



Government of the Republic of Kiribati

National Water Resources Policy

Water for Healthy Communities, Environments and Sustainable Development

**Coordinated by the National Water and Sanitation Committee through the Ministry
of Public Works and Utilities**

November 2008



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1. Title of the Policy

National Water Resources Policy (NWRP)

2. Purpose and Consistency of the Policy

The NWRP provides a framework for leadership and coordinated action in the supply of safe, adequate and financially, technically and environmentally sustainable water services to rural, outer island and urban communities in Kiribati and for the protection, conservation, sustainable use and efficient management of Kiribati's water resources. It is directed at improving the welfare and livelihood of I-Kiribati and represents the vision of the Government of Kiribati (GoK) for the water sector.

Freshwater supplies are critically dependent on climate and are impacted, sometimes severely, by climate variability and climate change. The NWRP builds on the Policy on Adaptation to Climate Change announced by the GoK in 2005 and recognises that water and sanitation are intimately linked. This policy concentrates on freshwater resources and their protection and foreshadows the development of complementary national sanitation policy. Implementation of the NWRP is addressed in the accompanying National Water Resources Implementation Plan (NWRIP).

The NWRP is consistent with: the National Development Strategies (NDS) of 1996-1999, 2000-2003, 2004-2007, and the Kiribati Development Plan (KDP) 2008-11; the Draft National Water Plan initiated by the United Nations Department of Technical Cooperation for Development in 1992 and updated by the Water Engineering Unit of the Ministry of Works and Utilities in 2000; the Cabinet decision in 2004 to make outer island water supplies sustainable; and a major commitment on improved freshwater and sanitation by Te Beretitenti, His Excellency Anote Tong, in December 2007 at the inaugural Asia Pacific Water Summit, in Beppu, Japan. It complements the Public Utilities Ordinance, particularly in the protection of groundwater reserves. It has special relevance to the GoK's plan to develop Growth Centres on atolls beyond Tarawa.

The policy has incorporated community priorities expressed during the 2002 Kiribati National Consultation on Sustainable Water Management, which were reinforced in the extensive Gilbert Group consultations for the National Adaptation Program of Action, Kiribati Adaptation Project Phase I (KAP I) in 2003. In the latter, island communities identified water and sanitation issues in seven out of the top ten adaptation strategies, clearly reflecting the high priority and community concerns over freshwater supplies. The widespread public concerns over freshwater are also

reflected in the Kiribati Development Plan 2008-11. This policy and its accompanying Implementation Plan are a response to these public concerns and provide strategies for securing a better future for all I-Kiribati.

The NWRP is also consistent with regional and international initiatives such as the Kiribati-endorsed Message from Beppu announced at the conclusion of the inaugural Asia Pacific Water Summit in Japan in late 2007; with the Kiribati-sanctioned Ministerial Declaration on the 2003 Pacific Regional Action Plan on Sustainable Water Management; and with the United Nations' Millennium Declaration in 2000, "*to halve by the year 2015 the proportion of the world's population who are unable to reach or afford safe drinking water*" and "*to stop the unsustainable exploitation of water resources*" as well as the target of the World Summit on Sustainable Development in Johannesburg in 2002 of "*halving the proportion of people who do not have access to basic sanitation by 2015*". These goals and the sustainable management of water and energy have also been fully endorsed by the European Community.

3. Background to this Policy

I-Kiribati have always recognised that freshwater is a precious and finite resource. Droughts are common and freshwater is often scarce so water resources had to be protected and used carefully. In the past, water supply was, and in some outer islands still is, the responsibility of the *kaianga*. In recent times, especially in urban areas, population pressure due to inward migration and natural population growth has contaminated local groundwater sources, causing an increase in water-borne diseases and forcing households to rely on water delivered from government-managed water supply schemes pumped from distant, safer groundwater sources.

The growing impacts of human settlements and those of climate variability and change on freshwater resources and the linkage between development, poverty alleviation and water availability require a commitment by the community and continued determination and leadership by the national government to protect and use wisely the nation's scarce water resources.

Water supply issues in the Republic of Kiribati are amongst the most complex in the world. They involve very vulnerable, limited and scattered water resources used by more than 160 villages and two densely populated and growing urban areas. These are spread over 21 inhabited atolls or small islands, which span over 3 million square kilometres of the central western Pacific. Water resource issues affect the entire population and span the responsibilities of many Ministries. They require an integrated and coordinated whole-of-government approach that engages communities, clearly specifies responsibilities and accountabilities and encourages and directs actions from the village through island to the national level.

This policy and its accompanying implementation plan build on international and regional imperatives, previous government policies, decisions, ministerial and presidential statements, and incorporate aspects of national development strategies and plans. It is based on extensive community consultations carried out during KAPI and has involved critical inputs from ministries with responsibilities in the water sector and from non-government organisations and businesses.

In a statement to the Maneaba ni Maungatabu, on the opening of its fifth session on 31 October 1994, Te Beretitenti of the Republic presented an outline of the Government policy on all areas of its responsibility. Those policies that had direct or indirect implications for the water sector of Kiribati were:

- Strong emphasis is placed on the improvement of living standard of an I-Kiribati.
- Resources and efforts will be directed towards developing subsistence and employment opportunities, and improving living conditions.
- Efforts to reduce population growth will continue.
- The resettlement programme will continue to be developed, new sources of livelihood explored, and basic essential services ensured and expanded.
- Efforts to promote Kiritimati Island as a focus of development will continue.

The *Draft National Water Plan*, developed in 1992 and updated in 2000 by the Water Engineering Unit of the then Ministry of Works and Energy, identified the need for national policy guidelines in order to develop priorities and to coordinate the water sector. The Kiribati National Consultation on Sustainable Water Management, conducted as a lead up to the Pacific Regional Consultation on Water in Small Island Countries in 2002, clearly identified the continuing need for adequate supplies of safe drinking water and for better coordination of the water sector.

Consultations throughout the Gilbert Group conducted for the National Adaptation Program of Action, Kiribati Adaptation Project Phase I identified seven water and sanitation - related priority strategies in the top ten priorities:

- Water pumps/pipes to get water from good sources to settlements and homes
- Protect water wells
- Assess and locate available water on the islands
- Water conservation at home (including awareness raising)
- Improve sanitation, construct toilets
- Water conservation in piping systems
- Install rainwater tanks

These strategies fall into three broad categories: make use of a variety of water sources; protect freshwater sources particularly from human and animal wastes; and conservation of water by the community, industry and government agencies. There is a clear need for education and awareness raising in these strategies.

The Sigatoka 2003 Ministerial Declaration of the *Pacific Action Plan on Sustainable Water Management*, endorsed by all Pacific Island Nations Heads of State during the Pacific Island Leaders meeting in Auckland in 2003, and presented at the 3rdWWF, called for the development of national instruments including broadly-based national visions, policies, plans, legislation and capable organisations and empowerment of communities appropriate to each island country. It recognised that both behavioural change and long term collaboration were essential for improvement.

The Asian Development Bank Technical Assistance Project, *Promotion of Effective Water Management Policies and Practices* in 2004 developed a 20 year Kiribati Water Sector Road Map that set out strategies and a long-term action programme. It proposed the development of national policies and procedures for the improvement of operation of the water sector as a key initial 12-month task.

The National Development Strategy 2003-2007 and the Kiribati Development Plan 2008-11 contain some policies and goals of direct relevance to the water sector. These include:

- Raise the quality of life by improving supply and quality of water.
- Ensure sustainable use of water resources,
- Promote community participation for better use of water resources,
- Provide sound infrastructure and services at reasonable costs,
- Rehabilitate and expand existing water supply systems,
- Improve collection, storage, treatment and distribution of water,
- Rehabilitate the sewerage and sanitation system and improve its operation and management,
- Improve maintenance standards for government assets, and
- Ensure that all future construction projects comply with the Environment Act.

The Cabinet decision in 2004 to make outer island water supply systems sustainable provides a clear policy direction that needs to be imbedded in a broader national water policy framework.

At the inaugural Asia Pacific Water Summit, in Beppu, Japan, in December 2007, Te Beretitenti, His Excellency Anote Tong, reaffirmed his government's determination to protect, conserve and use water resources wisely and adopted "*Water for Healthy Communities, Environments and Sustainable Development*" as the theme for incorporation into national water policy.

The Kiribati Development Plan 2008-11 echoes previous concerns over the quality and quantity of freshwater available to island communities and highlights the need for strategic action in this sector. The development of National Water Policy and its Implementation Plan is a keystone Technical Assistance Activity in the 2005 Water Component of the Global Environment Fund *Kiribati Adaptation Program, Phase II* (KAPII) endorsed by the Government.

4. Formulation of Policy

This policy has grown from widespread public concerns over freshwater voiced during spread public consultations conducted during the National Adaptation Program of Action, Kiribati Adaptation Project Phase I (KAP I). Draft policy was initiated under the EU Pacific Water Governance Project, coordinated by SOPAC. It was developed under KAPII Water Component Project 3.1.1 by the National Water and Sanitation Coordination Committee under the chair of the Ministry of Public Works and Utilities and drafted by Professor Ian White, Australian National University. There has been broad consultation on draft versions of this policy

amongst, key ministries, stakeholders and with the community and Workshops with peak committees. All Government Agencies with responsibilities in the water and sanitation sector were involved through the National Water and Sanitation Committee and the National Adaptation Steering Committee in its drafting. The water and sanitation service providers, the Public Utilities Board in South Tarawa, the Water Engineering Unit of MPWU and the Ministry of Health and Medical Services, the Rural Planning Unit, Ministry of Internal and Social Affairs and the Public Works Department of the MLPID for Kiritimati have all contributed to the development of the NWRP. Non-government organisations and Councils, the Churches and businesses have been given opportunities to comment and many have suggested improvements. Implementation of this policy is addressed in the accompanying National Water Resources Implementation Plan.

Implementation of this Policy, including roles and responsibilities is addressed in the accompanying *National Water Resources Implementation Plan*. A companion document *Background to the National Water Resources Policy and Plan* provides background information that led to the development of this policy.

5. Justification for this Policy Initiative

Freshwater is essential for life and for the survival and well-being of all nations. In Kiribati, it is a **vital, strategic national resource** on which island communities and their economic growth are founded, and whose security of supply and quality needs to be assured. In most islands, the quantity of **freshwater is limited, demand is increasing** and the **quality of water is especially vulnerable**. As a result, water-borne diseases are common, particularly among susceptible population groups like old people and children under five. The difficult challenges faced in the water sector span the responsibilities of a number of Ministries and local authorities. There are critical issues that need to be addressed through an enlightened and coordinated approach led by the Government using a whole-of-government approach and engaging the entire community particularly at the village and island level.

6. Priority Issues Addressed by this Policy

Issues to be urgently addressed include:

1. The high rate of preventable deaths and illnesses due to water-borne diseases;
2. Contamination of fresh groundwater sources by human settlements and sanitation;
3. Impacts of climate variability and change on the availability of fresh water;
4. Difficulties in protecting, conserving and managing freshwater sources;
5. Growth in demand for water especially in urban areas;
6. Inequities in provision of services to schools, hospitals, clinics, rural, outer island and urban communities;

7. Limited collection and use of rainwater;
8. Large unaccounted for losses and leakages in water reticulation systems;
9. Financially and hydrologically unsustainable water supply systems;
10. Constraints on development due to limited water supplies;
11. Inadequate knowledge and monitoring of the nation's freshwater resources;
12. Decrease in the number of trained water specialists and technicians;
13. Limited community participation in freshwater management and conservation;
14. Limited community understanding of responsible water use and protection; and
15. A need for enhanced water education in schools.

7. Statement of Policy

7.1 Policy Goals

- 1. Provide safe, socially equitable, financially, technically and environmentally sustainable water supplies to enhance the welfare and livelihood of I-Kiribati.**
- 2. Protect and conserve freshwater sources for public water supplies.**
- 3. Deliver freshwater efficiently and effectively.**

The policy intent is that: firstly, as a matter of highest priority, safe freshwater will be supplied sustainably to satisfy basic human needs, then those of the environment and finally those required for development; secondly, there is a strong commitment to protect and conserve freshwater resources; and thirdly there is a determination that services are delivered well.

7.2 Policy Objectives

Beneath the three policy goals are seven specific policy objectives or actions.

Policy Goals	Policy Objectives	Comments
1. Provide safe, socially equitable, financially, technically and environmentally sustainable water supplies to enhance the welfare and livelihood of communities in Kiribati.	1.1 Increase access to safe and reliable water supplies	The preventable illnesses and deaths due to water-borne diseases are of great social and economic costs to the nation. Key elements are protection of water sources, supplying simple, cost-effective methods for treating community water supplies, better water supply for schools, hospitals and clinics, priority islands with scarce freshwater, improved and safe sanitation systems, and increasing community understanding of water quality, hygiene and protection and treatment of water. Rainwater is an underused resource despite existing building regulations. Increased use of properly maintained, improved rainwater collection systems can improve self-regulation of demand and increase resilience.
	1.2 Achieve sustainable water resource management	Sustainable management and protection of freshwater and associated land resources and controlling demand are essential for addressing declining quantity and quality of water resources, developing environmentally responsible solutions and for guaranteeing future opportunities. Controlling leakage, reducing wastage, encouraging water conservation, pumping sustainably, and ensuring equitable allocation of water are essential steps in sustainable water management. A range of policy, regulatory and economic instruments are available to manage demand and allocation and to use water efficiently.

2. Protect and conserve freshwater sources for public water supplies.	2.1 Improve understanding and monitoring of water resources and their use	It is difficult to protect and conserve a resource whose condition and quantity are not known. The quantity and quality of available freshwater is known only in a few islands in Kiribati. To protect and conserve water resources, reliable, up-to-date information on the stocks and flows of water, on its quality and on current and projected demand for water is essential. To sustainably manage water and sanitation services during climatic extremes, such as droughts, heavy rains and storm surges, climate variability and climate change, requires information on the onset of extreme conditions and on adaptation strategies to address these threats. Key steps are regular monitoring, data analysis and regular reporting.
	2.2. Improve protection of public freshwater sources	The protection of groundwater sources used for supplying communities is essential for the health and wellbeing of communities. This involves questions of appropriate land uses, and appropriate regulatory and management strategies. Key elements are the protection from contamination by human and animal wastes, prevention of industrial and mining pollution and the engagement of the local community in management of freshwater.
	2.3. Increase community awareness of and participation in the protection, management and conservation of water.	The widely dispersed nature of village communities in Kiribati means that it is essential for village communities take responsibility for managing and protecting their water supplies. These will need to be adequately trained and resourced. Greater community awareness and better understanding of water resource and sanitation issues can lead to improvements in health, water conservation and improved participation. Increased participation by the community is essential for strengthening community ownership of issues involved in water and sanitation systems, for supporting water source protection and conservation strategies and for building partnerships between government agencies and the public in planning and decisions. Schools are important users of freshwater. Education, particularly of children plays a fundamental role in water conservation and protection.
	3.1 Improve governance in the water sector.	Improving the efficiency, transparency, responsiveness, coordination and cooperation of government institutions in water and sanitation will improve planning, efficiency, services and partnerships with the community. Increasing the capacity of people working in the sector by fostering appropriate training schemes and training opportunities, and succession planning is a fundamental step for improving performance in the sector. Effective planning of operations and maintenance of water supply systems is essential to efficient service provision.

<p>3. Deliver freshwater efficiently and effectively</p>	<p>3.2 Decrease unaccounted for water losses, improve cost recovery and find alternate sources of water.</p>	<p>Unaccounted for water losses from public water reticulation systems are unknown. Estimates are that these losses may amount to 50% of extracted freshwater. Because of the energy required to extract this water and the scarcity of treated water in Kiribati, these losses need to be reduced urgently. Plans for leak detection strategies and for the remediation of public water supplies need to be developed and implemented. The installation of water meters on all connections to water supply systems coupled to a tiered water-use tariff system will greatly improve cost recovery in water supply.</p> <p>The scarcity of groundwater and rainwater in some islands and atolls means that water supply is limiting development in those areas. Kiribati has used reverse osmosis desalination plants in the past but they had large energy consumptions and were unreliable and expensive. There is a need to continue to explore new technologies and alternate systems for producing freshwater using renewable energy. The possibility of importing water from islands with higher rainfall needs also to be considered as does the infilling of swampy areas to construct groundwater recharge areas. The economics and energy costs of alternate freshwater sources need to be critically examined.</p>
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7.3 Planned Policy Outcomes

The national water policy addresses the short and long term priority concerns raised by I-Kiribati communities and families over freshwater. Planned outcomes from the purposeful implementation of this policy are the sustainable management of water and related land resources, improved protection of water sources with increased community participation and improved access to safe and efficient water services.

Planned outcomes of national water resources policy implementation

- Improved public health due to a decrease in water-borne diseases;
- Equitable access to safe freshwater;
- Improved water supplies for schools, hospitals and clinics;
- Decreased losses from reticulated water supplies;
- Efficient allocation of water to various users;
- Increased community participation in the protection, conservation and management of freshwater sources;
- Improved public awareness of water resource issues;
- Enhanced water and sanitation educational programs;
- Increased conjunctive use of water sources especially rainwater;
- Clear identification of roles and responsibilities in the water sector;
- More effective governance, monitoring and assessment of water resources;
- Strengthened institutional and human capacity and the provision of appropriate training in the water sector;
- Better knowledge of the quantity and quality of fresh water resources and their use;
- Financially, technically and environmentally sustainable water supply systems with improved levels of cost recovery and lower water losses;
- Improved protection of freshwater resources from adverse impacts of human activities;
- Improved risk assessment and management for the water sector;
- Enhanced resilience to extreme events, climate variability and climate change and increased ability to respond quickly to water crises;
- Enhanced access to donor and loan schemes and coordination of donor agencies in the water and sanitation sector.

8. Strategies for Achieving Policy Objectives

A range of strategies are available to achieve the policy objectives of the NWRP.

<p>1. Short to Medium Term (up to 3 years)</p>	<ol style="list-style-type: none"> 1. Formalise the terms of reference and composition of the National Water and Sanitation Coordination Committee 2. Review, modify and implement the 10 year National Water Resources Plan and the Tarawa Water Master Plan. 3. Review, modify and implement the Tarawa Water Master Plan. 4. Prioritised actions for higher risk areas. 5. Develop and implement a national water resource monitoring, assessment and reporting system. 6. Carry out assessments of the quantity, quality and use of water resources and the condition of and losses from water supply systems. 7. Assess the personnel and training needs in the water and sanitation sector, and address any deficiencies. 8. Develop or adopt appropriate water quality guidelines. 9. Develop and enforce rainwater harvesting and associated planning and building code guidelines and regulations. 10. Develop an equitable financing or incentive scheme for installation of rainwater harvesting systems in private and community buildings. 11. Develop and implement community and student education and awareness programmes on freshwater conservation and protection. 12. Secure support for improvement to outer island water supply systems. 13. Develop equitable cost recovery schemes for urban and rural water supplies and reduce leakage in reticulation and domestic systems. 14. Review non-polluting sanitation systems. 15. Develop indicators of improved water and sanitation management. 16. Support regional and international projects which aim to protect and conserve ground water resources and improve sanitation systems
<p>2. Longer Term (3 to 10 years)</p>	<ol style="list-style-type: none"> 1. Review, improve and initiate, where necessary, national water legislation and supporting regulations. 2. Review and rationalise, where necessary the roles of government agencies in water and sanitation. 3. Strengthen community participation in water resource management by establishing village water and sanitation committees. 4. Develop national sanitation policy. 5. Develop plans for the continual improvement and coverage of urban water and sanitation systems and the use of alternate water sources. 6. Develop a training scheme for water and sanitation specialists. 7. Implement a system to warn of climatic extremes and their impacts on water supplies. 8. Develop legislation and regulations for the protection of water supply sources and for providing the statutory basis for water agencies. 9. Build up capacity in the government and non-government sectors for water resource assessment, management and planning. 10. Support and participate in regional and international water, climate and sanitation programmes. 11. Review water resource policy and plans, and their implementation every 5 years.

9. Organisational and Institutional Responsibilities

The *Directions Assigning Ministerial Responsibility* (5 August 2003) includes “Ministerial Coordination” and “Cabinet taskforces Chairmanship” in the responsibilities of Office Te Beretitenti (OB). The role of the National Strategic Policy and Risk Assessment Unit (NSPRAU) within OB includes:

- Reviewing national policies of strategic national importance and of long-term risk; and
- Facilitating inter-ministry coordination on specific issues of national importance.

The *Directions Assigning Ministerial Responsibility* also specify particular line Ministry responsibilities in water:

- Minister for Public Works and Utilities – water management; sewerage systems
- Minister for Health and Medical Services – health inspectorate services and environmental health
- Minister for the Environment, Lands and Agricultural Development – environment and conservation; waste and pollution management.

Other Ministries, however, also have responsibilities that are related to or impact on the water and sanitation sector. The National Water and Sanitation Coordination Committee, NWSCC, under the chair of the Ministry of Public Works and Utilities has been established to coordinate implementation across Ministries and to monitor and report on progress of implementing this policy. Specific activities, measurable performance indicators, roles and responsibilities are covered in the National Water Resources Implementation Plan.

In addition, island Councils, Urban and Town Councils, and non-government groups such as the Kiribati Women Federation (AMAK), the Kiribati Association of NGOs (KANGO), the Kiribati Chamber of Commerce and Industry (KCC&I) and the Kiribati Council of Churches also have a responsibility for ensuring that activities undertaken under the NWRP and NWRIP are successfully and sustainably implemented.

10. Resource and Financial Implications

Additional water specialists will be required to effectively implement this Policy. Funding will also be required for the execution of various water projects identified in this Policy. The Policy and Implementation Plan can be used as the basis for proposals to donors and funding agencies to highlight the priorities of Kiribati with regards to water resources. Briefs for a number of projects for which donor funding could be sought are given in the Background to the National Water Resources Policy and Implementation Plan.

11. Implementation and Reporting Schedule

Implementation of the NWRP will take effect from the time that it is approved by Cabinet. The accompanying National Water Resources Implementation Plan uses the policy objectives and strategies of this policy to develop a 10 year implementation plan detailing activities, indicators and outputs, and responsibilities. Implementation will be overseen by the Ministry of Public Works and Utilities through the National Water and Sanitation Coordination Committee which will report on progress to Cabinet. The Committee will report to Cabinet on the state of the nation's water resources and on progress in policy implementation annually. The NWRP and its accompanying Implementation Plan will be formally reviewed after 5 years.