
- iv. Development of infrastructure for bulk irrigation water supply and storage by government (construction of strategically placed irrigation water storage facilities).

B. Water conveyance and distribution

Issue: Water conveyance and distribution has not reached the stage where there is easy access to irrigation water.

Policy: Opportunities shall be explored to ensure that adequate infrastructure for irrigation water is made available.

Strategies:

- ii. Facilitate the development of water conveyance infrastructure to ensure equitable access to irrigation facilities.
- iii. Carry out studies to identify promising opportunities for securing more irrigation water supplies and conveying such water to potential irrigation areas.

- iii. Undertake studies into infrastructural
- iv. Opportunities to make water accessible and more easily reallocated within the irrigation sub-sector.
- v. Undertake studies of investment-oriented enhancement to service delivery, and promising options initiated.

3.3.1.2 Operation, Maintenance and Cost Recovery Issues

A. Maintenance of dams, weirs and canals

Issue: Maintenance of dams, weirs and canals etc. has not been adequately attended to and most of the responsibilities have been left with government.

Policy: The operation and maintenance of irrigation facilities and their appurtenant infrastructure shall be the responsibility of the users.

Strategy:

- i. Establish and enforce a transparent system of fines and other regulatory measure to discourage the misuse of irrigation infrastructure, over-abstraction and of water and the pollution of water courses.
- ii. Prepare information packages on maintenance of the irrigation infrastructure (dams, weirs, canals).
- iii. Facilitate training of farmers on the maintenance of irrigation infrastructure
- iv. Facilitate the transfer of maintenance of irrigation infrastructure to users
- v. Facilitate the rehabilitation and/or upgrade existing schemes as appropriate.

B. Tariffs and fees for water permits

Issue: Water permits for irrigation are issued free of charge while costs are incurred during the processing of applications

Issue: Water is used free with no user charges.

Policy: On the basis of thorough civil society sensitisation, consultation and participation, a transparent irrigation service tariff structure in accordance with the Water Act, which requires that such tariffs are set, at least in part, user shall establish groups.

Policy: A tariff structure in accordance with the water Act of 2003 shall be established and implemented.

Strategies:

- i. Engage in a sensitization and consultation process for stakeholders on the introduction of tariffs.
- ii. Fees for issuing water permits shall be established and effected.
- iii. Ensure that irrigation service tariffs are disbursed for the purpose that they are levied, and do so in a transparent and accountable fashion.
- iv. Allow the Water Apportionment Board and later the River Basin Authorities to establish and collect charges for administering water permits
- v. Establish revenue collection structures.
- vi. Set and review permit application and renewal fees whenever necessary.

3.3.1.3 Financing Irrigation Issues

A. Credit services for irrigation development

Issue: Irrigation development is an expensive undertaking and a number of farmers are finding problems in securing adequate finance.

Policy: Farmers shall be assisted to ensure that they have access to adequate finance for irrigation farming.

Strategies:

- i. Facilitate access to adaptable and flexible credit services for small farmers
- ii. Strengthen farmers' capacity to manage irrigation schemes such that their projects can attract financiers.
- iii. Facilitate a situation where loans are deducted by buyers and paid to financiers to ensure confidence on the side of financiers.

B. Diversification in irrigated agriculture

Issue: Marketing opportunities limit the diversification of irrigated products.

Policy: Establish mechanisms that will improve marketing and processing institutions, infrastructure and services to respond to the output of irrigated agriculture.

Strategy:

- i. Conduct research on crops that are economically viable for irrigation farming
 - ii. Disseminate information to stake holders.
- Strengthen irrigation extension services in the country.

CHAPTER 4: INSTITUTIONAL ARRANGEMENT

4.1 Implementation Strategy

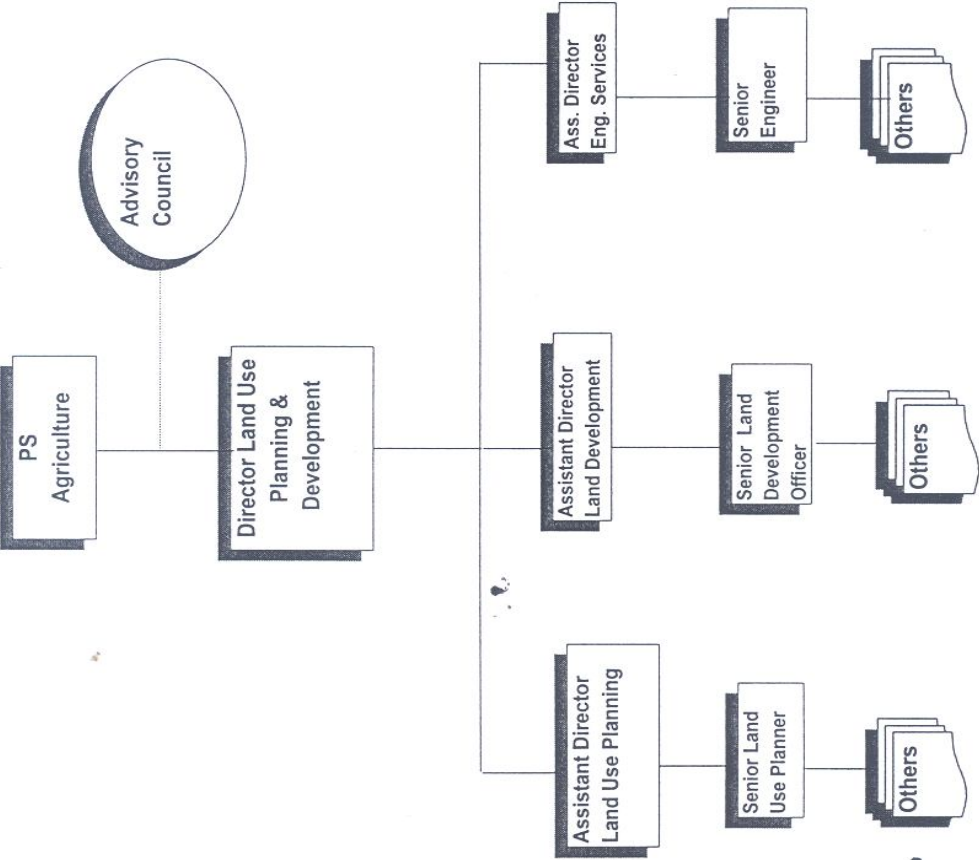
The implementation of the Irrigation Policy will be through the strategies developed for each policy statement. Irrigation stakeholders will develop an implementation plan through a consultative process to guide the implementation of the proposed strategies. The strategies and action plan will be reviewed periodically so as to guarantee that it adequately addresses emerging needs.

4.2 Institutional Framework.

For effective and efficient implementation of the policy and irrigation development in general there is a need for stakeholder collaboration in the process. Irrigation development has to be supported by other sectors that include; water development and management, marketing, financing, training and extension services etc.

The policy guidance for irrigation development in the country shall remain the mandate of the Ministry of Agriculture and Cooperatives. This responsibility will be coordinated and implemented by the proposed Department of Land Use Planning and Development (DLPD) as proposed by the ZIMKEN REPORT of 2001. The onus shall be on the three sections of the Department (i.e. Land Planning, Land Development, and Engineers Sections) to ensure that an effective coordination is in place for the proper and efficient implementation of this Policy. (See the proposed Organogram for the DLPD next page)

Proposed Structure of the Land Use Planning & Development Department



The DLPD shall coordinate and facilitate all irrigation development activities in the country and in doing so shall involve all stakeholders through the formation of an Irrigation Development Working Group. Representatives in this working group shall include the following;

Dept of Water Affairs of the Ministry of Natural Resources and Energy (currently Water Resources Branch)

Institutions involved in development of irrigation projects

Institutions involved in marketing of irrigation products

Non-Governmental Organizations (NGOs)

Institutions of Higher Learning

Financiers of irrigation projects Developers and suppliers of bulk water for irrigation

DLPD – Secretariat

Swaziland Environment Authority

It is imperative that the proposed institutional arrangement of the DLPD is put in place so that all resources are appropriately put together for the swift implementation of the Policy. The existing Land and Irrigation Development Section ([LIDS](#)) shall facilitate the implementation of the policy and irrigation development until the formation of the DLPD is completed.

The Department of land Use and Mechanization of UNISWA shall coordinate research activities on irrigation and related matters. A working relationship with the LIDS and eventually the DLPD will have to be established through an MOU. In the meantime the Agricultural Research Division shall work on the establishing an irrigation research unit, which will take over the coordination of irrigation research activities in collaboration with DLUM of UNISWA and other stakeholders.

Some of the key functions of the irrigation component of the DLPD will include:

- i. To oversee the implementation and adherence to the policy
- ii. To provide coordination and facilitate irrigation development in the country
- iii. To be involved in the mobilization of resources for irrigation development
- iv. To facilitate improved management of irrigation schemes

- v. To facilitate the planning, development and implementation of smallholder irrigation schemes.
- vi. To coordinate and conduct irrigation extension services.

4.3 Monitoring and Evaluation

A system for monitoring and evaluation will be developed which shall be used during the periodical monitoring and evaluation exercises. The monitoring and evaluation will be conducted on the strategic and action plans. This monitoring and evaluation exercise will ensure that the policy is implemented systematically and identify gaps and shortfalls where they might exist or arise. In the process it will ensure that strong linkages, coordination and synergies are appropriately developed for an effective and efficient implementation of the irrigation Policy. The implementing strategies will be reviewed and modified on that basis of the results of the monitoring and evaluation.