European Union and SOPAC

# Programme for Water Governance Republic of Kiribati Water Governance Pilot Project

## Summary of Activities

Potential fresh water sources in North Tarawa, Kiribati

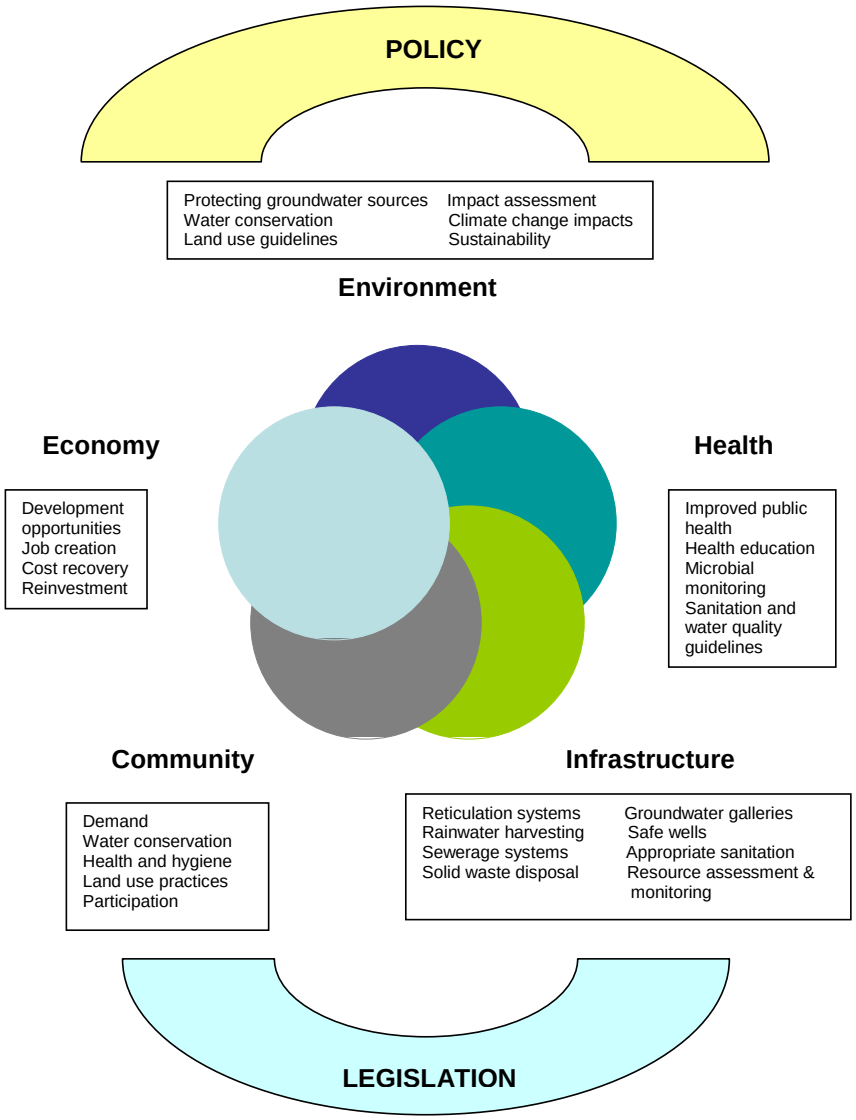
**Fenner School for Environment and Society**

THE AUSTRALIAN NATIONAL UNIVERSITY

**September 2007**

ANNEX KI9

**Proposed interdependencies in the water and sanitation sector in Kiribati**



# Contents

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# Summary of activities

## 1.1 Water Governance

Water governance has been defined as *the capability of a social system to mobilise energies, in a coherent way, for the sustainable development, management and use of water resources*. Effective governance is open, transparent, participatory, communicative, sustainable, equitable, coherent, incentive-based, efficient, sustainable, integrative and ethical. It includes the ability to design public policies that have as their goal the sustainable development, management and use of water resources. It also involves the building of social acceptance and support for them and the development of strategies to implement them.

The degree of water governance within a society appears to be determined by:

- The degree of consensus about the linkages between society, climate and water;
- Agreement on the bases for public policy that express those linkages;
- The existence of management systems that can effectively implement policies.

Governance implies the capacity to generate and implement appropriate policies, based on having established a consensus, and coherent management systems and adequate administration. A fundamental factor in governance is the ability to introduce and develop institutions consistent with the capability, limitations and expectations of the prevailing system.

There is no easy prescription for the rapid translocation of recent water governance reforms and water management frameworks from developed countries to small island developing countries. In many small island countries in the Pacific region the major challenges in water governance are simply supplying adequate quantities of safe freshwater to isolated communities, where there are no economies of scale, and coping with the complex cultural and institutional changes necessary in the transition from the traditions and practices of subsistence communities to the demands of growing, urban communities. Experience suggests that quick, formulaic solutions which take no account of island priorities, traditions and practices, which developed over millennia, are often politely ignored. Transformation of the water sector in the Pacific involves behavioural change, which is generally a long term process and requires appreciation of the nature of freshwater in small island countries and the prevailing culture and traditions.

## 1.2 Water resource and governance issues in Kiribati

Freshwater resources in small low-lying atolls, the dominant land-form in the Republic of Kiribati, are sourced mainly from shallow groundwater lenses. These thin veneers of fresh groundwater floating over seawater are amongst the most vulnerable in the water sources in the world to human and climate influences. Limited quantities of safe groundwater, increasing demands, seawater intrusion, pollution from human and animal wastes, unacceptably high rates of infant mortality due to water-borne diseases, social and economic costs of gastroenteritis, the potential for salinisation due to over-extraction, and limited resources and capacity to deal with pressing issues are some of the vital problems faced. Increasing urbanisation, the impacts of climate change and the widely-dispersed island communities across 3 million square kilometres of the Central and Western Pacific are additional threats to the resilience of island populations and increase the complexity of coping with these challenges. In these countries, water is a fragile, strategic resource on which communities and economic growth depend, and whose security and safety needs to be assured.

Past water projects in Kiribati, supported the Government of Kiribati with assistance from UNDP, AusAID, UNESCO IHP, SOPAC, ADB, WB and ACIAR, have all identified the need for enhanced water governance at the national, island and village level. The Kiribati National Consultation on Sustainable Water Management, conducted as a prelude to the Pacific Regional Consultation on Water in Small Island Countries in 2002, identified the continuing need for better coordination of the water sector. Extensive community consultations carried out throughout the Gilbert Group for the World Bank (WB) National Adaptation Program of Action, Kiribati Adaptation Project Phase I in 2004 identified 50 priority adaptation strategies. Seven out of the top ten priorities were water and sanitation-related.

The Kiribati Water Sector Road Map, developed under the ADB Project *Promotion of Effective Water Management Policies and Practices* proposed the establishment of a National Water and Sanitation Committee (or a number of committees) to advise the Government on all aspects of water supply and sanitation for all of Kiribati. Some of the functions envisaged for these committees were providing a forum for the community and NGOs to express their opinions; to review performance of the supply and sanitation systems across the nation and to review the performance of groundwater protection measures. A 20-year water sector Roadmap for outer islands was developed in 2004 as part of this ADB technical assistance project. The Roadmap provides key milestones and targets for sector development in four strategic areas:

1. Institutional Arrangements and Policy Framework;
2. Water Resource Assessment and Monitoring;
3. Community Awareness, Consultation and Participation; and
4. Water and Sanitation Development and Management.

The highest priority under the first category was the development of national water policy.

Kiribati and Colombia were the first countries in the world to be selected under the Global Environmental Facility (GEF) Strategic Priority on Adaptation. The World Bank implemented project *Kirabati Adaptation Program – Pilot Implementation Phase (KAPII)*, supported by AusAID and NZAID has recently been signed and initiated. The Development of National Water Policy and National Water Plan is a keystone Technical Assistance Activity in the Water Component of KAPII. Planning for this activity assumes that a Water Resources Steering Committee will be in place to oversee and review the development of National Water Policy and other water activities in KAPII and that the necessary preliminary discussions on effective policy and national plans will have been taken place.

Currently, Kiribati has no coherent national water policy, no water legislation and no focussed and up-to-date strategic, medium to long term plans for the water and sanitation sector. Previous attempts at forming a National Committee to integrate efforts in water have failed due to inter-ministry rivalry, a lack of definition of roles, the traditional reluctance to share knowledge and the fact that past whole-of-government committees have been largely driven by relatively short-term, externally-funded projects. When funding for these ceased, so too did enthusiasm. There is currently no mechanism for coordinating government and community activities in the water and sanitation sector, no mechanism for developing policy and plans and no mechanism for fostering a whole-of-government approach. In addition, the community is not engaged in the water and sanitation sector at the national, island or village level.

Because of the clearly identified need for a national framework for fresh water resources, the pilot water governance programme for Kiribati focused on development of initiatives at the broader national level but which have implications at the island and village levels. It was designed to blend seamlessly into the

water component of KAPII. The programme was based on brief inputs from the Australian National University to assist country facilitation of the process and the development of a strategy. A key element in this process will be the re-establishment of National Water and Sanitation Coordination Committee.

## 1.3 Approach and methodology

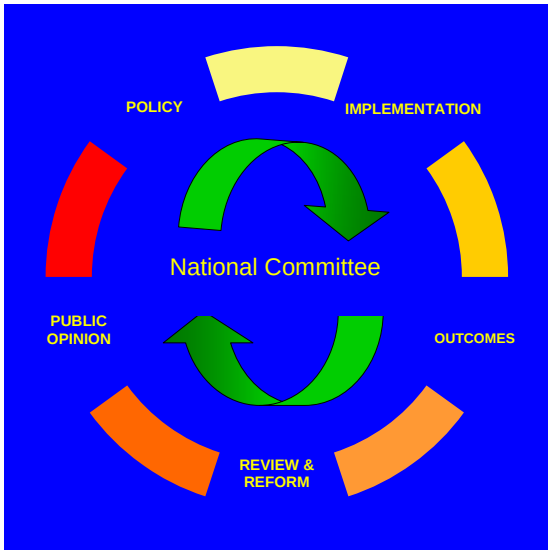
The PfWG pilot programme for Kiribati focused on water resources governance at the national level. It involved inputs of an international specialist, Professor Ian White working together with colleagues in the water sector in Kiribati during three visits in May 2006, September 2006 and February 2007.

The project was conducted in three Phases. Phase I of the pilot started with reviews of: water governance reforms in small island nations; previous attempts to improve water governance in Kiribati; the results of national consultations on water resources; the responsibilities of current organisations concerned with water; together with the collection of relevant water policy pronouncements and national plans. Wide ranging discussions were held with government, non-government and donor organisations to identify key issues, analyses past experiences and discuss solutions. In Phase II discussion documents and suggestions for the programme were circulated and discussed with all stakeholders. The consultations identified the following key components of project:

1. Discussions with stakeholders over past recommendations on water governance, particularly policies and institutional frameworks, and their application in Kiribati, together with past experiences in whole-of-government and community participation approaches;
2. Initiation of processes that will lead to the re-establishment of a National Water and Sanitation Coordination Committee that includes community and NGO representatives;
3. Initiation of broadly-based consultations and discussions on the basic elements of a Draft National Water and Sanitation Policy and
4. Revision and restructuring of a Draft 10 year National Water and Sanitation Plan.

In Phase III, a National Water and Sanitation Coordination Committee was convened and discussed the composition of the Committee, draft terms of reference for the Committee and developed priority project proposals.

### 1.3.1 Underpinning model



The simplified policy cycle model shown above was used in this work as a framework to suggest governance projects. At its centre, a broadly-based whole-of-government and community National Water and Sanitation Coordination Committee plays a crucial role in amending and implementing policy, in engaging the community and reviewing outcomes in a continuous process of adaptive management.

## 1.4 Work Programme

The pilot project for the European Union Programme for Water Governance (PfWG) in the Pacific was undertaken from May 2006 to March 2007. Further related activities which flowed on from the pilot were conducted after March 2007. Professor Ian White of the Fenner School for Environment and Society was the facilitator for the project.

Three in-country visits were carried out corresponding to the three phases of this project. During these visits intensive discussions were held with all key government agencies in the water and sanitation sector, with nongovernment organisations and with donor agencies. Following these consultations, discussion documents were prepared and circulated to all participants these were followed up in final visits. The primary aim of these discussions was to raise the advantages of a whole-of-government approach to the water and sanitation sector and to emphasise the importance of establishing a coherent national policy and a medium to long term national water plan to underpin the national policy. During the final visit, the National Water and Sanitation Coordination Committee under the chair of the Secretary Ministry of Public Works and Utilities met to discuss composition of the Committee and its draft Terms of Reference.

| Phase | Visit Dates | Main activities |
|---|---|---|
| I | 17-27 May 2006 | Initial visit, discussions with all stakeholders, preparation and circulation of discussion documents on the advantages of a National Water and Sanitation Coordination Committee: *Background Document* and *Why a National Water and Sanitation Committee*? |
| II | 26 July – 11 August 2006 | Follow up discussions on National Water and Sanitation Committee. Preparation of draft Terms of Reference and Goals for Committee. Circulation of TOR for discussion and revision. Review previous policy statements and Cabinet decisions on water. Review 2000 Draft National Water Plans. Develop draft National Water Policy and undertake major revisions of 10 year National Plan. Circulate Draft Policy and Draft National Water Plan to all stakeholders. Prepare report on possible water projects for support under EU EDF10. |
| III | 19 Feb – 2 March 2007 | First meeting of National Water and Sanitation Coordination Committee to ratify composition of the Committee and the draft TOR. Prepare Diagnostic Report for GEF Sustainable Integrated Water Resources and Wastewater Management in Pacific Island Countries for Kiribati for the Committee. Prepare GEF Demonstration Concept Project. Prepare EDF10 Outer Island Water Proposal for the Committee. |

## 1.5 Analysis of issues

Consultations with government agencies, NGO's and donor agencies together with the review of relevant litereature have helped identify governance issues and problems in the water and sanitation sector in Kiribati. These will be discussed under the three key determinants of effective water governance.

### 1.5.1 Linkages between society, climate and water

The high correlation between annual rainfall and the Southern Oscillation Index (SOI) or the position of the Pacific Warm Pool means that Kiribati is subject to frequent, long and severe droughts (Fig. 1). An analysis of rainfall records in South Tarawa since the mid 1940's revealed that, for 12 month rainfalls, there have been 10 major droughts with an average return period of 73 months. Islands with no or limited groundwater, such as Banaba, suffer severe shortages during these droughts. Even in islands with reasonably thick freshwater lenses, lenses become thinner and salinity increases. Severe droughts have even caused temporary abandonment of some islands in the past.

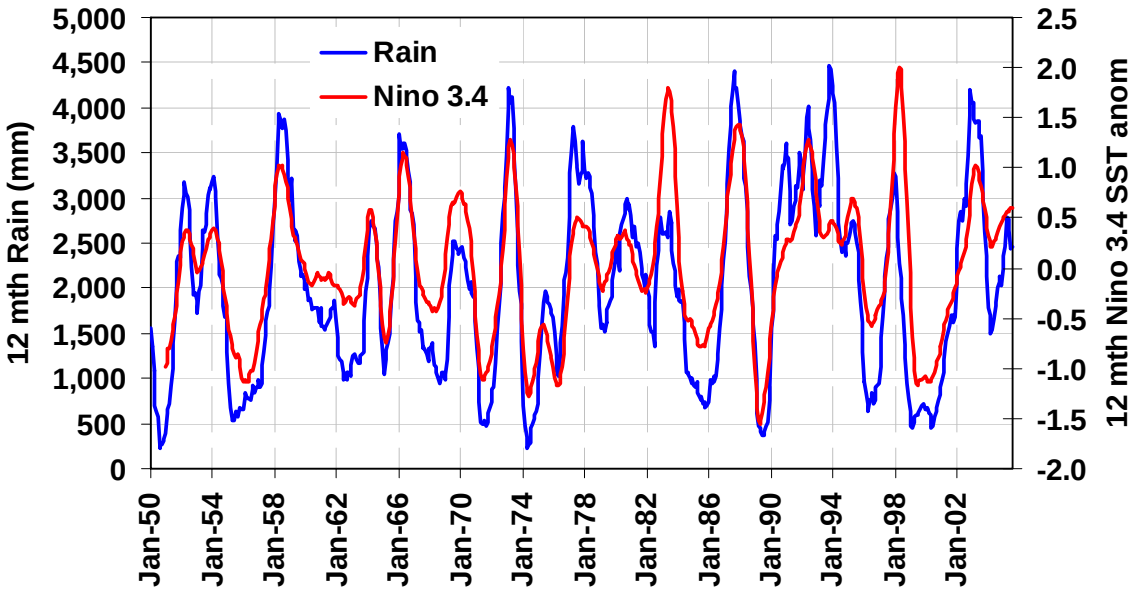



Fig. 1. Correlation between annual rainfall in South Tarawa, Kiribati and the 12 mth Nino 3.4 sea surface temperature anomaly in the central .

Extended low rainfall periods occurred in 1998 and the early part of 1999 throughout Kiribati, and particularly in South Tarawa, Banaba and certain remote, narrow, outer islands with limited groundwater. This resulted in rainwater tanks running dry, dramatic increases in salinity in domestic wells, the death of some trees, die-back in others and an increasing demand on potable, reticulated water. The drought and its impacts led to the declaration, by the President, of a State of Disaster in the Republic on 26 February 1999. This declaration highlighted the need for appropriate quantitative measures of the severity of droughts or a drought index for small coral islands which takes into account the different sources of water for domestic supplies.

The 1998-2002 drought, the worst on record for 12 month rainfalls, demonstrated that the country does not have protocols in place to warn the government of the potential onset of droughts or their likely impacts on the availability of water resources. An important deficiency in the current system of monitoring

is that there is no central database repository for monitoring and assessment data from urban and rural locations and there is no apparent mechanism for triggering action should values exceed critical levels.

There is little information on actual domestic, industrial and agricultural water use from various available water sources in either urban or rural areas. In urban areas, per capita demand is growing as acquisition of water using devices such as washing machines increases. In the absence of that information, estimates of the daily per capita potable water requirements have varied between 30 and 100 L, with the WHO recommending a lower limit of 40L/person/day. Well water, even when brackish or polluted is accessed for washing and other non consumptive uses. Treated freshwater reticulation and Outer Island supply projects have aimed at supplying design demands of 30 to 50L/person/day. The key information then has been the expected number of people in any community.

Since 1963, the average exponential growth rate of the total population of Kiribati has been 1.8% while that of Outer Islands has been 0.9% and that of South Tarawa is 4% (Fig. 2). These figures reflect the impacts of internal, inward migration from Outer Islands to urban South Tarawa. If these trends continue, the total population of Kiribati is expected to exceed 113,000 and South Tarawa is likely to have well over 60,000 people by 2020. If a low estimate of consumption rate of 50 L/person/day of reticulated water is assumed for South Tarawa then demand has already exceeded the sustainable yield of treated groundwater from current sources. In some of the Outer Islands and North Tarawa, there are relatively large fresh groundwater reserves capable of sustaining higher populations, however, in most cases the actual quantities of water available for extraction remain to be ascertained.

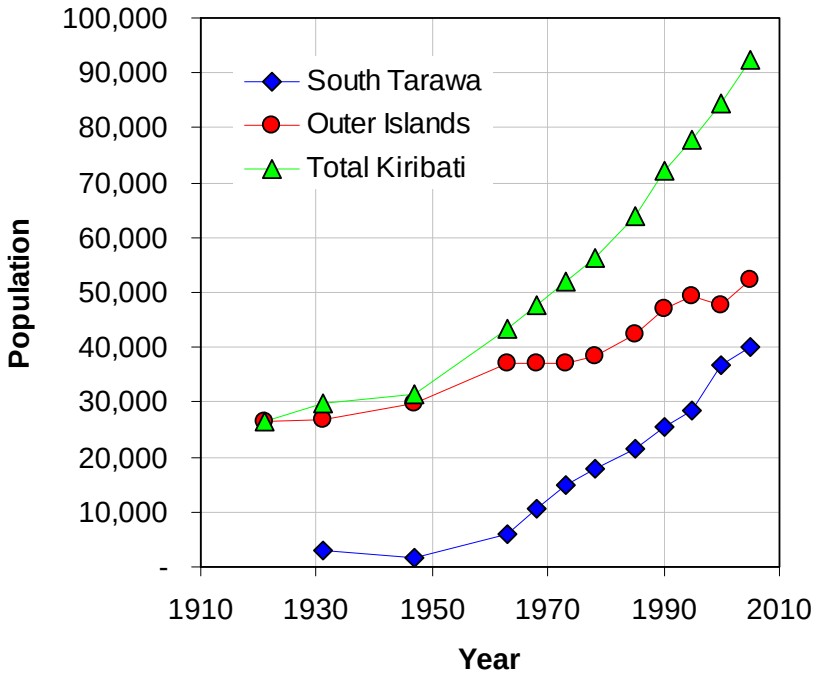



Fig. 2. Population growth in Kiribati, and in rural outer islands, and urban South Tarawa.

Numerous community consultations in Kiribati and studies have demonstrated a well-developed and traditional, long-standing understanding at all levels of the intimate linkages between society, survival and water. The community consultations carried out throughout the Gilbert Group for the World Bank

(WB) National Adaptation Program of Action, KAP Phase I in 2004 identified seven out of the top ten five adaptation strategies that were directly water and sanitation-related. These were:

- Water pumps/pipes to get water from good source to settlement areas 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

Human and animal faecal contamination of groundwater is a major problem in Kiribati which has resulted in a past major outbreak of cholera in 1977 and numerous isolated occurrences. The rate of infant mortalities due to water-borne diseases exemplifies the linkages between society on the quality of water supply systems (Fig. 3).

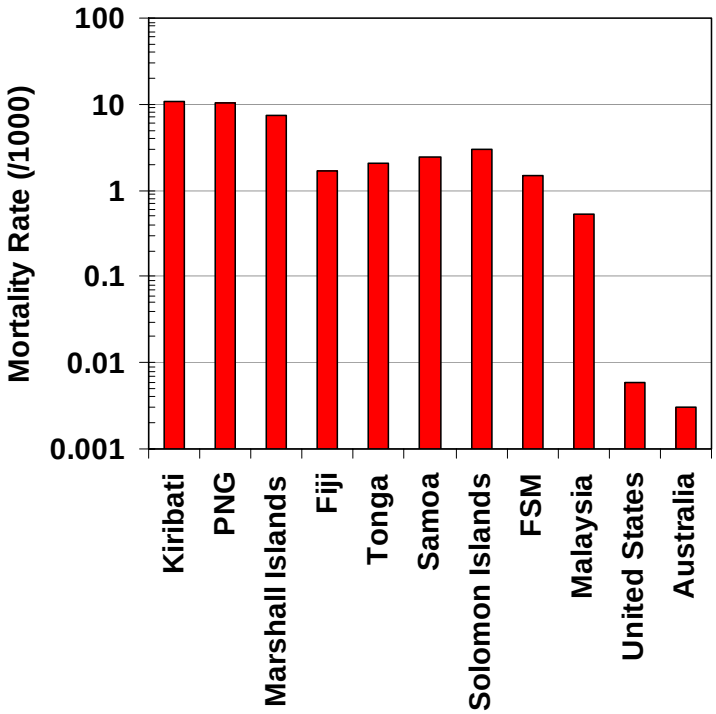



Fig. 3. Comparison of infant (<5 yrs) mortality rates per 1000 due to diarrheal diseases for Pacific and other countries (WHO, 2005). Note log scale.

Health statistics from clinics in Kiribati for 2005 show that South Tarawa, with 43.5% of the countries population had over 55% of the nation's reported diarrhoea and dysentery cases. Just over one in three of the population was affected. The crowded township of Betio, with 31% of South Tarawa's population, had over 54% of South Tarawa's diarrhoea and dysentery cases. These figures demonstrate that, in atoll communities, higher density populations can lead to higher incidences of water-borne diseases. The social and economic costs of these illnesses through loss of family members, absences from work and general lack of well-being are very large. In general, there is little information or systematic monitoring of the microbiological quality of water supplies especially in rural outer islands. In addition to microbial

quality, industrial contamination, particularly leaking hydrocarbons from diesel power generators pose major problems for island communities in urban areas.

The impacts of increasing population density and human settlements on water quality and the speed at which surface contaminants are translocated by rain into shallow groundwater has led to the abandonment of groundwater source areas in some islands along South Tarawa. Because of this, government regulations enabled the declaration of Water Reserves over major groundwater sources in South Tarawa which prohibit settlement and allow eviction of existing dwellers and land owners from the Reserves. The lands overlying the freshwater lenses in the larger islands of Buota, Bonriki and Teaoraereke were declared Water Reserves. Since 1992, Teaoraereke, however, has not been used as a freshwater source for reticulated water because of continued encroachment by human settlement. Encroachment is a continuing threat to water reserves, despite regulations, because of increasing population pressures and limited available land area for settlement in South Tarawa which contribute to the contamination of groundwater.

Land ownership is fundamental to survival in Kiribati. The declaration of water reserves over privately-owned land causes considerable tensions and conflict between affected communities and the government because of the loss of local amenity when land owners are evicted from their land or when some traditional land uses are prohibited. This has led to costly ongoing disputes and vandalism of water infrastructure and groundwater monitoring boreholes. To reduce conflict, the Government pays affected landowners annual commercial rents for the land resumed as water reserves. Despite recommendations, local landowners have not been involved in the on-going management of water reserves.

In Kiritimati, land is owned by the government, so conflicts over the declaration of water reserves need not arise. There, however, encroachment of settlements over shallow groundwater used for water supply is a continuing problem in some areas such as Banana and Tabakea. Only the current fresh groundwater sources in South Tarawa have regulations aimed at protecting them from contamination. Despite these regulations the groundwater reserves on South Tarawa are still impacted by inappropriate land uses such as gravel mining and squatter settlements mainly in Bonriki. There are no equivalent regulations for protecting water sources in rural areas or outer islands.

The avoidable tragedies of infant deaths due to water-borne diseases, the economic and social losses due to diarroheal diseases, the scarcity of safe water supplies, the impacts of major ENSO-related droughts and the protection of water sources are critically important areas in the linkages between society and water.

The above analysis helps identify a list of priorities for the water and sanitation sector in Kiribati:

- Increase per capita supplies of safe freshwater to improve health;
- Control demands for water and decrease losses from reticulation systems and storages;
- Protect groundwater sources and rainwater stores from contamination;
- Improve sanitation;
- Increase rainwater harvesting;
- Increase community understanding of and participation in the water and sanitation sector;
- Move towards sustainable water supply systems;
- Improve assessment and monitoring of island freshwater resources;
- Increase capacity in water resources planning and management;
- Develop and implement appropriate technology for rural water supplies and sanitation services.
- Improve risk assessment for water resources to climate variability and change;
- Review and improve legislation, policy, and administrative issues;
- Set the agenda for donor agencies and financing organizations in water sanitation projects.

### 1.5.2 Public water policy directed at society and water linkages

A clear, unified National policy provides an essential element in the framework for the conservation, sustainable use and management of any country's water resources and for the provision of safe and adequate water to its communities. National water policy at its best should enunciate the vision and hopes and aspirations of the people of Kiribati for the sector. Current water and sanitation policy however is *ad hoc* and fragmented and is not embedded within a framework of sustainable development. Existing policy consists of mainly unrelated Ministerial statements and Cabinet decisions and pronouncements which are inadequately documented and have no mechanisms for implementation.

Previous relevant pronouncements and policies related to water include a statement to the Maneaba ni Maungatabu (Kiribati Parliament), on the opening of its fifth session on October 31, 1994, by Te Beretitenti (The President) of the Republic. This 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 with UN agency assistance 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 Sigatoka 2003 Ministerial Declaration of the *Pacific Action Plan on Sustainable Water Management*, endorsed by all Pacific Island Nations Heads of State, including Kiribati, 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 National Development Strategy 2003-2007 includes some policies and goals of direct relevance to the water sector:

- 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 but one that needs to be imbedded in a broader national water policy framework which includes implementation.

### 1.5.3 Management systems to effectively implement policies

In order to enhance governance policy, it is necessary to have in place appropriate and effective management systems to implement policy and plans. Implementation also requires a concerned coordinated effort by the government sector and the willing participation of the community. Currently, three government departments have explicitly stated responsibilities in water and at least four others (see Fig 3.) have administrative responsibilities that impinge on the water sector. Although other agencies have activities in the water and sanitation sector, some may be without legislative basis. Previous projects and reviews have recommended improved coordination between government ministries and clearer definitions of roles in the water sector. In order to implement policy, it is also necessary to form partnerships with the community and industry.

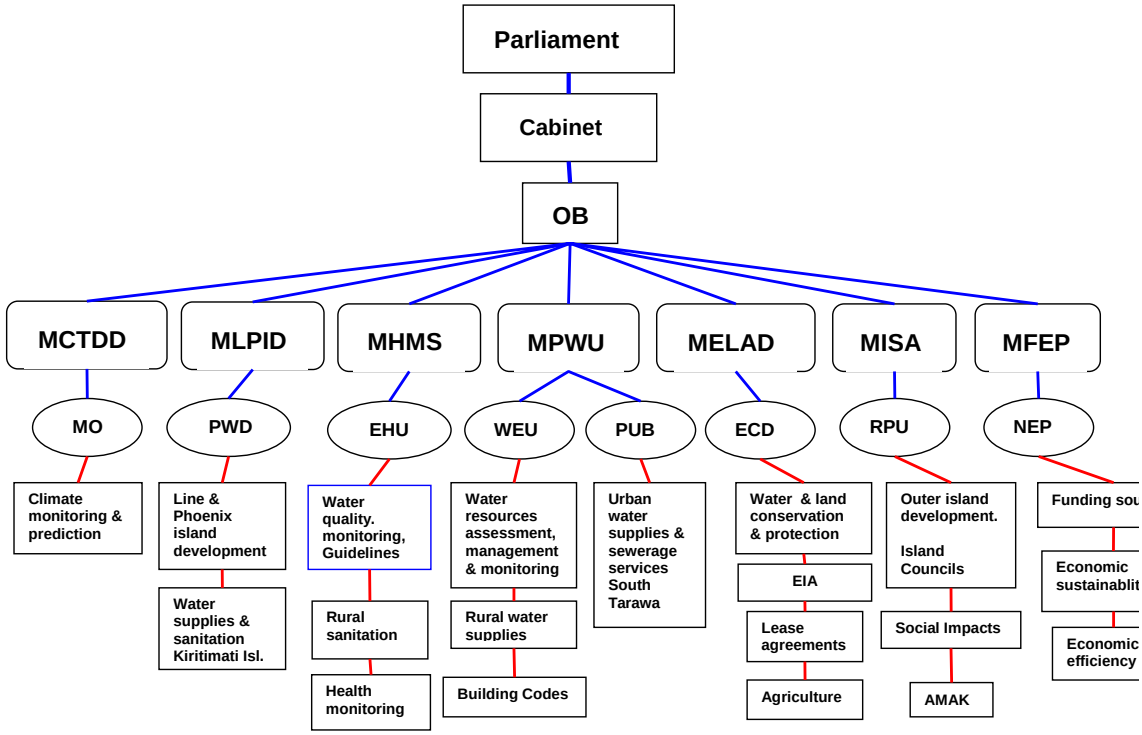



**Fig 4 Kiribati Water Sector Organisational & Responsibility Diagram**

Government Ministries tend to act as independent silos and there are major barriers to inter Departmental collaboration. The Government of Kiribati in 1985 established the *Kiribati Water Supply and Sanitation Coordinating Committee* (KWSSCC). It was chaired by the then Ministry of Health, Family Planning and Social Welfare (MHFPSW) with deputy chair from the then Ministry of Works and Energy and secretarial support from MHFPSW. The Committee was to address the critical water and sanitation issues facing the country and its planned role was to monitor water quality in the country, to review and consider future water and sanitation projects before presentation to Cabinet, and to act as an advisory body to Government Ministries and non-Government organizations on water and sanitation related matters. The Committee members were to be senior officers in MHFPSW, the PUB, the Public Works Department of the MWE, the Ministry of Home Affairs and Rural Development, Ministry of Finance and Economic Planning, and a representative of the non-government organisation (NGO) Karikirakean Maaun te I-Kiribati (formerly - Save the Children Federation). Rivalry over which Government should

chair the Committeea, a lack of definition of or confusion over roles, together with a traditional reluctance to share knowledge, led to its demise.

In the past government water project steering committees have been largely driven by relatively short-term, externally-funded projects. When funding for these ceased, so too did enthusiasm. There is currently no mechanism for coordinating government and community activities in the water and sanitation sector and no mechanism for developing policy and plans and no mechanism for fostering a whole-of-government approach. In addition, the community is not engaged in the water and sanitation sector at the national, island or village level. The Outer Island Project Coordination Committee however provides a useful model for whole-of-government - NGO collaboration

An additional mechanism necessary for the implementation of policy is the enactment of supporting National water legislation. While regulations exist specifically for the operation of the Public Utilities Board, there is no equivalent set of regulations for Outer Islands. Draft National Water Legislation was drawn up in 1992 with UN agency assistance and has been with the Office of the Attorney General since then. It has yet to be enacted. One of the contentious issues appears to be ownership of water resources. Traditionally in Kiribati, land ownership implied ownership of groundwater resources. It also appears that water supply services operated in the designated growth centre of Kiritimati are without legislative basis.

A further mechanism for policy implementation is the existence of medium to long-term plans for the sector with clearly identifiable and measurable outcomes. A Draft 10 Year National Water Master Plan was prepared under a UNDCTD project in 1992 and subsequently revised up to 2000 by the Water Engineering Unit and the Public Utility Board of the then ministry of Works and Engineering. This plan is in urgent need of upgrading as it is outdated and has few measurable planned outcomes. In order to be effective a national water plan must critically analyse the current situation in water and sanitation, identify the priority and urgent tasks to be addressed and use the yet-to-be developed national water policy as a framework for implementation. The Kiribati Water Sector Road developed under the ADB 2004 Sectoral Strategy and Action Program *Promotion of Effective Water Management Policies and Practices* provides some guidance in the development of a strategic plan. The revised strategic water plan must also provide an analysis of the sectoral responsibilities. A National Water Policy could provide both the justification and the guiding principles for the Plan. The National Water and Sanitation Coordination Committee could be the mechanism for overseeing and coordinating the implementation of policy and the Plan, for reviewing and reporting progress and policy effectiveness, for engaging the community at the National level and for fostering community participation at the island village levels.

In order to implement policy, it is necessary to form partnerships with the community and industry. There is a general reluctance in government agencies to participate with community organisations and representatives in the design, planning management and protection of water resources. Instead the favoured approach has been to introduce regulations with stiff penalties for infringement. An examination of the past success of regulations to control behaviour, such as settlement on Water Reserves, would suggest that they have limited effectiveness, particularly when enforcement is difficult or nonexistent. A community-government Committee for the Management and Protection of Water Reserves Management was established in 2000 and was intended to address such issues in the Water Reserves for South Tarawa. It has been defunct for some time and appears never to have met.

Given the highly dispersed, rural, small villages scattered throughout the Republic's 21 atolls and islands across 3 million square kilometres of the Central Western Pacific, it is extremely doubtful if any centralised Ministry can deliver efficient and safe water surfaces at the village level without the

participation and active involvement of villages and community ownership of the water supply systems. Resourcing potential village level water and sanitation committees presents a major challenge, particular for government Ministries that liase with regional island councils. Currently only NGOs focus on village-level governance issues

The governance issues in Kiribati are clearly wide ranging and complex. Encompassing all key issues within the 10 month time frame of this project is not possible. One of the critical issues identified here is that governance projects need to be integrated but above all long-term if lasting change is to be achieved. However, with guidance from the key players in the water sector in Kiribati, the following priority pilot project options have been identified.

## 1.6 Design of Governance Pilot Projects

### 1.6.1 Re-establishment of the National Water and Sanitation Committee

**Project Aim**

To facilitate the re-establishment of the Kiribati National Water and Sanitation Coordination Committee

**Tasks**

- Review previous documents relevant to past National Committees.
- Identify factors which impeded the function of previous Committees.
- Interview key stakeholders about the need and function of a National Committee.
- Prepare a background briefing on the past operation and need for such a Committee.
- Propose a structure and *modus operandi* for the Committee.
- Prepare a general goal and terms of reference for the Committee.
- Discuss the terms of reference with stakeholders.
- Revise outputs.

**Inputs**

- Advice from key government agencies and community groups in the water sectors.
- Advice from key players in the sector in the Pacific.
- Relevant documents and reports.
- Critical review of background document and terms of reference.

**Outputs**

- Background document on the need for a National Water and Sanitation Coordination Committee, NWSCC.
- Draft document detailing the strengths, proposed mission, aims, terms of reference, coordination, reporting and composition
- Meetings with relevant stakeholders to discuss implementation

**Resources**

- Necessary reports.
- Time allocation by stakeholder personnel in Tarawa.
- Time allocation by key participants for review.

**Anticipated Outcomes**

- Improved appreciation of the importance of the NWSCC.
- Re-establishment of the whole-of-government and community NWSCC.
- Improved coordination, more transparency, openness and better collegiality in the water and sanitation sector.
- Involvement of the community in the sector at the National level.

This project approach was endorsed by all key stakeholders.

### 1.6.2 Drafting of National Water Policy

**Project Aim**
To develop a first draft of the National Water Policy for discussion by the NWSCC.

**Tasks**
- Review previous documents relevant to water policy in the Pacific.
- Review past Cabinet and Ministerial statements on water and sanitation.
- Interview key stakeholders about the need for National Water Policy.
- Develop overall policy goals and policy intent statements.
- Prepare a rough draft National Water Policy.
- Circulate to all potential members of NWSCC.
- Circulate to reviewers.
- Revise after comments.
- Find a champion to promote National Water and Sanitation Policy.

**Inputs**
- Advice from key government agencies and community groups in the water sectors.
- Advice from key players in the sector in the Pacific.
- Relevant documents and reports.
- Critical review of rough draft policy.

**Outputs**
- First draft National Water and Sanitation Policy
- Meetings with relevant stakeholders to discuss features of the Policy.

**Resources**
- Necessary reports.
- Time allocation by stakeholder personnel in Tarawa.
- Time allocation by key participants for review.

**Anticipated Outcomes**
- Improved appreciation of importance of national water policy.
- A discussed and reviewed draft national policy.
- Clear strategic national directions and priorities in the water sector for the next 10 years for government agencies and the community.
- Improved confidence in the donor community.

This project approach was endorsed by all key stakeholders.

### 1.6.3 Complete revision of the draft 2000 10 Year National Water Plan

**Project Aim**
To completely revise the National Water Plan for discussion by the NWSCC using the draft National Policy as framework.

**Tasks**
- Review other Plans in the Pacific.
- Review the 1992 and revised 2000 Draft Plans.
- Interview key stakeholders about the need for a National Water Plan and the required features.
- Incorporate an analysis of the current performance in the delivery os water and sanitation services.
- Prepare a rough draft National Water Plan.
- Circulate to all potential members of NWSCC.

- Circulate to reviewers.
- Revise after comments.

**Inputs**
- Advice from key government agencies and community groups in the water sectors.
- Advice from key players in the sector in the Pacific.
- Relevant documents, plans and reports.
- Critical review of rough draft plan.

**Outputs**
- First draft National Water and Sanitation Policy
- Meetings with relevant stakeholders to discuss features of the Policy.

**Resources**
- Necessary reports and plans.
- Time allocation by stakeholder personnel in Tarawa.
- Time allocation by key participants for review.

**Anticipated Outcomes**
- Improved appreciation of importance of national water plans.
- A discussed and reviewed draft national plan.
- Clear understanding of the current situation.
- Full support for priorities and strategic national directions for the next 10 years from government agencies and the community.
- Improved confidence in the donor community.
- Improved public health.
- Improved access to water.

This project approach was endorsed by all key stakeholders.

## 1.7 Pilot Projects Results

### 1.7.1 National Water and Sanitation Coordination Committee

The proposed mission of the National Water and Sanitation Coordination Committee is to :
*coordinate, facilitate and enhance Government and community activities in the water and sanitation sector to ensure that communities have access to water of suitable quality and appropriate quantities and to appropriate sanitation to meet all reasonable health, environmental, and development needs*.

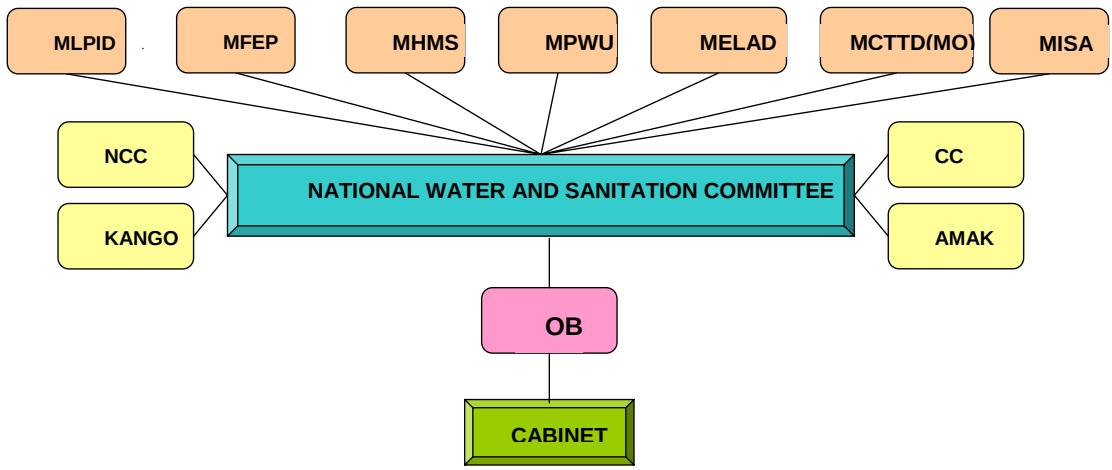
The proposed structure and composition of the committee is shown in Fig. 5. Note that four non-government organistations, National Council of Churches (NCC), KANGO, the umbrella NGO organisation in Kiribati, the Chamber of Commerce (CC) and the Kiribati Women's Federation (AMAK) are included in this proposed structure.

The suggested principle aims of the Committee are to:

1. Promote the sustainable management, conservation and use of water and related land resources by implementing Government policy and by coordinating and enhancing Government and community activities and involvement.
2. Facilitate and enhance initiatives to raise the quality of life by improving the quality and availability of safe water and decreasing illness and infant mortality rates due to water-borne diseases.

3. Coordinate and facilitate information gathering and assessment, policy and instrument development and review, and identification of other needs for the water and sanitation sector throughout Kiribati.
4. Provide broadly-based strategic advice to the Government of Kiribati, the community, non-government and donor organisations on the nation's water resources and sanitation service and their management and use.

**Fig. 5. Proposed Structure for the National Water and Sanitation Coordination Committee**




The draft terms of reference for the Committee are to:

1. Coordinate and enhance the strategic activities of Government Ministries in the water and sanitation sector to ensure sustainable management.
2. Facilitate and coordinate the review and assessment of water and sanitation-related policies, regulations, plans, instruments and standards and make recommendations to Government on policy development, program implementation and potential improvements.
3. Provide the Government with broadly-based, coordinated, strategic advice on priorities for water and sanitation and on water-related development opportunities.
4. Provide a national forum for the discussion of water and sanitation-related issues.
5. Coordinate and facilitate an annual, national, island-based assessment report on the quality and quantity of water resources, water consumption, rainwater harvesting and demand for water and encourage strategic systematic monitoring.
6. Coordinate and facilitate assessments of risks in the water and sanitation sector and possible adaptation strategies in relation to global change and extreme events.
7. Enhance and coordinate strategies to improve community understanding of and participation in water and sanitation use and planning and in furthering water conservation and protection.
8. Coordinate the review and assessment of, and prioritise and make recommendations on proposals for water and sanitation-related projects.

It is planned that the Committee will provide the medium for integrated policy development and program implementation and for coordination and enhancement of information gathering, analysis and clearing; and dialogue and consultation on matters of policy, implementation and regulations content for the nationally vitally important water and sanitation sector.

At its inaugural meeting on 22 February 2007, the Committee chaired by the Secretary Ministry of Works and Utilities, adopted these suggested aims and terms of reference (subject to Cabinet approval) but rejected the idea of the inclusion of NGOs on the Committee since its main tasks were "government business".

### 1.7.2 Draft National Water Policy

A draft National Water Resources Policy (NWRP), *Water for Healthy Communities, Environments and Sustainable Development* was produced which is consistent with previous policy decisions, and government statements. The NWRP provides the framework for the conservation, sustainable use and management of Kiribati's water resources and for the provision of safe and adequate water to island communities. It represents the vision of the people of Kiribati for the water sector based on past national consultations.

The overriding policy goal is"

> *"To ensure that communities have affordable access to sustainable water supply systems providing water of suitable quality and appropriate quantities and to appropriate sanitation to meet all reasonable health, environmental, and development needs"*

There is a clear policy intent here that safe freshwater is to be made available sustainable first to satisfy basic human needs, then those of the environment and finally those required for development.

Underneath that goal are a series of policy objectives which have measurable outcomes.

| Objective | Comments |
|---|---|
| 1. To improve the safety of freshwater supplied from groundwater and rainwater systems. | Illness and death due to water-borne diseases are of great social and economic costs to the nation. Key elements are improving the protection of water sources, supplying simple, cost-effective methods for treating community water supplies and increasing community understanding of water quality and water treatment. |
| 2. To protect fresh groundwater resources from adverse human impacts. | The protection of groundwater sources used for supporting communities is essential to the planning and management of groundwater supply systems in low islands. This involves questions of appropriate landuses, and appropriate regulatory and management strategies. |
| 3. To sustainably manage all aspects of the use and conservation of freshwater. | 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. |
| 4. To improve knowledge of | To sustainably manage and use water resources it is essential to |

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|---|---|
| the quality and quantity of the nation's freshwater resources and demand for them. | have reliable, up-to-date information on the stocks and flows of water, on its quality and on current and projected demand for water. A key step is monitoring and analysis |
| 5. To improve knowledge and management of water resources under climatic extremes, variability and change. | To manage water and sanitation services during climatic extremes, such as droughts, heavy rains and storm surges, climate variability and climate change it is necessary to have information on the onset of extreme conditions and on adaptation strategies to address these threats |
| 6. To improve outer island water supplies | Outer island water supplies require special attention. The provision of timely assistance, advice and training opportunities is essential |
| 7. To increase community awareness and understanding of water resource and sanitation issues | Greater community awareness and better understanding of water resource and sanitation issues can lead to improvements in health, water conservation and improved participation. |
| 8. To increase community participation in water resource and sanitation management. | Increased participation by the community is essential for strengthening community ownership of issues involved in water and sanitation systems, for supporting conservation strategies and for building partnerships between government agencies and the public in planning and decisions. |
| 9. To increase the use of rainwater harvesting. | Rainwater is an underused resource despite existing building regulations. Increased use of rainwater can reduce risk of contamination, improve self-regulation of demand and increase resilience. |
| 10. To develop instruments to help manage demand and allocation of water. | Controlling increasing demand and ensuring equitable allocation of water is an essential step in sustainable water management. A range of policy, regulatory and economic instruments are available to manage demand and allocation and to use water efficiently. |
| 11. To review and revise, where necessary, all legislation, regulations and organisational responsibilities relevant to water and sanitation. | Improving the efficiency, transparency, responsiveness, and coordination of government institutions in water and sanitation will improve planning, services and partnerships with the community. |
| 12. To ensure that people working in the water and sanitation sector have appropriate knowledge and skills. | Increasing the capacity of people working in the sector by fostering appropriate training schemes and training opportunities is a fundamental step for improving performance in the sector. |

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| 13. To ensure an adequate supply of trained personnel for the water and sanitation sector. | Human capacity limitations can affect the ability to manage water and sanitation services and water resources effectively. Identification of human resource needs and for succession planning are essential elements for increasing capacity. |
| 14. To ensure cost effective planning, operation and maintenance of water supply and sanitation systems. | Effective planning operation and maintenance of water supply systems is essential to efficient service provision, the reduction of unaccounted for water losses, and cost recovery. |

The national water policy is intended to address priority concerns in both the short and long term. Expected outcomes from policy implementation are aimed at attaining sustainable management of water and related land resources with increased community participation and the sustainable delivery of safe water services. The anticipated outcomes are:

| **Expected outcomes of national water resources policy implementation** |
|---|
| • Improved public health due to a decrease in water-born diseases;<br>• Equitable access to safe freshwater;<br>• Sustainable water supply systems;<br>• Protection of freshwater resources from adverse impacts of human activities;<br>• Better knowledge of the quantity and quality of fresh water resources;<br>• Efficient allocation of water to various users;<br>• Improved risk assessment and management for the water sector;<br>• Greater public awareness of water resources issues;<br>• Enhanced water and sanitation educational programs;<br>• Increased stakeholder involvement in water protection of freshwater sources;<br>• Increased community participation in the conservation and management of water and water sources<br>• More effective governance, monitoring and assessment of water resources;<br>• Increased ability to respond quickly to water crises;<br>• Strengthened institutional and human capacity and the provision of appropriate training in the water sector;<br>• Clear identification of roles and responsibilities;<br>• Improved levels of cost recovery;<br>• Improved access to donor and loan schemes. |

The draft policy identifies a range of short to medium and longer-term strategies to achieve the policy objectives of the NWRP.

| | |
|---|---|
| 1. Short to Medium Term | 1. Formalise the terms of reference of the National Water and Sanitation Coordination Committee<br>2. Review, develop and implement the 10 year National Water Master Plan including plans for both urban areas and outer islands.<br>3. Develop a national water resource monitoring, assessment and reporting system.<br>4. Carry out an assessment of the quantity and quality of national water resources.<br>5. Assess the personnel and training needs in the water sector.<br>6. Develop appropriate water quality guidelines.<br>7. Develop rainwater harvesting and associated planning and building code guidelines.<br>8. Develop an equitable loans scheme for rainwater systems. |

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| | 9. Develop a community and youth education and awareness programme for freshwater.<br>10. Secure support for improvement to outer island water supplies.<br>11. Develop a water pricing system for urban supplies.<br>12. Review non-polluting sanitation systems.<br>13. Develop indicators of improved water and sanitation management<br>14. Identify personnel and training needs and sources of appropriate training. |
| 2.Longer Term | 1. Review, improve and initiate, where necessary, legislation and regulations relevant to freshwater and sanitation.<br>2. Review and rationalise, where necessary the roles of government agencies in water and sanitation.<br>3. Strengthen community participation in water resource management by establishing village level committees.<br>4. Develop plans for the continual improvement of urban water and sanitation systems.<br>5. Develop a training scheme for water and sanitation specialists.<br>6. Develop a system to warn of climatic extremes and their impacts on water supplies.<br>7. Develop legislation for the protection of groundwater resources.<br>8. Identify human resource needs and develop capacity for water resource assessment , management and planning.<br>9. Support and participate in regional and international water, climate and sanitation programmes.<br>10. Review policy and implementation every 5 years. |

While the draft National Water Resources Policy has been circulated to all stakeholders in the water and sanitation sector it was not possible to consider it at the inaugural meeting of the National Water and Sanitation Coordination Committee because of the perceived urgency of the GEF IWRM proposal.

### 1.7.3 Draft 10 year National Water Resources Plan

A draft 10 year National Water Resources Plan *National Plan and Strategies for Sustainable Water Management and Use* has been developed. This is a major revision and extension of the 1992 draft National Water Plan and its revision in 2000. The draft "*National Plan and Strategies for Sustainable Water Management and Use*" describes plans and strategies to address identified priority needs in the water and sanitation sector in Kiribati. It is based on the framework developed in the Draft National Water Resource Policy "*Water for Healthy Communities, Environments and Sustainable Development*".

The draft *National Plan and Strategies for Sustainable Water Management and Use* aims to respond to the identified priorities and government policy agenda in Kirbati's water and sanitation sector and to provide a framework for the sustainable supply of appropriate quantities water of adequate quality and sanitation services to meet community, health, environmental and development needs and to benefit all I-Kiribati.

The draft National Plan framework elaborates specific strategies in order to guide the medium-term (10 year) development of the sector, and to provide a way of identifying how best the resources of the Government, NGOs, private sector, community organisations, donor and loan agencies may be best invested in technology appropriate to local circumstances.

It is intended that implementation of the Plan will be monitored and assessed through a set of indicators and milestones.

The overall objectives of the draft Plan are to:

- Implement Government policy in the water and sanitation sector

- Establish a basic framework for the orderly planning, development conservation and use of water resources and the provision of adequate sanitation services;
- Ensure the good quality and sufficient quantity of drinking water through the protection of water resources and safe disposal of human waste
- Establish sustainable water supply systems
- Increase community understanding of and participation in water and sanitation planning and management
- Establish a system for monitoring outcomes and the regular review and updating of the plan.

Five major tasks are identified in the draft Plan:

1. Improve understanding of water resources and their use
2. Increase access to safe and reliable water supplies.
3. Achieve sustainable water resource management
4. Increase community participation in water management and conservation
5. Improve governance in the water and sanitation sector.

A series of subtasks has been identified under each major tasks and measurable indicators of the success of these tasks and expected timeframes for their completion have been given.

| Task and Subtask | Indicators |
|---|---|
| **1. Improve understanding of water resources and their use** | |
| 1.1 Improve knowledge of the quality and quantity of the nation's freshwater resources. | Data base and reports to Cabinet of the quantity and quality of water available to island community water supplies and on potential threats to freshwater sources.<br>This is a 20 year project consisting of 4 five-year phases which address assessment of island water resources in order of priority. |
| 1.2 Improve understanding of water demand in urban and Outer Island situations and the capacity to pay for water. | Completed surveys and a summary report of case studies of water consumption, water sources and capacity to pay in a range of urban and Outer Island households.<br>This is a two year project with data to be collected from selected priority areas. |
| 1.3 Improve knowledge and management of water resources under climatic extremes and change. | Develop data base and summary reports to Cabinet on the impact of climate extremes on the availability of water in urban and Outer Island locations. Development of a system for warning the Government of possible droughts and water shortages.<br>Two year project to establish data base with assistance from external agencies. Continuing responsibility for early warning. |
| 1.4 Improve monitoring, data collection, storage, analysis and reporting of information. | Establish a data incorporating rainfall, water quality and water quantity in selected and expanding locations with annual reports to Government.<br>Data base establishment one year project. Ongoing responsibility for monitoring and reporting |
| 1.5 Improve understanding of the most effective ways of increasing community participation in the water and sanitation sector. | Review and summary report of methods of including community participation in water resource management. Recommendation to Government<br>One year project |
| **2. Increase access to safe and reliable water supplies** | |
| 2.1 Decrease the incidence of water-borne diseases. | A 30% decrease from 2005 levels of the number of diarrhoeal and dysentery cases by 2010 and a 50% decrease by 2015.<br>On-going improvement with initial 5 year Phase I. |
| 2.2 Improve the safety of | A 10% increase over 2005 levels in the percentage of the population with |

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| freshwater supplied from groundwater and rainwater systems. | access to safe water sources by 2010 and a 20% increase by 2015.<br>On-going improvement with initial 5 year Phase I. |
| 2.3 Protect fresh groundwater resources from adverse human impacts. | Passing of Regulations detailing acceptable and proscribed activities in water reserves. Monitoring and reporting regimes established documenting the health of water reserves. The formation of Water Reserve Management Committees.<br>Initial phase two years then an on-going project |
| 2.4 Improve outer island water supplies. | A 10% Increase in the number of Outer Islanders with safe water supplies from protected water sources by 2010 and a 20% increase by 2015.<br>On-going improvement with initial 5 year Phase I |
| 2.5 Increase the use of rainwater harvesting. | Strategy developed to enforce building code for installation of rainwater tanks. Revolving loan fund established for Outer Islands. A 10% increase in the number of households with raintanks by 2010 and a 20% increase by 2015.<br>Strategy developed and rolling fund established within one year. On-going improvement with initial 5 year Phase I. |
| 2.6 Increase access to safe, basic sanitation. | A 10% increase over 2005 levels in the percentage of the population with access to safe sanitation by 2010 and a 20% increase by 2015.<br>On-going improvement with initial 5 year Phase I. |
| **3. Achieve sustainable water resource management** | |
| 3.1. Develop policies and instruments to help manage demand and allocation of water. | Development of national growth centre policies. Development of pricing systems for urban and outer Island water supply. Installation of domestic water meters in urban areas.<br>Three year time frame |
| 3.2. Develop effective leak detection and remediation programs. | Established leak detection program with annual reporting of performance.<br>Initial development one year with on-going reporting |
| 3.3. Identify sustainable groundwater extraction rates for public water supply systems. | Reports of successfully completed assessments.<br>Initial 5 year phase but a projected 20 year program. |
| 3.4. Identify acceptable land use practices for water source areas. | Reports from studies of the impact of land use on water sources. Recommendations from studies on acceptable and proscribed activities.<br>Three year time frame. |
| 3.5. Document the impacts of groundwater extraction. | Reports from studies of the impacts of pumping on land productivity. Inclusion of local communities in monitoring.<br>Five year time frame. |
| 3.6. Increase cost recovery for water supply systems. | Implementation of urban and rural cost recovery programs.<br>Three year time frame |
| 4. Increase community participation in water management and conservation | |
| 4.1. Increase community awareness and understanding of water resource and sanitation issues. | Production of community and education programs and information materials. Formation of island water committees.<br>Five year time frame but on-going activity |
| 4.2. Facilitate Island Council and village level water and | Establishment of village level water committees with plumber and mechanic. Provide training and redefine role of island water technicians. |

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| | sanitation committees | One year time frame but on-going activity |
| 4.3. | Develop mechanisms for minimising conflicts over water resources | Published strategies and mechanisms for reducing conflict between village communities, between villages and between the community and government over water resources and supplies.<br>One year time frame. |
| 4.4. | Include community representation at the national level in water and sanitation planning. | Establishment of The National Water and Sanitation Coordination committee with representation from NGO and community organisations.<br>One year time frame for establishment but on-going. |
| 4.5. | Develop education programs for schools on safe water supplies and sanitation | Production of an education program that targets younger school students. Annual reports on the program<br>One year time frame but on-going activity |
| **5. Improve governance in the water and sanitation sector** | | |
| 5.1 | Review, revise and make recommendations on water and sanitation policy. | Announcement of a National Water and Sanitation Policy.<br>One year time frame |
| 5.2 | Review and recommend procedures for implementing policy and monitoring implementation. | Review report on implementation and monitoring of policy to Cabinet. Effective procedure for reporting implementation of policy against targets.<br>One year time frame but on going reporting of implementation |
| 5.3 | Review and revise, where necessary, all legislation, regulations and organisational responsibilities relevant to water and sanitation and to the declaration and protection of water reserves. | Report with recommendations to Cabinet<br>One year time frame with 5 year reviews. |
| 5.4 | Improve coordination between agencies with responsibilities in the water and sanitation sector and with relevant community organizations. | Establishment of the National Water and Sanitation Coordination Committee.<br>One year time frame with annual reviews. |
| 5.5 | Improve cost effective planning, operation and maintenance of water supply and sanitation systems. | Publishing of plans, operations and maintenance schedules.<br>Annual task |

The draft plan also specifies agencies responsible for the carriage of subtasks and a regular reporting schedule is suggested.

While the draft National Water Resources Plan has been circulated to all stakeholders in the water and sanitation sector it was not possible to consider it at the inaugural meeting of the National Water and Sanitation Coordination Committee because of the perceived urgency of the GEF IWRM proposal.

## 1.8 Difficulties encountered and measures taken to overcome problems

### 1.8.1 Ministry rivalries

The major difficulty encountered in this project was the reluctance of government Ministries with responsibilities in water to work collaboratively together. Rivalry over which Government should chair the 1985 *Kiribati Water Supply and Sanitation Coordinating Committee* led to its demise.

In order to defuse these rivalries it was strongly suggested that the National Committee should be chaired by the Office of the President (OB) and report directly to Cabinet. The GOK has recently approved the establishment of a National Strategic Policy and Risk Assessment Unit (NSPRAU) within OB under the secretary of OB. NSPRAU, which has yet to be staffed, will have oversight of KAPII. The intended role of the NSPRAU is to:

- Provide support to Cabinet and the President on Cabinet Memoranda;
- Review national policies of strategic national importance and of long-tem risk;
- Facilitate inter-ministry coordination on specific issues of national importance;
- Oversee disaster and crisis management arrangement.

It seems entirely appropriate to run the National Water and Sanitation Coordination Committee through NSPRAU. This idea had the support of most agencies.

An additional problem in the setting up of the National Committee was the payment of sitting fees for attendance at Committee Meetings. Unfortunately the precedent has already been set in the water sector by donor and loan projects for project steering and review committees. It is believed that if the Committee is chaired and supervised by OB this custom may cease

### 1.8.2 Uncertainty over Policy and Planning

There appears to be an extreme reluctance to develop national policy and enact legislation in general as their purposes and value do not be not fully appreciated. There are few mechanisms for implementing Cabinet decisions and the decisions themselves are difficult to access. Even where strategies and policies exist, such as the long-specified, island development centres in the National Development Strategy, planning and implementation does not appear to follow. As well, the signing of and agreeing to international conventions and protocols does not necessarily translate into action at the national or local levels. The Sigatoka 2003 Ministerial Declaration of the *Pacific Action Plan on Sustainable Water Management*, which was endorsed by Kiribati, during the Pacific Island Leaders meeting in Auckland in 2003, called for the development of national instruments including broadly-based national visions, policies, plans, legislation and capable organisations and empowerment of communities. Activities to address these goals have been largely driven by external donor and regional agencies.

An Australian Technical Adviser to the Strategic National Policy and Risk Assessment Unit, Office of the President had also identified the uncertainty over the values of coherent policy and has run a series of Workshops on Policy Development in late 2006 based on *The Australian Policy Hanbdbook.*

## 1.9 Difficulties encountered in implementation

### 1.9.1 Leadership of the Committee

The proposal to place the National Water and Sanitation Coordination Committee directly under the Office of the President through the National Strategic Policy and Risk Assessment Unit was done to reduce rivalry and promote collaboration between Ministries with responsibilities for water.Unfortunately

the Office of the President was unable to assume leadership of the Committee because the National Strategic Policy and Risk Assessment Unit has remained unstaffed since the completion of the Technical Advisor's secondment. The Secretary of the Ministry of Works and Utility, the designated lead National Water Agency, was able to take the chair, however, this has rekindled some of the tensions between rival Ministries.

### 1.9.2 Technical capacity and the impact of external project proposals

There are only two or three senior water resources experts in Kiribati. When opportunities to prepare proposals for large, externally-funded water resource projects arise, their energies are diverted from existing commitments. During the course of this pilot project, both the AusAID, NZAid KAPII *Water Component* Proposals and the Global Environment Facility *Sustainable Integrated Water Resources and Wastewater Management in Pacific Island Countries* were introduced in Kiribati. This lead to considerable diversion of effort and focus, so instead of considering, dicussing and amending the draft National Policy and Plans, the National Water and Sanitation Coordination Committee spend its efforts in reviewing Diagnostic Reports, Hot Spot Analyses and Draft Concept Pilot projects. Donor agencies need to be aware of the very limited human resources in small island states and of their potential diversion from vital or strategic business by external proposals.

## 1.10 Changes introduced in implementation

The Government re-established the National Water and Sanitation Coordination Committee on 22 February 2007. However, the Committee was chaired by the Secretary Ministry of Works and Utilities rather than a senior officer from the Office of the President because the National Strategic Policy and Risk Assessment Unit was unstaffed. Due to the short notice of the meeting, some agencies with key responsibilities in the water and sanitation sector, the Ministry of Health and Medical Services, the Ministry of Internal and Social Affairs and the Ministry of Finance and Economic Planning were unable to attend the meeting. While the Committee adopted in principle the suggested aims and terms of reference (subject to Cabinet approval) for the National Committee but rejected the idea of the inclusion of NGOs on the Committee since its main tasks were "government business".

The draft National Water Resources Policy and draft 10 year Water Resources Plan were widely circulated but were not considered at the inaugural meeting due to the perceived urgency of dealing with the GEF IWRM Diagnostic Report, Hotspot Analysis and Demonstration Concept Project.

## 1.11 Achievements/results (incl connection with IWRM Planning Programme)

- Developed Aims and objectives, terms of reference for the National Water and Sanitation Coordination Committee.
- Inaugural meeting of the National Water and Sanitation Coordination Committee held on 22 February 2007 (see Fig. 6) ratified in principle the proposed goals, objectives and terms of reference.
- Draft National Water Resources Policy developed and circulated.
- Draft 10 year National Water Resources Plan developed and circulated.
- Draft National Water Resources Policy and Plan used as the basis for a 6-year 5.491M€ Proposal for Support to the EU European Development Fund, EDF10 *Safe and Sustainable Water Supplies and Sanitation for Rural and Outer Island Areas in the Republic of Kiribati* .

- Draft National Water Resources Policy and Plan used as the basis for the GEF IWRM Diagnostic Report, Hot Spot Appraisal and the development of a 5 year $US 0.5M Demonstration Concept Project.

Fig. 6. Inaugural meeting of the National Water and Sanitation Coordination Committee, Betio, Tarawa, Kiribati on 22 February 2007. The chair of the Committee on the left is Reina Timau Tiinga, Secretary of the Ministry of Public Works and Utilities.

### 1.11.1 Outputs: reports, documents and papers

The pilot has produced the following written reports, documents and papers:

| Report | Content |
|---|---|
| The Case For the National Water & Sanitation Coordination Committee | Discussion document for circulation amongst key stakeholders to raise awareness of the advantages of a whole-of-government approach. |
| Coordination of the Water and Sanitation Sector: Background To The Kiribati National Water And Sanitation Coordination Committee. | Discussion document for circulation amongst key stakeholders to highlight previous approaches to the coordination of the water and sanitation sector in Kiribati and to identify lessons learnt. |
| The National Water & Sanitation Coordinaton Committee: Strengths, | A discussion paper proposing the mission, aims terms of reference, coordination, responsibilities and reporting and |

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| Proposed Mission, Aims, Terms of Reference, Coordination, Reporting and Composition | suggested composition of the National Water and Sanitation Coordination Committee |
| Long Term Water and Sanitation Priorities In Kiribati for Potential Support Under EU EDF10 | A document developed for the Government of Kiribati, based on research undertaken for the PfWG pilot project identifying long term priorities for possible funding under EU EDF10 |
| Sustainability of Water and Sanitation Services in South Tarawa, Kiribati | This is a summary of issues critical to the sustainability of the water and sanitation services and the associated risks in the densely urbanised South Tarawa, Republic of Kiribati, which has one of the highest incidences of water-borne diseases in the Pacific. It was developed from research conducted for the EU PfWG project and was circulated to donor agencies. |
| Water for Healthy Communities, Environments and Sustainable Development: Draft National Water Resources Policy. | This sets out the purpose, consistency, previous references. Policy goal, policy objectives and intended outcomes of National Water Resources Policy and was prepared for consideration by the National Water and Sanitation Coordination Committee. |
| National Plan and Strategies for Sustainable Water Management and Use: Draft 10 Year Water Resources Plan | This Plan uses the framework of the Draft National Policy to identify priorities in the water and sanitation sectors and to identify achievable tasks, timeframes and responsibilities to address those priority concerns. It was prepared for consideration by the National Water and Sanitation Coordination Committee. |
| Proposal for Support EU European Development Fund, EDF10, Safe and Sustainable Water Supplies and Sanitation for Rural and Outer Island Areas in the Republic of Kiribati. | This proposal for a 6 year 5.5M € project was developed using the draft National Water Resources Plan developed under PfWG. It was developed for the Government of Kiribati for submission to EU. |
| Global Environment Facility (GEF) Project Development Facility Block B. Sustainable Integrated Water Resources and Wastewater Management in Pacific Island Countries. National IWRM Diagnostic Report, Republic of Kiribati | This report was developed using the draft National Water Resources Plan developed under PfWG. It was prepared for the GOK and for SOPAC for submission to GEF |
| GEF IWRM Demonstration Project Concept Paper for the Pacific Country the Republic of Kiribati : Protection And Management off | The 5 year $US 0.5M project was prepared using research undertaken for the PfWG in Kiribati. It was prepared for the GOK for transmission to SOPAC and to GEF. |

| | |
|---|---|
| Shallow Groundwater Sources For South Tarawa | |
| Trial Of Low Cost Membrane Filtration Treatment Of Drinking Water In Pacific Small Island Countries. | The review of priorities in the rainfed island of Banaba, Kiribati for EU PfWG identified the urgent need for low cost, easily operated and maintained membrane filtration systems to filter out bacteria, sediment and algae from water supplies. This proposal was submitted to SOPAC for possible funding for Pacific island nations. |
| Society-Water Cycle Interactions in the Central Pacific: Impediments To Meeting The UN Millennium Goals for Freshwater And Sanitation | Paper published in RIHN 1st *International Symposium Proceedings – Water and Better Human Life in the Future*- 6-8 Nov 2006, RIHN, Kyoto, pp 41-52 |
| Climatic and Human Influences on Groundwater in Low Atolls | Paper published in *Vadose Zone Journal*. **6**:581–590 (August 2007) |
| Challenges in freshwater management in low coral atolls. | Paper published in *Journal of Cleaner Production,* **15**: 1522-8 (2007) |

## 1.12 Linking with other programmes

**AusAID, NZAid and World Bank Kiribati Adaptation Programme Phase II Water Component**

The KAPII Water Component relies on the existence of a National Water Resources Committee to steer water projects within the water component. This committee has been established within the EU PfWG pilot project. Two key activities with KAPII are the development of National Water Policy and National Water Plans. The basic groundwater for these have been prepared under EU PfWG.

**EU EDF10 Project Proposal for Kiribati**

The Draft National Water Resource Policy and Plan developed here under EU PfWG were used to identify priority projects for potential funding in Kiribati under EU EDF10. Projects over 6 years totally 5.5M€ were developed.

**Global Environment Facility (GEF) Sustainable Integrated Water Resources and Wastewater Management in Pacific Island Countries.**

The Draft National Water Resource Policy and Plan developed here under EU PfWG were used to develop a Diagnostic Report for Kiribati and to develop a Demonstration Concept Project for submission to SOPAC and GEF.

**Skyhydrant Membrane Treatment System for Developing Country Water Supplies**

The research and reviews undertaken for the EU PfWG pilot project revealed the pressing need for need for low cost, easily operated and maintained membrane filtration systems to filter out bacteria, sediment and algae from water supplies in small island water supply systems. A project proposal to introduce and train small island water technicians in the use of this technology was prepared and submitted to SOPAC.

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