Water is Precious

NATIONAL WATER POLICY

(draft FINAL)

"Water is everybody's responsibility"

INTRODUCTION

Major global concerns such as water shortages against burgeoning population growth, water pollution and climate variations causing severe droughts, have prompted calls for water sector reforms worldwide. Naturally, the people of the Solomon Islands, as responsible stewards of the environment, have joined the global efforts of addressing such alarming issues through engaging in a comprehensive water sector reform programme of their own. The long-established perception that water is an infinite resource is not consistent with sound stewardship and the need to seriously protect and conserve our environment's precious natural resource for future generations to enjoy is realized in this policy.

Government's proactive stance in ensuring that the water sector is reformed is reflected in the National Economic Recovery, Reform and Development Plan 2003-2006 (Key Strategic Area 4). With the phasing out of that plan, the focus on water sector improvement continues under the current Government and is reflected in its policy framework (May 2006). Effectively, this Water Policy (The Policy) document merely builds on past and continuing efforts aimed at bringing the holistic vision that the Solomons hold of their water into view.

The Policy discusses the current status of Solomon Island's water sector and provides a broad set of strategies, designed to guide the sector's development and focussing on ensuring that the needs and aspirations of the people of SI are met. To this end, the objectives of the Policy will facilitate an enabling environment that encompasses an integrated multi-sectoral approach to sustainable water management.

The Policy addresses in the main the two sub-sectors below:

i) Water Resources Management
ii) Water (and Sanitation) Services

VISION

Every Solomon Islander shall have reasonable access to sustainable, adequate, quality water.

MISSION STATEMENT

In partnership with all stakeholders, ensure the sustainable development, management and supply of water, wastewater services as well as appropriate sanitation for the benefit of current and future generations of Solomon Islanders.

WATER SECTOR

Definition

The water sector can be generally defined or described as a group of institutions that are interrelated through a common interest in water (consumptive and non-consumptive). This includes agencies that develop and manage water resources, provide water supply, wastewater and sanitation services and use significant volumes of water for specific sectoral needs, such as agriculture, electricity and recreational purposes.

Mandate

The existing legislation in the Solomon Islands that govern and impact on the water sector comprise the following:

Water Resources Management (conservation and development)

River Waters Ordinance 1969: provides measures for watershed control in relation to rivers only and regulates the use of designated river water through permit applications;

Environment Act 1998: provides for the protection, preservation and conservation of the environment, including the prevention and control of pollution to water;

Public Health Ordinance 1970: authorises inspections to be conducted for the regulation of water pollution

Solomon Islands Water Authority Act 1992: the Solomon Islands Water Authority was established under this Act and is currently charged with providing the proper management and development of urban water resources and services and

sewerage services in the Solomon Islands.

Environmental Health Act & Provincial Ordinance

Organisations and Functions of the Water Sector

The table below indicates the key organizations and their roles in relation to the water sector in the Solomon Islands.

Organisation	Function
Ministry of Mines and Energy, Division of Water Resources	Responsible for water resources assessment and management: SIWA functions under this Ministry.
Department of Forestry, Environment and Conservation	Responsible for environmental assessment and protection.
Ministry of Health	Water supply in rural areas and supervision of sanitary conditions for the whole Solomon.
Ministry of Provincial Government and Constituency Development	Responsible for water supply in the provincial centers except the urban areas where SIWA operates.
Ministry of Agriculture and Land	Responsible for executing contracts with the land owners for water rights

SECTOR PERFORMANCE

The performance of the Water Sector examines what and how the sector has contributed towards the social, economic and environmental development of the Solomon Islands. Performance can be measured by developing appropriate indicators that demonstrate how well water sector goals and objectives are being met. Such indicators provide a useful tool in reviewing this policy and its associated programmes. In order for comparisons to be drawn and forecasts made regarding water performance, qualitative and quantitative indicators need to be developed first from a reliable source of data, and thereafter requiring consistent collection.

The indicators discussed in this document show the extent to which the sector has been developed so far to manage water resources, provide basic water and sanitation services, and the quality at which these services are being delivered. While not comprehensive given inadequate data availability, the indicators provide insight into problems and potentials for integrated water resources management.

Water Resources

Water resources is a general term encompassing the concepts of availability (the location, spatial distribution, or natural fluctuations of water); accessibility (given availability, whether people can access it or afford water in adequate quantities); and quality (whether accessed water is free of contaminants and safe for consumption). It also describes water in various forms, such as groundwater and surface water.

Water Resources and Development.

Water resources availability in Solomon Islands varied considerably from over abundance (sizeable rivers and streams on high islands) to scarce water resources in small islands and low lying atolls (rain harvesting and exploitation of vulnerable fresh water lenses). Where there is abundance, the question of quality always prevails.

The much needed development activities such as logging (especially uncontrolled) which is currently widespread in the country and the traditional slash and burn practices of farming (increased with increased population) have gradually and systematically negatively affected surface water resources quality and quantity, a threat to population and communities who are dependent on the water sources affected. This is real and an on-going concern for serious addressing.

In Solomon Islands, most water resources development are for human consumption and personal use, agriculture, industrial and some power generation (hopefully more hydro-power developments as renewable energy source).

Water Resources Management

Management refers to the ability to manage water development in a way that ensures long term sustainable use for future generations. In the Solomon Islands, responsibility for water resources management, including assessment, planning and development, is shared between the Ministry of Mines and Energy, Ministry of Health and Medical Services and Solomon Islands Water Authority. The present institutional framework for water resources management lacks proper coordination, featuring fragmented control as well as duplication and negligence of functional roles.

Issues pertaining to water rights and allocation have been flagged for Government intervention given the situation of customary land rights and ownership of water sources. Essentially, water resources are controlled and

regulated by Government; they are not explicitly declared as state property. This highlights the need for legislation review. There are also pressing concerns pertaining to the adverse effects of climate variability, traditional agricultural practices, deforestation and logging activities on the quality and quantity of water resources. Some efforts made to address these issues are reflected in the country's action plans, primarily targeted at improving the dearth of skills and capacity in overall water.[1] However, implementation is likely to occur over a long-term period.

Community Awareness/Participation

Fundamental to the success of water sector reforms is the level of participation and awareness of the community/stakeholders. Their input at various decision-making levels is warranted to ensure that the management of water resources is effective and efficient. Awareness amongst Solomon Islands' general population is limited, particularly in the rural areas concerning the effects of development, agricultural methods, climate change and natural disasters on water quality and quantity. Ignorance is also apparent regarding the nature of water and its finite state.

The Population Census 1999 revealed a low literacy rate nationwide which further exacerbates the lack of awareness regarding responsible water resources management. Developing and implementing measures for increasing awareness amongst the general users and landowners are critical.

Statistics reveal that there is almost an exclusion of women from the decision-making process in water resources management, notwithstanding their predominant composition as users of water. For effective water governance and management, gender equity in decision-making process is necessary.

Accessibility

Access to water resources, predominantly located on customary land, is hindered by the land owners' demands for compensation and lack of specific legislation.

Human Resource Development

The water resources division of the Department of Mines and Energy comprises hydrology and hydrogeology sections and employs a total of 6 all male technical personnel. Limited specialised skills are available in hydrological assessment and monitoring as well as water resources assessment, development and

[1] National Economic Recovery, Reform and Development Plan 2003-2006 and the Ministry of Mines and Energy Corporate Plan.

management. There is a great demand for expertise in this area. In addition, enhanced skills development in policy formulation and review and planning are needed.

Financial Capacity

Various programmes associated with improving water governance and management processes are funded by various donor agencies. However, effective implementation and monitoring activities are hindered by a lack of funds. Government budget estimates for 2006 – 2008 (Corporate Plan 2006-2008) indicate that the water resources division of the Department of Mines and Energy receives less priority over the mines, geology and energy sectors.

Water Services

In the context of this policy, the definition for water services includes the provision of drinking water and wastewater services (including sewage treatment and also sanitation requirements) to households and industry.

Water Supply and Sanitation

The relationship between water and population can be summarized as “healthy water means healthy people”. Everyone has the right to access safe and adequate water and good sanitation services. These essential basic services with appropriate awareness on hygiene can reduce health risks associated with bad water (eg. Diarrhea).

The Rural Water Supply and Sanitation (RWSS) Division of the Ministry of Health and Medical Services attempts to implement this important goal of safe water for health in the rural setting whilst SIWA for the urban setting.

Infrastructure

The infrastructure that supports the water services network in the Solomon Islands includes:

Urban:

- 17 water reservoir stations exist with capacities of around 10,000m^3 with 1/3 not in use.
- Water transmission pipeline (length?)
- Water distribution pipeline of 122km serves Honiara. PVC pipes make up the majority of the pipeline network.
- Chlorination disinfection facilities are located at water sources

- 4 groundwater bore fields – White River borefield (JICA funded) used only for emergencies
- Konglai Spring source has one high lift pumping station which transfers the biggest volume of water and consumes the largest electric power.
- Domestic and communal septic tanks
- Sewer pipelines connect 12% residents in Honiara
- Small scale sewerage treatment facilities serve a central hospital and a few private companies in Honiara

Assets	**Ministry of Health/Provincial Agencies (to be provided)**	**SIWA for Honiara**	**Total**
Spring Sources		4	4
Groundwater bore fields	Nil	4	4
Water treatment facilities	Nil	0	0
High lift pumping stations	Nil	4	4
Reservoirs (capacity 10,000m^3)	Nil	17	17
Bore supply systems	Nil	5	5
Pipe length (kilometers)	1788	122	1910
PVC		78	78
Polyethylene		9	9
galvanize iron		24	24
Cast iron		12	12
Pipe size (diameter) range:	15-200 mm	13-450 mm	

Service Providers

Water services include the supply of water to domestic and commercial customers and the provision of sewerage systems to parts of the urban population. The Solomon Islands Water Authority (SIWA) currently delivers urban water supply and sewerage system services and products to customers residing within its zoned jurisdiction of operation, while the Ministry of Health provides water supply in rural areas and monitors the sanitary conditions for the whole country. The Ministry of Provincial Government and Constituency Development is responsible also for water supply in the provincial centers apart from the urban areas that are served by SIWA.

Sludge (from septic tanks) collection services are operated by the Honiara City Council and a private company for the Capital.

SIWA Customers

	Honiara	**All cities (incl. Honiara, Noro, Auki & Tulagi)**
Population in districts supplied by SIWA	66,402	**76,831**
Served population	49,221	**56,094**
Served ratio (%)	74	**73**
Customers	6,510	**7,321**
Water consumption - domestic customers (l/c/d)	197	**168**
Water consumption for all customers (l/c/d)	334	**276**
Water Production (m^3/day)	25,719	**28,751**
Sewage Discharged into Sewerage System (m^3/day)	2,490	**2,490**

Source: Study of SIWA water supply and sewerage system, 2005, project for improvement of SIWA water supply and waste water service funded by JICA.

Quality of Services

During peak demand periods, approximately 25% of Honiara's water distribution districts suffer from low water pressure, resulting in inability to get water during the day. In the unserved areas within and outside the city boundaries, a significant number of residents, particularly women and children, are still performing the laborious task of drawing water directly from the springs or rivers for their basic needs. Recent reports indicate that customers whose tap water is derived from spring water sources often complain of the water quality after heavy rainfall periods in the corresponding catchment area.

Accessibility

Most people have access to water in the Solomon Islands, however not all are connected to reticulated water. The 1999 Census deduced 60% of households were supplied by SIWA or by the Rural Water and Sanitation Supply Scheme, with only 52% having access to a piped water supply (69.6% in urban areas, 50% in rural areas). Nationwide, 38.1% of the households depend on outside

shared piped water, 21.6% on rivers and streams and 16.4% on rain collection. It is noted that these data do not reflect access to “safe” water supply.

There are no sewage or water treatment facilities in the Solomon Islands except for a few small scale treatment facilities for sewage and chlorination disinfections facilities for water. In Honiara, 71% of the households have septic tanks and 5% of the residents are connected to a sewer pipeline. According to the 1999 census, 77% of total households in the Solomons do not have access to modern toilet facilities.

Human Resources Development

SIWA employs the majority of water services personnel in the sector. There is a demand to increase expertise in the areas of operation and maintenance of water supply facilities and customer management. Private sector participation is minimal.

The Ministry of Health employs 93 personnel for the rural water supply operation and maintenance

Charges and Tariffs

The current charge for sewerage services is 50% of the water consumption. In recent years SIWA has been achieving its financial goals on meeting operation and maintenance targets, with commercial water and sewerage bills accounting for 60% and 10% respectively of the total revenue. This is the result of SIWA’s revised tariff and billing system in October 2003 and aggressive billing collection methods.

ANALYSIS OF ISSUES TO JUSTIFY POLICY INITIATIVES

The issues and challenges identified in the water sector to be addressed can be summarized as follows:

Key area	Water Resources	Water Services
Management	▪ Effective water governance is required to control, manage and protect the water resources (includes encouraging sound agricultural practices) and environment ▪ Water resource ownership is a major issue and requires legislation to resolve this by placing this resource in the charge of the State. ▪ The provision of accurate and timely data/information from all service providers to the Department of Mines and Energy needs to be enforced.	• Water services provision for the country is the shared responsibility of three different organizations and this has resulted in variable and inadequate levels of services. • The inadequate wastewater collection and treatment systems threaten ecosystems and public health and therefore need to be addressed. • The need to upgrade infrastructure and improve maintenance of water supply schemes are essential.
Capacity building	▪ Human resources need to be developed to the required levels of competency with an increased specialised knowledge and understanding of water resources within the country.(hydrological assessments etc)	• Upskilling in planning, management and technical areas of water services supply and wastewater management in both rural and urban areas is required. The need for improved skills in demand management is accentuated.
Finance	• Lack of funds is a key factor for the inability to implement sound water management functions such as monitoring, assessments and protection	• There is lack of sustainability in cost recovery and non-financially viable operations in rural areas. In urban areas, low levels of cost recovery exist due to high arrears and high leakage in urban areas and energy costs.
Technology	▪ Technologies change constantly and in order for efficiency in water resources management, appropriate	• Technology for water supply and wastewater treatment needs to be sustainable and appropriate. Personnel need to

	technologies need to be invested in and utilized. Upgrading of water quality equipment and laboratory facilities services is needed to conduct proper monitoring activities pertaining to water quality and quantity.	be trained on the use of the technology.
Awareness and Consultation	▪ Aggressive public awareness is needed against unnecessary developments including logging activities that causes contamination. Other proactive measures are needed to counter periods of water shortages. ▪ Effective consultation and collaboration with land owners are essential to minimize conflict arising over access to water resources	• There is limited community involvement in water service planning, management and delivery. • High water loss through leakage and unwise consumer use

DEVELOPMENT OBJECTIVES

The following objectives have been identified for policy development and are aimed at facilitating an enabling environment that encompasses the principles of good governance, sustainability and accountability.

1. Sustainable water resources management for the sector
2. Universal access to safe and reliable water
3. Increased access to basic sanitation and wastewater disposal
4. Efficient and effective water, sanitation and wastewater services
5. Strengthened financial viability for the water sector
6. Wider public education and awareness on water issues

IMPLEMENTING STRATEGIES

The following strategies have been identified for achieving the policy objectives.

1. *Sustainable water resources management for the sector*

    - Adopt an integrated sectoral approach for the effective management of water resources (need strong political will and agreement from cross sectors);
    - Develop appropriate institutional framework that supports sound water sector governance (include formulation of coordinating bodies, apex body etc);
    - Develop appropriate legislative and regulatory framework that addresses key issues relating to water conservation, water ownership rights, water allocation and abstraction, water quality protection and monitoring etc;
    - Build up and maintain institutional and technical capacity in water resources development, assessment, monitoring and management
    - Strengthen collaboration between the Government and donor countries for exchange of information, knowledge and skills transfer, etc

2. *Universal access to safe and reliable water*

    - Ensure accessibility and availability of water supply services at most times;
    - Improve and rehabilitate water supply systems, particularly in the rural areas;
    - Ensure compliance with regulation, government policies and international water quality standards;

- Revise and adopt appropriate water tariff system and pricing strategy for both urban and rural areas, while maintaining affordability element

3. *Increased access to basic sanitation and wastewater disposal*

- Increase access of the population to basic sanitation services;
- Plan and implement sanitation and wastewater improvements in both urban and rural areas (includes rehabilitation of existing sewer network);
- Consider outsourcing or sub-contracting service alternatives to increase access to sanitation services;
- Strengthen community awareness on sanitation issues

4. *Efficient and effective water, sanitation and wastewater services*

- Ensure ongoing effective consultation with customers to match service delivery with needs;
- Encourage private sector participation in the delivery of water and sanitation and wastewater services, such as meter reading, engage in government or donor-funded projects;
- Develop appropriate wastewater collection and treatment facilities and related services;
- Provide appropriate service standards for quality and safety;
- Enhance efficiency and effectiveness of water supply and sanitation systems and service provision through sound asset management, appropriate technology, innovative techniques, revised procedures and plans, total quality management principles etc;
- Build human resources capacity to manage, develop and sustain water supply and sanitation services (demand management skills etc);
- Ensure management systems are aligned with best practice use and reuse of water resources;
- Ensure improved public health in the provision of sanitation services;
- Ensure cost-recovery methods are appropriate through the careful transfer of costs of supply and treatment from the provider to the consumer

5. *Strengthened financial viability for the water sector*

- Encourage private sector investment in the water sector
- Increase opportunity for joint venture prospects
- Decrease dependence on foreign aid for water sector development
- Implement active tariff policies to generate sufficient and inflation-proof cashflow
- Develop local capital markets

- Tap into potential sources of grants from international aid agencies

6. *Wider public education and awareness on water issues*

   - Enhance public relations between service providers and customers to minimise conflicts over land access and water rights;
   - Educate the community/village water schemes to ensure their autonomy in providing and managing safe and reliable water for their beneficiaries;
   - Encourage early education for children on the extensive water issues, especially at the primary level.
   - Extend awareness campaign programmes to cover churches, NGOs and the chiefly systems on future impacts against unnecessary development such as logging and deforestation in relation to water.
   - Enhance community participation and awareness in planning and decision making processes, with particular regard to inclusion of women
   - Enhance awareness and capacity in river-basin and watershed management
   - Promote Benchmarking on appropriate and relevant water indicators amongst the rural water supply schemes and encourage provinces to share skills and information data

SECTOR REGULATION

The establishment of a regulatory function is necessary for monitoring the implementation of the Water Policy. It shall ensure that this Policy is adhered to with integrity, impartiality and fairness. This will be effected through strict observance of the provisions of the Acts and Regulations concerned.

The Ministry of Natural Resources shall establish an independent unit charged with the monitoring and licensing functions for the sector. Data collection and analysis for sector performance monitoring will be carried out by this unit.

IMPLEMENTATION OF POLICY

Proposed changes in legislation will contain the necessary provisions and flexibility for the implementation of this policy. The Ministry of of Mines, Energy will be responsible for administering the legislation and spearheading the continuous review of this policy.

Legislation Review

The Water Resources Bill 2001, which was still in draft form when the project started in the beginning of this year was reconsidered for appropriateness and promulgation after comprehensive review in relation to this Policy. New legislation will unify all water related procedural rules. The revised Legislation "Water Resources Act 2006" is now been finalised and awaiting submission to Cabinet and Parliament.

Expected Benefits of National Water Policy Implementation

Commensurate with effective policy implementation are the expected benefits listed below:

- Improved public health through increased access to quality water-related services;
- Clear and appropriate standards of service;
- Improved levels of cost recovery and financial viability of service providers;
- Strengthened institutional capacity to sustain water resources and services;
- Improved levels of performance and higher system efficiencies;
- Increased stakeholder involvement in water resources management and service provision;
- Greater public awareness of responsible water management and use;
- Adoption of integrated water resources and demand management principles and practice
- Conservation and protection of water catchments areas and water sources.

PUBLIC CONSULTATION

Ongoing in-depth consultation with water sector stakeholders is essential, in reviewing the Policy at least every two years. Views obtained from consultations shall be noted, analysed and considered during the review process.

The Policy shall be made available for public comment.