

**Pacific Regional Report of the Cooperative Performance  
Audit:  
*Access to Safe Drinking Water***



## Foreword

Performance audits of government operations, actively promoted by PASAI, have become increasingly accepted, if not demanded, as a vital tool in ensuring government operations are both transparent and accountable for the public resources they use on the public's behalf across the Pacific region.

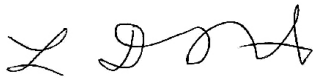
If one jurisdiction undertaking a performance audit is valuable then it follows that there must be economy of scale if more participate.

To this end, PASAI has developed a program of Cooperative Performance Audits within the region. The focus to date has been on environmental auditing as environmental issues, such as the sustainable management of water resources, cross country borders and boundaries. Cooperative audits, involving a number of individual Pacific country/state audit offices, are a powerful tool to assess regional environmental impacts. The Cooperative Performance Audit program also has the clear goal of building performance auditing capacity across PASAI member audit offices.

The cooperative performance audit of access to safe drinking water is the second in this series and a topic of obvious and fundamental importance. Sadly not all people in the region share the same standards of access to safe drinking water. This report seeks to identify these deficiencies and the success stories.

This report is the culmination of a team effort but special mention must be made of the financial assistance and support provided by our development partners: the Asian Development Bank and the INTOSAI Development Initiative. The Regional Working Group on Environmental Auditing and the Applied Geoscience and Technology Division (SOPAC) of the Secretariat of the Pacific Community provided invaluable technical support and advice over the course of the audit.

I commend this report to Pacific island governments, donor agencies, and environmental organisations involved in water issues.



Lyn Provost

Secretary General

Pacific Association of Supreme Audit institutions

# Table of Contents

<b>Abbreviations and Glossary of Terms</b> .....	<b>5</b>
Abbreviations.....	5
Glossary of Terms.....	5
<b>1. Summary</b> .....	<b>6</b>
Introduction .....	6
PRAI Objectives and Outcomes.....	6
Cooperative Audit Objective and Scope .....	7
Overall Audit Conclusion.....	8
Key Findings .....	8
Structure of the Regional Report.....	13
<b>2. Introduction to the Audit</b> .....	<b>14</b>
Reasons for the Audit .....	14
Planning for the Audit Program .....	14
Second Regional Cooperative Performance Audit.....	15
<b>3. Access to Safe Drinking Water in the Pacific Region</b> .....	<b>18</b>
Millennium Development Goals .....	18
Pacific Island Water Challenges .....	18
Regional Frameworks for Action.....	19
Monitoring Arrangements .....	20
<b>4. Main Findings against Each Line of Enquiry</b> .....	<b>22</b>
Line of Enquiry 1: Is there a legal and policy framework to ensure access to safe drinking water? ....	22
Line of Enquiry 2: Has the framework been implemented? .....	26
Line of Enquiry 3: Is the effectiveness of implementation monitored and can improvements be demonstrated?.....	35
<b>5. Executive Summaries</b> .....	<b>41</b>
Cook Islands .....	41
Fiji.....	44
Kiribati.....	47
The State of Kosrae of the Federated States of Micronesia (FSM).....	50
The Republic of Palau.....	52
Samoa .....	57

Tuvalu.....	59
Yap State – Federated States of Micronesia.....	63
<b>APPENDIX A: Capacity Building through the Cooperative Performance Audit Approach</b>	<b>64</b>
The First Cooperative Performance Audit .....	64
The Second Cooperative Performance Audit.....	65
Performance Audit Skills.....	67
The PASAI Cooperative Performance Audit Methodology .....	67

## Abbreviations and Glossary of Terms

### Abbreviations

ADB	Asian Development Bank
AusAID	Australian Agency for International Development
CPA program	Cooperative Performance Audit program
FSM	Federated States of Micronesia
IDI	INTOSAI Development Initiative
INTOSAI	International Organisation of Supreme Audit Institutions
INTOSAI WGEA	INTOSAI Working Group on Environmental Auditing
MDGs	Millennium Development Goals
PASAI	Pacific Association of Supreme Audit Institutions
PICTs	Pacific Island Countries and Territories
PRAI	Pacific Regional Audit Initiative
RAP	Regional Action Plan
RWGEA	Regional Working Group on Environmental Auditing
SOPAC	Applied Geoscience and Technical Division of the SPC
SPC	Secretariat of the Pacific Community
SAI	Supreme Audit Institution
UN	United Nations
UNICEF	The United Nations Children’s Fund
WHO	World Health Organisation

### Glossary of Terms

**Performance Audit** – An audit of the economy, efficiency and effectiveness with which an audited entity uses its resources in carrying out its responsibilities.

**Cooperative Audit** – A cooperative performance audit involves a group of audit offices undertaking an audit on the same subject at the same time. An overview report is usually prepared, as well as individual reports by each audit office for tabling in their respective jurisdictions.

## 1. Summary

This report provides a regional overview of the process and outcomes of the Cooperative Performance Audit in the Pacific region on access to safe drinking water. The report records the achievements against Pacific Regional Audit Initiative (PRAI) objectives, including building performance auditing capacity within PASAI (see Appendix A), and the lessons learned from the second cooperative audit. In addition the high level findings, about access to safe drinking water in the Pacific island countries/states that were the focus of the audit, are presented.

### Introduction

This report assesses the contribution of the second cooperative performance audit to the achievement of the Pacific Regional Audit Initiative (PRAI) objectives. It contains some high level observations about access to safe drinking water in Pacific countries, based on comparative results across the ten individual country/state audit reports. It also contains several examples of good practice that the audits found and includes key messages identifying where improvements are required.

The report should be of interest to Pacific island governments, donor agencies, and environmental organisations involved in water issues.

The report also assesses how performance audit capability in Pacific island audit offices is increasing as a result of the cooperative audit process (see Appendix A).

### PRAI Objectives and Outcomes

The overarching PRAI objective is 'to raise Pacific public auditing to uniformly high standards'. To achieve this objective, one of the PRAI outputs is to build and sustain public auditing capacity through the conduct of cooperative audits with participating Supreme Audit Institutions (SAIs) in the Pacific region.

The PRAI work program notes that SAI capacities differ across the region but they all face similar human resource capacity challenges. In seeking to address this issue, one of the strategies used is to develop performance auditing capacity through a cooperative audit approach. This component of the PRAI supports cooperative performance audits that result in individual national reports and an overview regional report.

### *Why Audit Drinking Water?*

Pacific island countries and territories have unique water management issues due to factors such as their small size, lack of natural storage, competing land uses, and vulnerability to hazards including drought and cyclones. Not all Pacific island people have drinking water supplied to their homes. As a region, the Pacific may not meet the Millennium Development Goal target 7C: 'to halve, by 2015, the proportion of people without access to safe drinking water and basic sanitation'.

Pacific island auditors-general were keen to assess the performance of their governments in this important area.

### *Which SAIs Participated?*

Ten PASAI member audit offices took part in the audit: Cook Islands, the states of Kosrae and Yap of the Federated States of Micronesia (FSM), Fiji, Kiribati, Palau, PICT 1, Samoa, PICT 2 and Tuvalu. Of the SAIs participating in the second cooperative audit, seven had participated in the first cooperative audit and three were new to the cooperative performance audit approach, the states of Kosrae and Yap of FSM and Kiribati.

The audit reports of the following SAIs are now in the public domain: Cook Islands, Fiji, the states of Kosrae and Yap of FSM, Kiribati, Palau, Samoa, and Tuvalu. Two additional SAIs participated in the cooperative audit. However, their reports have not yet been released and because of confidentiality issues the individual country reports cannot be identified in this regional report. As a result, when cross-country comparisons are made in this report, these Pacific island countries will be referred to as PICT 1 and PICT 2.

The Governments of the nine<sup>1</sup> Pacific island countries are signatory to the Pacific Regional Action Plan (RAP) on Sustainable Water Management, 2002, which guides actions on water supply and drinking water safety issues within each of their jurisdictions.

### *Support for the Audit*

The audit was supported by the Asian Development Bank (ADB), the INTOSAI Development Initiative (IDI), the Pacific Association of Supreme Audit Institutions (PASAI) and the Regional Working Group on Environmental Auditing (RWGEA). The Applied Geoscience and Technical Division (SOPAC) of the Secretariat of the Pacific Community (SPC) provided technical advice on water management issues.

The audit teams worked together on the planning phase and the reporting phase of the audit, using a peer review approach and with support from expert advisors including in-country support during fieldwork, audit analysis and report drafting.

### **Cooperative Audit Objective and Scope**

The aim of the audit was for each participating SAI to assess the effectiveness of actions (taken by key agency/agencies) to improve access to safe drinking water, by examining:

- **Line of Enquiry (LOE) 1** - Is there a legal and policy framework to ensure access to safe drinking water?
- **Line of Enquiry (LOE) 2** - Has the framework been implemented? and
- **Line of Enquiry (LOE) 3** - Is the effectiveness of implementation monitored and can improvements be demonstrated?

The audits focused on either the management of drinking water in key locations, such as public water utilities or the operations of key agencies in each country/state. This included considering whether the Pacific Island Countries and Territories (PICTs) were taking the

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<sup>1</sup> The national government of the Federated States of Micronesia (FSM) is signatory to the Pacific RAP. As a result it is appropriate to audit how the plan is implemented in the two FSM states of Kosrae and Yap that participated in the audit.

steps required by the Pacific Regional Action Plan and other regional water agreements. It was intended that each participating SAI would report its findings in its own jurisdiction and that a high-level regional perspective would be contained in this regional overview report.

### **Overall Audit Conclusion**

The overall objective for the cooperative audit was to assess the effectiveness of management of the supply of safe drinking water in selected locations within nine PICTs.

The overall audit conclusion is that most of the audited PICTs need to strengthen arrangements to improve access to safe drinking water. A key concern is that where there is no single overarching legal and policy framework for improving access to safe drinking water, there are resulting weaknesses in implementation, coordination, and making improvements based on monitoring and sound data. The few PICTs with specific legislation for safe drinking water tended to have a more robust and coherent approach to management and were more able to demonstrate improvements. There are also funding and capability constraints in most PICTs, which limit their effectiveness and ability to improve their performance.

The individual audit reports recommended areas where improvements could be made. The implementation of those recommendations should lead to improved access to safe drinking water for citizens in Pacific island countries and associated health benefits.

### **Key Findings**

The main findings from each of the three lines of enquiry are noted below.

***The overall finding on the first line of enquiry is that most of the ten PICTs have legal and policy frameworks in place but not a single, overarching framework.***

An effective legal framework, supported by policies and strategies, is essential for effective management and supply of safe drinking water. The Regional Action Plan on sustainable water management encourages PICTs to develop a legal framework appropriate to the needs of their citizens.

The results for this line of enquiry are summarised in part 4 of this report (table 4.1).

The key findings for this line of enquiry were broadly positive:

- nine of the ten audits had laws relevant to water management in place; principally overarching public health acts covering matters such as risks to the water supply;
- three of the audited countries/states had specific drinking water legislation or a similar law in place, and three had drinking water legislation or similar in draft form;



- five of the ten audits found that national strategies, plans or policies were in place that identified risks to the supply and safety of drinking water and referred to the United Nations Millennium Development Goal related to safe drinking water;
- five of the ten audits reported that the policy framework recognised the role of traditional owners with a further two audits reporting that this role did not apply within their jurisdictions.

However, the audits also found that:

- there is no uniform approach to developing systems and processes required to underpin access to safe drinking water, with only three audits reporting that regulations were in place to:
  - protect water sources;
  - allocate water to consumers; and
  - specify water quality standards to ensure water is suitable for consumption.

#### **Comment on First Line of Enquiry**

Where government objectives are set out in legislation, there is often a need for further guidance to ensure those objectives are enshrined in national policies or planning approaches.

The audits broadly found that the necessary legislative requirements for access to safe drinking water are in place, but in most cases these are fragmented rather than in a single piece of legislation regulating safe drinking water. The effect of the requirements being spread among different statutory instruments is that other tools such as regulations and policies become more important to guide the implementation of government objectives ensuring access to safe drinking water.

It is also more challenging to effectively implement the framework and monitor whether objectives are being achieved where the framework is fragmented.

***The overall finding on the second line of enquiry is that legal and policy frameworks have not been effectively implemented in most of the ten audited countries/states.***

The cooperative audit assessed whether the legal and policy frameworks for supply of safe drinking water had been implemented, and were operating effectively, focusing on:

- administrative support for access to safe drinking water; and
- water system infrastructure.

### *Administrative Support for Access to Safe Drinking Water*

This involved examining the roles and responsibilities of key agencies, coordination arrangements between them, and arrangements to ensure safe drinking water. The results are summarised in part 4 of the report (table 4.2).

All audits found that agencies responsible for implementing the water management framework were identified. Six audits found that roles and responsibilities between agencies were clear. However, most audits (six) found a lack of coordination between responsible agencies. In particular:

- only two audits assessed coordination arrangements between these agencies as effective;
- six audits found that coordination arrangements were not in place; and
- two audits found coordination arrangements were in place but were not effective.

These results are concerning, as coordination of administrative effort and clarity about roles and responsibilities are basic conditions for efficient use and management of resources to achieve the best possible result.

Eight of the ten countries/states covered by the audit need to take concerted action to facilitate greater coordination between existing water agencies and other responsible parties to effectively manage arrangements for sustainable access to safe drinking water for their citizens.

### *Drinking Water Safety Planning, and Independent Monitoring and Water Testing*

Ensuring drinking water safety requires a risk management approach, an independent testing agency, and compliance with water quality standards:

- four countries/states audited have drinking water safety plans in place, and are making improvements based on risks identified in the planning process;
- all of the ten countries/states audited had an independent agency responsible for drinking water testing and monitoring, however
  - several audits found that the number of water supply inspections and testing procedures were erratic or did not comply with approved standards; and
- lack of investment in appropriate facilities for water quality testing and also staff training was the prime cause for a lack of assurance that water testing procedures were comprehensive.

### *Water Pricing Policies*

The Pacific Regional Action Plan (RAP) on Sustainable Water Management encourages PICTs to establish financially viable enterprises for water by developing appropriate financial and

cost-recovery policies, tariffs, billing and collections systems, and financial operating systems.

Although water pricing policies exist in the majority of the countries audited, in most cases the policies were either not regularly reviewed and updated or funding was not set at a level to pay for and maintain the water supply system. The exception was PICT 1.

Where water charges apply, they need to be set considering capacity to pay, be applied equitably, and be reviewed from time to time.

#### *Water System Infrastructure*

Part 4 of the report (table 4.3) summarises, on a comparative basis, the water system infrastructure in place in the audited countries/states.

Piped water was the most common option for providing access to improved sources of drinking water in the selected locations covered by the audit. However, in two cases there was no water treatment facility attached to the source.

The audits found a high degree of variance in the results concerning compliance by water utility operators with standard operating procedures, including basic maintenance matters such as cleaning pipes and checking for leaks.

#### **Comment on Second Line of Enquiry**

Administrative support for access to safe drinking water and water system infrastructure requires significant improvement across the Pacific countries audited. Coordination arrangements between responsible agencies and clarity around roles and responsibilities are generally poor. More PICTs should become involved in the drinking water safety planning process as it is leading to positive outcomes for the four countries/states audited that are using the process.

Water quality testing arrangements need improvement with the lack of investment and trained staff identified as key inhibitors.

The extent to which individual countries can provide sound water system supply infrastructure including water treatment facilities at source and maintenance schedules such as regular leakage checks on pipes is very dependent on adequate funding. Most countries/states audited need to review their water pricing policies to see if the revenue derived is adequate to the task of maintaining and upgrading the water supply system.

The role played by donor agencies is also important in this context and more needs to be done to ensure that appropriate co-ordination and oversight mechanisms are in place to see that donor funding is responsive to national and community priorities.

***The overall finding on the third line of enquiry is that there are weaknesses in monitoring systems and performance management frameworks.***

The third line of enquiry considered whether monitoring arrangements were in place to assess the effectiveness of implementation of the legal and policy framework, and whether improvements in access to safe drinking water could be demonstrated.

This involved looking at:

- water quality monitoring and testing arrangements, public health data, and information provided to the public; and
- performance management arrangements.

The results are summarised in part 4 of the report (tables 4.5 and 4.6) and below.

#### *Water Quality Monitoring and Testing, Public Health Data Collection, and Information Given to the Public*

- Most of the audits (seven) found monitoring arrangements for water quality/safety in place;
- Five of the audits found regular and comprehensive water quality testing;
- Nine of the ten audits found public health data was collected on the incidence of diseases arising from the consumption of poor quality water;
- Only three audits found that the public was regularly informed if water was unsafe for drinking; and
- Three of the countries/states audited need to do more in the area of public awareness about drinking water management and quality.

#### *Performance Management Arrangements*

- Only five audits found a performance management framework in place;
- Only three audits found that the overall effectiveness of the water management system was monitored and reported to stakeholders; and
- Only four audits found that data were available on matters such as climate change effects and population growth and used to forecast effects on the supply of safe drinking water.

The audits generally reinforced that lack of good information is a key challenge in water management in the Pacific. Without useful data collected over time, it is difficult to assess whether investments are well targeted and achieving government and stakeholder objectives. It is also difficult to assess whether government agencies are performing their functions efficiently and effectively.

### **Comment on Third Line of Enquiry**

Despite the somewhat negative findings in the areas of performance management arrangements and the lack of good information and forecasting, six audits found that improvements in access to safe drinking water could be demonstrated. This is encouraging.

Overall, there is scope for all PICTs covered by this cooperative performance audit to make improvements to parts of their water management arrangements to improve access to safe drinking water for their citizens. There is good support and guidance available from regional organisations involved in water resource management issues, such as the SPC, to facilitate these desired improvements.

### **Structure of the Regional Report**

This report consists of five parts:

- part 1 provides the executive summary;
- part 2 contains general information on the audit, reasons for the conduct of cooperative performance audits on environmental topics; planning for the audit program including external agency support; and the second regional cooperative performance audit and participating SAIs;
- part 3 provides background to the audit topic, including: Millennium Development Goals, Pacific island water challenges, regional frameworks for action, and monitoring arrangements;
- part 4 contains the main findings against the three lines of enquiry; the existence of a legal/policy framework, the implementation of the framework, and whether the effectiveness of implementation is monitored and if improvements can be demonstrated; and
- part 5 contains the executive summaries of those national reports that are in the public domain, including responses from the audited entities.

## **2. Introduction to the Audit**

This part sets out the reasons for the conduct of cooperative performance audits on environmental topics; planning for the audit program including external agency support; and the second regional cooperative performance audit and participating SAIs. The audited entities are also identified.

### **Reasons for the Audit**

2.1 The cooperative performance audit on access to safe drinking water is the second cooperative performance audit to be undertaken in the Pacific Association of Supreme Audit Institutions (PASAI) region. It is part of a program of Cooperative Performance Audits (CPA) in the region with the objective of building performance audit capacity within individual Supreme Audit Institutions (SAIs) to ultimately identify and promote improvements in the effectiveness, efficiency and economy of public administration. Results of performance audit capacity building through the CPA program are reported in Appendix A.

2.2 The CPA program is conducted under the Pacific Regional Audit Initiative (PRAI). A key aspect of the PRAI is to build capacity in individual SAIs through participation in cooperative performance audits and cooperative financial audits. This aligns with the strategic objective of INTOSAI for greater cooperation among SAIs.

2.3 At the 2008 PASAI Congress, auditors-general decided that the first CPA program should be environmentally focussed. This was a very good fit with the INTOSAI's Working Group on Environmental Auditing (WGEA) work plan that aims to facilitate concurrent, joint, or co-ordinated audits in each of the INTOSAI regions, including PASAI.

### **Planning for the Audit Program**

2.4 Initial planning work for the CPA program was undertaken between the 2008 and 2009 PASAI congresses, including discussion at two meetings of PASAI's interim governing body, the Transitional Working Group. The SAI of New Zealand, in its role as coordinator of the ACAG/PASAI Regional Working Group on Environmental Auditing (RWGEA), conducted a survey of PASAI members to identify suitable topics for the CPA program and to find out which SAIs would be interested in taking part.

2.5 The survey favoured solid waste management as the topic for the first cooperative performance audit, with freshwater management a close second and fisheries the third choice. Many SAIs expressed interest in taking part in the program.

2.6 Planning for the CPA program relied heavily on the guidance produced by the Working Group on Environmental Auditing (WGEA) on conducting cooperative audits to determine the appropriate form of cooperation, and the level of support required.

2.7 The CPA program is planned and conducted as co-ordinated audits. That is, the same audit topic is undertaken in each of the jurisdictions, with audit teams coming together at critical points in the audit cycle, planning and report writing. It was expected that each SAI would report in its own jurisdiction, and that a regional report would be compiled to present to the subsequent PASAI Congress and then released more widely to donor organisations, stakeholders in the region and the general public.

### *External Agency Support*

2.8 The Asian Development Bank (ADB) agreed to fund an advisor to lead the program and the INTOSAI Development Initiative (IDI) agreed to support planning and reporting meetings for each of the audits. Additional support was provided by IDI with the establishment of a capacity building expert position in the PASAI Secretariat. One of the functions of the capacity building expert is to assist with the delivery of the CPA program.

2.9 The first cooperative performance audit was completed in 2010 on the environmental topic of solid waste management. Ten Pacific SAIs participated: Cook Islands, the Federated States of Micronesia (FSM), PICT 1, Guam, Papua New Guinea, the Republic of Marshall Islands, the Republic of Palau, PICT 2, Tonga and Tuvalu. The consolidated regional report of these audits is now available on the PASAI website: [www.pasai.org](http://www.pasai.org). Individual SAI audit reports, where available, are on their specific websites.

### **Second Regional Cooperative Performance Audit**

2.10 At the 13<sup>th</sup> PASAI Congress held in Kiribati in July 2010, auditors-general agreed to continue with the CPA program, with the second cooperative performance audit being on the topic of access to safe drinking water. Again, ten Pacific SAIs decided to participate. The audit objective and high-level lines of enquiry agreed at the congress were:

To assess the effectiveness of actions (taken by key agency/agencies) to improve access to safe drinking water, by examining:

- Line of Enquiry (LOE) 1 - Is there a legal and policy framework to ensure access to safe drinking water?
- Line of Enquiry 2 - Has the framework been implemented? and
- Line of Enquiry 3 - Is the effectiveness of implementation monitored and can improvements be demonstrated?

### *Why Focus on Access to Safe Drinking Water as the Audit Topic?*

2.11 The availability, quantity and quality of freshwater is basic to the activities, interests and responsibilities of many different sectors. It impacts on every aspect of modern day life from industrial production, for example hydro power; to food production, for example agriculture and fisheries; to service industries such as tourism. It is also a basic necessity of human life. The topic of equitable and sustainable management of available freshwater resources is large and includes the management of catchment and river basins to downstream extraction for agricultural purposes and also the needs of local communities. Because of this, there was a need to identify and narrow the scope of the audit to make it manageable. The decision of auditors-general to focus on access to safe drinking water as the preferred audit topic was influenced by information that indicated that the citizens of a number of Pacific island countries were not able to access safe drinking water in the quantity necessary to protect and sustain human life.

2.12 'Access' and 'safe' are the two key terms in the audit topic that were examined in detail by the ten audit teams. 'Access' refers to the availability of freshwater in sufficient

quantities for drinking and hygienic purposes (UN Water and Sanitation taskforce for the Millennium Project, 2005). The Joint Monitoring Program for Water Supply and Sanitation (JMPWSS) established by the WHO and UNICEF defines safe drinking water as water with microbial, chemical and physical characteristics that meet WHO guidelines or national standards on drinking water quality.<sup>2</sup>

2.13 For developing countries in the Pacific, safe drinking water is an important factor in safeguarding human health. Unsatisfactory management of freshwater resources has resulted in the reporting of around 6.7 million cases of acute diarrhoea across the region on an annual basis. Children less than five years of age are over-represented in this WHO statistic.

#### *Participating Audit Offices*

2.14 Ten PASAI member SAIs concurrently performed audits of access to safe drinking water laws, policies and practices within their jurisdictions: Cook Islands, the states of Kosrae and Yap of the Federated States of Micronesia (FSM), Fiji, Kiribati, Palau, PICT 1, Samoa, PICT 2 and Tuvalu.

2.15 This high level of participation in the second cooperative performance audit, replicates that of the first regional cooperative performance audit and again provides a representative cross-section of PICTs, supporting the development of a regional overview report.

2.16 It was agreed that the scope of the audit would be limited to either the management of key locations, such as public water utilities or the operations of key agencies in each country.

2.17 Table 2.1 sets out the selected location and/or focus of the audit.

**Table 2.1 Audit Offices and Audit Focus**

<b>SAI</b>	<b>Selected Location/ Focus of Audit</b>
Cook Islands	Actions taken by key agencies to improve access to safe drinking water in the capital of Rarotonga
FSM – Kosrae	Supply to households within Kosrae state
FSM – Yap	Yap State Public Service Corporation and the Yap State Environmental Protection Agency
Fiji	The Water Authority of Fiji (WAF), the Water and Sewerage Department (WSD), the Ministry of Health (MoH), and a sample of Rural Local Authorities (RLAs) within the Central, Western and Northern Divisions of Fiji
Kiribati	Focus on water supply to urban population of South Tarawa

<sup>2</sup> [http://www.who.int/water\\_sanitation\\_health/monitoring/en/](http://www.who.int/water_sanitation_health/monitoring/en/)



Palau	Koror-Airai public water supply system
PICT 1	National capital district water supplier
Samoa	Actions taken by key agencies to ensure access to safe drinking water—Ministry of Natural Resources and Environment (MNRE), Samoa Water Authority (SWA) and the Ministry of Health (MOH)
PICT 2	The Water Board (TWB), Ministry of Health (MOH) and Ministry of Land, Survey and Natural Resources (MLSNR) and Village Water Committee (VWC) on the main island
Tuvalu	Water Division in the Ministry of Works and the Environmental Health Unit on the main island of Funafuti

Source: Country/state audit reports.

#### *Audited Entities*

2.18 As indicated in Table 2.1, in most instances, the country audits examined the operations of agencies with responsibility for providing water services and also those agencies with a role in water quality monitoring. This enabled an examination of key aspects of ‘access’ and ‘safe’.

### 3. Access to Safe Drinking Water in the Pacific Region

This part provides a background to the audit topic, including: Millennium Development Goals, Pacific island water challenges, regional frameworks for action, and monitoring arrangements.

#### Millennium Development Goals

3.1 In 2000, at the United Nations Millennium Summit, world leaders endorsed and agreed to meet the Millennium Development Goals (MDGs). The eight Millennium Development Goals (MDGs), range from halving extreme poverty to halting the spread of HIV/AIDS with a target date of 2015. These universal goals provide a blueprint for action agreed to by each country and each leading development institution. Every MDG has defined targets with regular monitoring and reporting against goal achievement.

The MDGs



3.2 MDG 7—Ensure Environmental Sustainability includes target 7C: ‘Halving, by 2015, the proportion of people without sustainable access to safe drinking water and basic sanitation.’ As a region, Pacific Island Countries and Territories are not on track to achieve the MDG drinking water target in 2015.<sup>3</sup>

3.3 The INTOSAI WGEA guidance, *Auditing Water Issues, experiences of Supreme Audit Institutions*, March 2004, notes that:

- ‘access to safe drinking water is a crucial prerequisite for life of all people in the world and that the contribution of SAIs to this public responsibility could be to audit the performance of government in this field.’<sup>4</sup>

3.4 In this context, the regional commitment to achieve the MDG target on access to safe drinking water supports Pacific SAIs auditing the performance of government administrations responsible for this essential service to their communities.

#### Pacific Island Water Challenges

3.5 The third World Water Forum held in 2003 noted the following challenges for Pacific island countries:

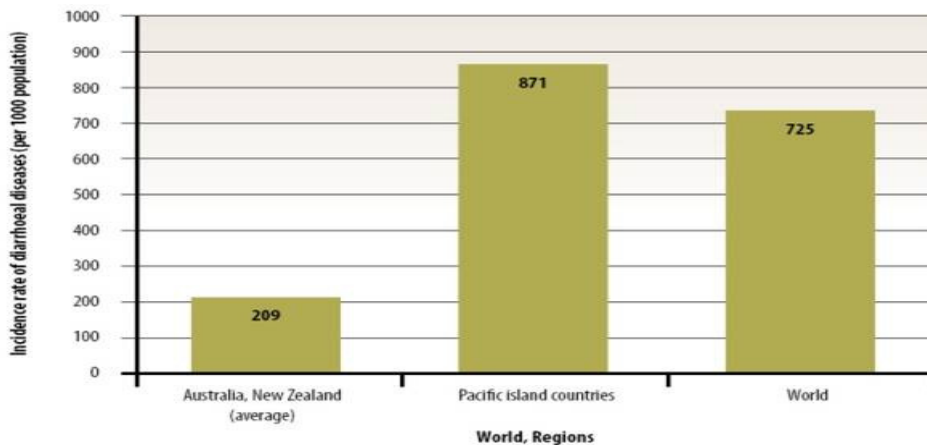
<sup>3</sup> This was sourced from information provided by Applied Sciences and Technology Division (SOPAC) of the SPC.

<sup>4</sup> INTOSAI Working Group on Environmental Auditing, *Auditing Water Issues – experiences of Supreme Audit Institutions*, March 2004, p. 6.

- uniquely fragile water resources due to small size, lack of natural storage, competing land use, vulnerability to natural hazards and those brought about by human activity, including drought, cyclones and urban pollution;
- water and wastewater service providers constrained by lack of human and financial resource bases, restricting the availability of experienced staff and investment, and effectiveness of cost-recovery;
- highly complex water governance due to the disconnect between traditional community and national administration practices and instruments; and
- lack of information and baseline data and poor monitoring capacity.

3.6 Pacific island countries present an incidence rate of diarrhoeal diseases 20 per cent greater than the world average and over four times higher than Australia and New Zealand. These data are presented in Figure 3.1.

**Figure 3.1 Incidence Rate of Diarrhoeal Diseases per 1000 population in Australia and New Zealand, Pacific Island Countries, and the World, 2002**



Source: WHO statistics, 2002.

3.7 For every eight people in Pacific island countries, only one had access to piped water to their dwelling, plot or yard in 2006 and only 46 per cent had access to any type of improved drinking water source. The definition of improved drinking water source is presented in the next section of this part with more detail provided in part 4 of this report.

3.8 Dealing effectively with Pacific islands water challenges requires concentrated effort by Pacific island governments in coordination with development/donor organisations and local communities.

### Regional Frameworks for Action

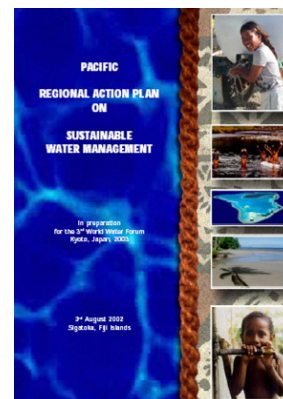
3.9 There are a number of regional frameworks in place, including:

- the Pacific Framework for Action on Drinking Water Quality and Health (2005);
- the Pacific Regional Action Plan on Sustainable Water Management (2002);
- the Pacific Wastewater Policy and Framework for Action (2001).

3.10 The Pacific Regional Action Plan on Sustainable Water Management (2002), the RAP, is structured around six thematic areas: water resources management, island vulnerability, awareness, technology, institutional arrangements and financing.

3.11 Under each of these themes are key messages listing the required actions and identifying the parties deemed to be most responsible for their implementation. These parties include national and local governments, regional agencies to coordinate regional effort and donor agencies amongst others.

3.12 In 2006, Pacific leaders agreed to address the region's water and sanitation issues through the Pacific RAP under the Pacific Plan. Signatories to the Pacific RAP include the countries whose audit offices took part in this cooperative audit.



### Monitoring Arrangements

3.13 The MDG target 7C specifically concerning drinking water is: 'halving, by 2015, the proportion of people without sustainable access to safe drinking water.' It has an associated indicator for monitoring progress: proportion of population using an improved drinking water source. This is defined as: 'percentage of the population using improved drinking water sources (including household water connection, public standpipe, borehole, protected dug well, protected spring, rainwater collection, and bottled).'

3.14 The WHO and UNICEF Joint Monitoring Programme for Water Supply and Sanitation (JMPWSS) is responsible for obtaining coverage statistics to monitor progress towards the MDG targets. These coverage statistics may differ from the official statistics of Pacific island countries due to different criteria in defining 'access' to drinking water or different methodologies in estimating coverage.<sup>5</sup>

3.15 As indicated earlier in 3.5, data issues and comparability remain a challenge in the Pacific to establish a base line to support accurate monitoring and reporting on progress towards MDG targets.

### Reporting on Progress

3.16 The following table consists of data extracted from the *ADB Annual Statistical Yearbook 2010* assessing key indicators for Asia and the Pacific on progress towards MDG targets. At the aggregate level, the Yearbook reported that about half the economies for which data are available are expected to reach the MDG target for improved drinking water. Table 3.1 provides data for the Pacific island countries being audited.

<sup>5</sup> WHO and SOPAC, *Converting Commitment into Action*, 2008, p. 6.

**Table 3.1 Percentage of Population using Improved Water Sources between 1900 and 2008.**

Developing Member Countries	1990			2008		
	TOTAL	Urban	Rural	TOTAL	Urban	Rural
Cook Islands	94	99	87	99 (2005)	98 (2005)	88 (2005)
Federated States of Micronesia (including the states of Kosrae and Yap)	89	93	87	94 (2005)	95 (2005)	94 (2005)
Fiji		92			93 (2000)	
Kiribati	48	76	33	64 (2005)	77 (2005)	53 (2005)
Palau	81	73	98	84 (2005)	80 (2005)	94 (2005)
PICT 1	41	89	32	40	87	33
Samoa	91	99	89	88 (2005)	90 (2005)	87 (2005)
PICT 2	100 (1995)	100 (1995)	100 (1995)	100	100	100
Tuvalu	90	92	89	97	98	97

Source: *ADB Annual Statistical Yearbook 2010*, Key Indicators for Asia and the Pacific.

3.17 When assessing progress made by individual economies, the *ADB Statistical Yearbook* reports that, on current statistics, PICT 2 and Tuvalu are early achievers in reaching the MDG target. Kiribati and the Federated States of Micronesia are on track to achieve the MDG target. The Cook Islands and Palau are reported as making incremental progress and PICT 1 and Samoa are reported as making no progress or regressing.

## **4. Main Findings against Each Line of Enquiry**

The part presents overview findings against each Line of Enquiry (LOE). They are supplemented by good practice examples identified during the individual country/state audits and also some of the key messages from these individual audits.

### **Line of Enquiry 1: Is there a legal and policy framework to ensure access to safe drinking water?**

4.1 The Regional Action Plan (RAP) on Sustainable Water Management is the agreed regional blueprint to guide the actions of country administrations to address water supply and drinking water safety issues within their jurisdiction.

4.2 The RAP includes this key message for responsible authorities in the Pacific:

- ‘develop national instruments including national visions, policies, plans, and legislation appropriate to each island taking into account the particular social, economic, environmental and cultural needs of the citizens of each country.’

4.3 Because of this direction outlined in the RAP, individual audit teams examined the degree to which national visions, policies, plans, and legislation were in place in the countries/states audited.

#### *National Legislative Instruments*

4.4 Table 4.1 sets out the national legislation, policies and plans in place related to access to safe drinking water in the ten audited countries/states.

**Table 4.1 Legislation, Policies and Plans Related to Access to Safe Drinking Water in Audited Countries**

Audit office	Safe Drinking Water Act or similar in place	Other relevant Acts eg Public Health Act or Environment Act	Regulations in place to:			National or state strategy/plan/policy and identifies risks to supply and safety	Reference in strategy/plan/policy to MDG target 7C
			Protect water source	Allocate water	Test water quality		
Cook Is	In draft form	Yes	Yes	No	Yes	Yes	Yes
FSM - Kosrae	In draft form	Yes	Yes	No	Yes	In draft form	No <sup>1</sup>
FSM - Yap	No	No	No	No	Yes <sup>2</sup>	No	No <sup>1</sup>
Fiji	Yes	Yes	No <sup>3</sup>	No <sup>3</sup>	No <sup>3</sup>	Yes	Yes
Kiribati	No	Yes	Yes (not clearly defined)	Yes (not clearly defined)	No	Yes	Yes
Palau	No	Yes (but needs review)	No	No	Yes	In draft form	No <sup>4</sup>
PICT 1	No	Yes	Yes	Yes	Yes	No	No
Samoa	Yes	Yes	Yes	Yes	Yes	Yes	Yes
PICT 2	In draft form <sup>5</sup>	Yes	No	No	No	Yes	Yes
Tuvalu	Yes	Yes	Yes	Yes	Yes <sup>6</sup>	In draft form	Yes

Source: Country/state audit reports.

**Notes:**

- Both Kosrae and Yap are states within the Federated States of Micronesia (FSM). FSM nationally includes in its Infrastructure Development Plan reference to MDG target 7C and the states of Kosrae and Yap are included in this estimate.
- Yap uses the US Environmental Protection Act (USEPA) as guidelines for water quality testing.
- Regulations will be issued once the Water Authority of Fiji 2007 promulgation is endorsed.
- Palau reports separately on achievements against MDGs and is on track to meet MDG target 7C.

5. PICT 2's Water Board Act 2000 provides for the general administration and operation of the Water Board which has responsibility for the supply of water to towns in PICT 2, but not villages. There is also a draft Water Resource Management Bill before cabinet.
6. Tuvalu uses the WHO guidelines on water quality standards.



4.5 It is important that where there are numerous pieces of legislation concerned with the administration of ensuring access to safe drinking water, there is a coherent legal framework to guide administrators who are responsible for implementation. While only three of the audited countries/states had drinking water legislation or a similar law in place, another three audits reported that legislation for a Safe Drinking Water Act or similar was in draft form. Also, it is positive to note that nine of the ten audits reported that other laws have been enacted relevant to the audit topic. These are principally overarching public health acts, which are especially important for population health impacts from consuming unsafe water. Generic environment acts also play a key role in protecting fresh water sources such as catchments or dams.

4.6 The majority of countries/states audited did not have a coherent, formalised legal framework that provides management with regulatory tools to ensure access to safe drinking water for the communities that they service.

#### *Risks*

4.7 The Cook Islands audit reports on the treatment of risks to public water supply and public health issues through complementary legislation, in this case, the Cook Islands *Public Health Act 2004*.

**The *Public Health Act 2004* deals with environmental risks to the water supply, under the sections relating to waste, pollution and other health hazards. Health inspectors note sources of contamination or areas of concern during their daily operations and either notify the environment service or deal with the matter under their own provisions.**

#### *Regulations*

4.8 Regulations to guide systems and processes required for access to safe drinking water were not uniform in the audited countries/states. Only three audits reported that regulations were in place to protect water sources, allocate water to consumers, and specify water quality standards that must be met to ensure drinking water is of a quality suitable for consumption. This is not a good result. The absence of regulatory guidance impacts on the effectiveness of implementation and the capacity to monitor the results of implementation.

#### *National Strategies/Plans*

4.9 The existence of strategic planning arrangements to support legislative objectives is fundamental to effectively managing access to safe drinking water. In the absence of well-defined strategies/plans, the risk of non-compliance with legislative objectives, where they exist, increases. National planning becomes a priority where, as discussed in 4.5, there are multiple pieces of legislation that govern a topic. A cohesive national plan provides the framework necessary to ensure that gaps in implementation are reduced, that duplication of administrative effort is minimised and that national aspirations can be achieved.

4.10 Five of the ten country/state audits reported that national strategies, plans or policies were in place that identified risks to the supply and safety of drinking water with a further three in draft form. This is a positive result.

4.11 The Samoa audit reported on a good practice namely, a comprehensive sector-wide approach that has recently been introduced in Samoa.

**The sector-wide approach is outlined in the *Water for Life: Water Sector Plan and Framework for Action, 2008-2013*. The framework has an overall goal of ‘ensuring community access to water of suitable quality and appropriate quantities to meet all reasonable health, environmental and economic development needs’. It covers all aspects in the water sector from managing water resources to access to safe drinking water including: attention to water sources, water treatment procedures, the distribution system and water quality monitoring.**

4.12 It is also positive to note that six of the ten country/state audits reported that the national policy/planning approach makes reference to the MDG target 7C. As indicated in the above table, both the states of Kosrae and Yap are included in the National Infrastructure Development Plan for FSM nationally and the Republic of Palau reports separately against progress towards MDG targets.

#### *Role of Traditional Owners in Water Policy Framework*

4.13 The cooperative audit also sought to identify to what degree the legal role of traditional owners was recognised in the water policy framework. This is an important cultural and economic consideration as traditional owners may have rights vested in the ownership of water catchment areas or extraction points along the water supply chain. It is important where these rights exist that they are acknowledged and appropriate consultative and compensation mechanisms are put in place. Five of the ten country/state audits reported that the legal role of traditional owners was recognised in the policy framework with a further two audits reporting that this legal role did not apply within their jurisdiction.

4.14 Overall, the cross-audit results indicate that more attention needs to be paid, at the national level, to the development of legislative instruments to guide the implementation of access and drinking water safety measures. It is important that government objectives are set out in legislation and that, in turn, these are expressed through national policy and planning arrangements to guide implementation.

#### **Line of Enquiry 2: Has the framework been implemented?**

4.15 To assess whether or not the legal and policy framework had been implemented, and how effective implementation was, the ten country/state audits focussed on examining:

- administrative support for access to safe drinking water; and

- water system infrastructure.

4.16 Comparative audit results are presented in the following tables. Table 4.2 examines the administrative framework to support access to safe drinking water in the countries/states audited. Results on financial arrangements including a water pricing policy are discussed separately. Table 4.3 examines, on a comparative basis, the water system infrastructure. Issues concerning whether water supply systems and testing arrangements apply equally to urban and rural populations was examined in some audits. This examination is reported separately to other comparative results.

#### *Administrative Support for Access to Safe Drinking Water*

4.17 Table 4.2 examines, on a comparative basis, the administrative support for access to safe drinking water in the countries/states audited. Administrative support includes the features of: identification of the implementing agencies, clarity around roles and responsibilities, co-ordination arrangements between these agencies, and a water quality monitoring agency that is independent of agencies that provide water services.

**Table 4.2 Administrative Support for the Implementation of the Framework**

Audit Office	Implementing agencies identified	Roles and responsibilities clear	Co-ordination arrangements in place and are effective	Independent drinking water testing and monitoring agency	Water testing procedures comprehensive and comply with standards	Drinking Water Safety Plan in place
Cook Islands	Yes	Yes	No	Yes	Yes <sup>1</sup>	in draft form
FSM - Kosrae	Yes	No	No	Yes	No (US EPA standards)	No
FSM – Yap	Yes	Yes	No	Yes	Audit unable to comment	No
Fiji	Yes	Yes	No (minimal)	Yes	Yes	Yes
Kiribati	Yes	No	No	Yes	No	No
Palau	Yes	No	Yes In place but not effective	Yes	No	Yes
PICT 1	Yes	Yes	Yes	Yes	Yes	Yes
Samoa	Yes	Yes	Yes	Yes	Yes	No
PICT 2	Yes	Yes	Yes but not effective	Yes	Yes (WHO guidelines)	Yes, in place for urban supply but not rural
Tuvalu	Yes	No	No	Yes (but only on request)	No	in draft form

Source: Country/state audit reports.

Note: <sup>1</sup> Sampling procedures in place are basic. While testing procedures are comprehensive, standards that are used are different to the legislative standards.

4.18 While all country/state audits reported that agencies responsible for implementing the framework were identified, coordination arrangements between these agencies were either not in place (six audits) or in place but not effective (two audits). This is not a good result as coordination of administrative effort is a basic prerequisite to maximise the use of scarce resources to achieve the best possible outcome. This poor result is further compounded by a lack of clarity around the roles and responsibilities of the agencies involved in implementing the framework. Only six of ten audits reported that agency roles and responsibilities were clear. Concerted action is necessary at the individual country/state level to facilitate coordination between existing water agencies and other responsible parties (including international donor agencies) to effectively manage arrangements for sustainable access to safe drinking water and, while doing this, ensure that public resources are used wisely.

4.19 The appointment of an overarching committee to coordinate and drive administrative effort is a good practice mechanism. The following example was identified in the Samoa audit report.

**The sector plan (see previous good practice example) identifies the various government agencies and their responsibilities in relation to achieving the objectives of the water sector. The sector is led by the Joint Water Sector Steering Committee (JWSSC) which has a number of responsibilities ranging from guiding sector policy and planning processes to monitoring water policy and programme implementation as well as approving individual water projects' appraisal reports, financing agreements, annual work programmes, evaluations and final reports. The JWSSC comprises the Chief Executive Officers of relevant government agencies for the purpose of sector coordination.**

4.20 In countries/states that lack a comparable co-ordination mechanism there would be value in exploring opportunities to develop a dedicated high-level, administrative steering committee with responsibility for the water sector, including access to safe drinking water, and which would be accountable to stakeholders.

#### *Independent Monitoring Agencies and Water Testing Arrangements*

4.21 Separating the function of monitoring from the actual delivery of services is an important administrative control as it provides assurance that monitoring and water testing arrangements remain independent of service functions.

4.22 All of the ten country/state audits reported that there was an independent agency responsible for drinking water testing and monitoring. While this is a good result, a number of audits reported that the number of water supply inspections and associated testing procedures were erratic, too costly to perform on a routine basis, or the procedures were not compliant with approved standards.

4.23 Even where water quality standards were specified in regulations, audit reports noted generally, that lack of investment in appropriate facilities for water quality testing and also staff training was the prime cause for a lack of assurance that water testing

procedures were comprehensive and complied with applicable regulatory or other international standards. These issues will be examined further in LOE 3.

### *Drinking Water Safety Planning*

4.24 The Pacific Drinking Water Safety Planning (DWSP) program is an initiative of the Applied Sciences and Technology Division (SOPAC) of the SPC and WHO. The program commenced in 2005 to assist participating countries to build capacity in developing system-specific water safety plans and implement subsequent improvement schedules. Drinking water safety planning is a comprehensive risk assessment approach that encompasses all aspects of drinking water supply, from catchment to consumer.<sup>6</sup>

4.25 It is a positive result that four country/state audits reported that DWSPs are in place with a further two in draft form.

4.26 The following is a good practice reported in the Fiji audit of the national water authority, the Water Authority of Fiji (WAF).

**The WAF has drawn up Drinking Water Safety Plans (DWSPs) for four out of 15 of its water treatment plants. Four of the 15 treatment plants in Fiji were selected to pilot this approach before it is rolled out more broadly.**

**The DWSPs prepared have identified risk factors that could cause drinking water to become unsafe. Risks to quality of water were identified at the catchment and intake stage, during the treatment stage, and in the storage and distribution stage.**

4.27 It is also good to see that the Cook Islands, Fiji, Palau and PICT 1 all have improvement schedules in place to treat the risks identified through the drinking water safety planning process.

### *Financing Access to Safe Drinking Water Including a Water Pricing Policy*

4.28 Another key message for responsible authorities, endorsed by Pacific leaders in the Pacific Regional Action Plan (RAP) on Sustainable Water Management, is:

- 'establish financially-viable enterprises for water that result in improved performance by developing appropriate financial and cost-recovery policies, tariffs, billing and collections systems, and financial operating systems.'

4.29 Because of this RAP message, the audit teams examined the degree to which appropriate financial and cost-recovery policies were in place in the countries/states audited.

4.30 In developing countries with low GDPs, water pricing policies (cost-recovery policies) are very sensitive policy instruments. However, in the absence of appropriately set tariffs, which take into account the capacity of consumers to pay for access to safe

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<sup>6</sup> SOPAC, *Pacific Drinking Water Safety Planning Guide*, 2008.

drinking water, the ability of water utilities to rehabilitate ageing water supply systems and to provide on-going system maintenance on a cost recovery basis is limited.

4.31 Seven of the ten country/state audits reported that financial arrangements were in place including a water pricing policy. A number of other audits reported that they were still dependent on a national budget allocation and did not have a 'user pays' policy.

4.32 The PICT 1 audit reported on the cost recovery successes of the national capital district water supplier, which has been operating on a profit margin for the past four years. This has resulted in the company being financially viable and able to sustain its operations.

**The national capital district water supplier began operation on 1<sup>st</sup> November 1996 with loan funding of Kina 6.0 million, borrowed from the National Provident Fund. From 1996 to 2004, the company was operating without making profits and in 2005 the first ever profit was posted. In the following year, the loan of 6.0 million was repaid and the first dividends were declared and paid to its shareholder, an independent public business corporation.**

**The audit noted that the water rates were set in five categories by consumer classification. The audit found that the tariff structure set by the water supplier was adequate to recover costs of providing water services. The structure has appropriately classified the consumers based on the projected rate of water use by consumers and takes into account the affordability of the rates for the population.**

4.33 While the operation of the national capital district water supplier demonstrates sound financial management, it needs to be noted that its operating environment, the national capital district, has a population base of around 1 million within a confined geographic area. It also has located within its geographic area a significant number of industries as well as government offices. Other Pacific island countries may not be in a similar position and continue to struggle with getting the balance right between government and donor subsidies and cost recovery as financial tools to support sustainable access to safe drinking water for their communities.

#### *The Role of Donor Agencies*

4.34 A number of country/state audits reported on their dependence on international donors to fund safe drinking water priorities and the need for better co-ordination between donor funds and local water initiatives.

4.35 A key message from the Tuvalu audit report was that:

- in Tuvalu, the planned activities in the water framework and plan are largely dependent on donor funding. If there is no funding available to finance parts of the framework, then implementation of that part of the framework is not undertaken. Multiple donors, with overlapping priority areas, can lead to the potentially

inefficient allocation of resources to less crucial activities within the framework. For example, in the past, donor funded projects have targeted the same activity over the same time period. This related to fixing and supplying water to households on Funafuti.

4.36 This situation again points to the need for an administrative mechanism such as an overarching steering committee with responsibility for coordinating safe drinking water implementation activities that is responsive to the national priorities determined by government and the community.

#### *Rate Setting and Billing Procedures*

4.37 Also in response to the RAP message, a number of audit reports examined the timeliness and accuracy of administrative procedures to identify water users, set rates and bill accordingly. For example, the Palau audit found that:

- water utility rates and fees are not regularly reviewed and updated. Water users were charged different rates. Fees and charges were only recently updated, 19 years after the implementation of initial water fees in 1992. The fees collected are much less than the amount needed to provide water supply.

4.38 The Kiribati audit found that:

- the Public Utility Board (PUB) had billed X customers or households for the three years 2008-2010. However, the audit identified that the number of customers used by the account section for billing purposes was not the same as the number of water users identified through a water unit survey. The survey result showed that the number of households connected to PUB water system was Y, which implies that Y-X customers in 2010 received the water free. This consequently affects PUB billing and hence overall water sales and revenue.

4.39 If water utilities are to be financially viable and able to provide basic system maintenance, there is a need to review the basis for setting water pricing policies including the development of financial and cost-recovery policies, tariffs, billing and collection systems, and financial operating systems that are aligned with the capacity to pay of water system users. This review would best be conducted at national levels with a regional overlay. The outcome of these reviews would assist in identifying where there is a need for government subsidies and the role that donor agencies can play. The impact of poor financial oversight of public water utilities is discussed in the next section.

#### *Water System Infrastructure*

4.40 Table 4.3 examines, on a comparative basis, the water system infrastructure that was in place in the audited countries and states. Results relating to whether or not testing arrangements apply equally to urban and rural populations are reported separately, as this aspect of the audit was not examined uniformly across country/state audits.

4.41 Because well-maintained water supply systems are important from a public health perspective and also assist in supporting the efficient allocation of scarce resources, the

audit teams assessed operational and maintenance procedures concerned with the supply of safe drinking water. To do this, it was first necessary to determine the source of water supply to households.

**Table 4.3 Water System Infrastructure**

Audit Office	Identify all sources of water supply to households	If water is piped, there is a water treatment facility attached to supply	Water supplier has operational plan or standard operating procedures (SOPs)	There is a maintenance schedule for supply infrastructure, eg cleaning of pipes; leakage checks	Water quality tests and infrastructure checks are regularly carried out on other water sources
Cook Is	pip water	No (basic filtration)	No	No	No
FSM – Kosrae	rain water catchments and pip water	No	Yes	No	Irregular
FSM - Yap	pip water	Yes	No	Yes	No
Fiji	pip water, water trucks, rain water tanks, rivers, wells	Yes	Yes	Yes	Yes
Kiribati	pip water, bore holes and truck delivery	Yes	Yes	No (insufficient funding)	No (insufficient funding)
Palau	pip water	Yes	Yes	No	Not examined in audit
PICT 1	pip water	Yes	Yes	Yes	Yes
Samoa	rain water catchments, bore holes and pip water	Yes	Yes	Yes	No
PICT 2	rain water catchments, bore holes and pip water	Yes	Yes but copy not made available to audit	Yes	Yes
Tuvalu	water tanks, truck delivery	N/A	No	No	Yes

Source: Country/state audit reports.

4.42 Table 4.3 identifies the water sources that communities use to access drinking water. All are with inherent risks that have to be managed. Accepted international definitions of improved as opposed to unimproved drinking water sources are provided in the following Table 4.4.



**Table 4.4 Improved and Unimproved Types of Drinking Water Sources**

Improved drinking water sources	Unimproved drinking water sources
Piped water into dwelling, plot or yard	Unprotected dug well
Public tap/standpipe	Unprotected spring
Tubewell/borehole/protected dug well	Cart with small drum/tank
Protected spring	Tanker truck
Rainwater collection	Surface water (river, dam, lake, pond, stream, canal, irrigation channels)
Bottled water	

Source: WHO, UNICEF.

4.43 As can be seen from Table 4.3, piped water was the most common option for providing access to improved sources of drinking water in most of the countries/states audited. Water sources identified in Table 4.4 meet accepted international definitions of 'improved' water sources. Piped water is at the top of the list. This is because the absence of piped water hampers the ability of the users to utilise drinking water in sufficient quantities to meet the basic demand not only for drinking, cooking and hand washing, but also for bathing and laundry.<sup>7</sup> However, WHO and SOPAC qualify this definition in *Converting Commitment into Action*:

- 'piped drinking water to the household is likely to be of better quality than that from point source systems (for example a well), as there is the possibility of carrying out effective centralised treatment by the service provider.'

4.44 The audits reported varying results concerning this assumption with two of the ten country/state audits reporting that no treatment facility was attached to the source.

**While the communities of Kosrae have water piped into their households, there were no treatment facilities at the water source. The state of Kosrae audit reported that the FSM Infrastructure Development Plan project to improve access to safe drinking water by providing effective treatment facilities had been stalled for a number of years. Efforts to resolve this impasse have resumed with the proposed creation of a Kosrae Utilities Authority to administer and manage water supply currently before the state legislature.**

4.45 Other areas of water infrastructure examined in the cooperative performance audit that impact on access to and quality of water supplied to the community through public water utilities includes whether standard operating procedures are in place, especially a system maintenance schedule. Again the country/state audits reported a high degree of variance in the results concerning these key features of well-maintained and operational water infrastructure.

4.46 While seven of the ten country/state audits reported that the water supplier had an operational plan or standard operating procedures (SOPs) in place, only five reported that there was an associated maintenance schedule for supply infrastructure, eg cleaning of pipes and leakage checks.

<sup>7</sup> WHO and SOPAC, *Converting Commitment into Action*, 2008, p. 16.

4.47 The importance of water losses through leakage as a result of poor infrastructure maintenance was identified as critically urgent in the audit conducted in Kiribati.

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4.48 The PICT 1 audit report found that:

- the national capital district water supplier had purchased and put in place technology to automatically detect leakage in the water distribution network.

4.49 This practice further emphasises the benefits that can be garnered by a financially viable water utility enterprise.

4.50 Regular infrastructure checks on other improved water sources, such as rainwater tanks and testing the quality of water of these sources, was also examined in the cooperative performance audit, where applicable. Again, there was significant variance in the results reported. Of the eight country/state audits that audited this, five reported that checks and testing were undertaken to some degree or another.

4.51 The audit conducted in PICT 2 reports on the practice of rainwater harvesting and associated infrastructure checks and water quality testing and the challenges that have emerged with this practice. Whether or not testing arrangements apply equally to urban and rural populations are also commented on here, as this aspect of the audit was not examined uniformly across country/state audits.

4.52 While there were four country/state audits where this was assessed, the PICT 2 audit was the only one that indicated that there was a formal, regularised system for testing water quality in rural areas but with associated risks.



Rainwater harvesting is a common source of freshwater in PICT 2. It is collected from roofs and stored in household tanks and used for drinking, and where sufficiently available, for bathing, cooking, washing etc. Maintenance of rainwater tanks in urban areas is the responsibility of the Water Board (WB) and in rural areas is the responsibility of village water committees. Monitoring of water quality is carried out by the WB in urban areas and by the Ministry of Health (MOH) in rural areas. Through a survey of village water committees, conducted as part of the audit, it was identified that the committees required additional financial and technical assistance and on the job training to establish and maintain their systems. Testing and analysis of water samples from village storage facilities is carried out in the MOH laboratory and the audit found that these results could be compromised owing to the large range of other testing procedures undertaken by the laboratory, including human tissue and food analysis.

4.53 In summary, administrative support for access to safe drinking water and water system infrastructure requires significant improvement across the Pacific countries/states audited. Coordination arrangements between responsible agencies and clarity around roles and responsibilities were generally found to be poor. Involvement in the WHO/SOPAC drinking water safety planning process was patchy, but where it was in place there were positive outcomes with the development of improvement schedules based on identified risks to access to safe drinking water. Water quality testing arrangements need improvement with the lack of investment and trained staff identified as key inhibitors.

4.54 Financing impacts on the ability of individual countries to provide sound water system supply infrastructure, including water treatment facilities at source and maintenance schedules such as regular leakage checks on pipes. While there were water pricing policies in the majority of the countries audited, with the exception of PICT 1, the policies were either not regularly reviewed and updated or not set at a level to adequately pay for and maintain the water supply system.

4.55 The role played by donor agencies is also important in this context and more needs to be done to ensure that appropriate co-ordination and oversight mechanisms are in place to ensure that donor funding is responsive to national and community priorities.

**Line of Enquiry 3: Is the effectiveness of implementation monitored and can improvements be demonstrated?**

4.56 Sound monitoring arrangements provide assurance to the public and stakeholders that systems are working effectively and that risks to public health are managed. Accurate, current data is fundamental to effective monitoring. Data gathered through monitoring can also be used to inform future planning and decision-making by identifying where there are gaps in implementation and the potential impact of these gaps.

4.57 As discussed in part 3 of this report, drinking unsafe water can have serious impacts on public health, particularly that of small children. As a result, water quality monitoring

and testing arrangements from source through distribution to consumption are critical in safeguarding public health. Because of this, the individual country/state audits examined whether or not arrangements were in place to provide this level of assurance and whether results were reported to the public on a regular basis.

4.58 Comparative audit results are presented in the following tables. Table 4.5 examines the water quality monitoring and testing arrangements and information provided to the public in the countries/states audited. Table 4.6 examines the performance management arrangements of responsible agencies that are in place in the audited countries/states.

*Water Quality Monitoring and Testing Arrangements*

4.59 Table 4.5 identifies water quality monitoring and testing arrangements and where related information is provided to the public.

**Table 4.5 Water Quality and Testing Arrangements and Public Notifications**

Audit Office	Water safety and quality monitoring arrangements in place	Water quality testing is comprehensive and regular	Public health data collected on diseases from consumption of unsafe water	Reports provided to stakeholders, including public on results of testing	Public awareness program exists
Cook Islands	No	Yes but basic to regular	Yes	Yes – information released to public @ discretion of Secretary	Yes
FSM - Kosrae	No	No	Yes	Irregular	No
FSM - Yap	Yes – Water quality and monitoring at the water plant	Yes – Water testing is done on a monthly basis	Yes	Infrequently	No
Fiji	Yes	Yes	Yes	Yes – public are only notified of threats to health	Yes
Kiribati	No	No	Yes	No	Yes
Palau	Yes	Yes- EQPB <sup>1</sup>	Yes	No but the law requires them to do so	Yes, only when water is contaminated
PICT 1	Yes	No limited resources	Yes	No	No
Samoa	Yes	Yes	Yes	No	Yes
PICT 2	Yes	No	No	No	Yes
Tuvalu	Yes	Yes	Yes	Yes	Yes

Source: Country/state audit reports

Notes: EQPB is the Environmental Quality Protection Board of Palau.

4.60 While the majority of Pacific island country/state audits found that there were monitoring arrangements in place, the comprehensiveness and regularity of testing was less systematic. A number of reports commented that this was due to limited manpower and insufficient resources to perform the required tasks.

4.61 A positive outcome was that nine of the ten country/state audits found that public health data were collected on the incidence of diseases arising from the consumption of poor quality water. This provides the opportunity to monitor, over the long-term, whether implementation of government measures to address access to safe drinking water are having the desired effect on public health.

4.62 Less positive were the audit results (three of ten) concerning whether or not the public is regularly informed if water is not safe for public consumption. Where responsible agencies have concerns over the quality of water made available to the public, the public should be made aware of these concerns. Tuvalu provides a good practice example of involving the community in testing arrangements and also communicating these results by radio.

**In Funafuti, the capital of Tuvalu, the Inspector of Health conducts water testing and public awareness over radio and through in-country training workshops. The Health Unit is responsible for conducting tests on water quality. While it does not have its own standards, it uses the WHO standard, which is considered to be acceptable. The photograph shows school children inspecting water quality test results at the World Water Day expo in 2011.**



4.63 A key message from the audit report of the state of Yap was that:

- ‘announcements are made infrequently over public radio on water quality testing results’. The audit then went on to recommend that ‘the responsible agencies should develop targeted public awareness programs concerning safe drinking water for the communities it services, including timely notification on water quality’.

4.64 One of the key themes of the Pacific RAP is awareness with a corresponding message:

- ‘access to, and availability of information on water should be provided to all levels of society’.

4.65 The involvement of civil society in good water resources management needs to be facilitated by government. One avenue is through public awareness programs. A number of audited countries/states have considerably more work to do on this. The Palau audit provides a positive message on engaging all sectors of the society in responsible management of Palau’s water resources.

**The Environmental Quality Protection Board (EQPB) of the Republic of Palau actively promoted World Water Day on 22 March 2011 by organising the 1<sup>st</sup> Palau National Water Summit. The goal of the summit was to develop a national water policy framework agreed to by relevant stakeholders. The framework would address key issues such as: security of supply; health; environment; governance and resilience (focusing on climate variability and the impact of climate change on water resources).**

*Performance Management Arrangements*

4.66 A key feature of any system is the capacity to monitor its effectiveness over time and to use monitoring data to identify where improvements are required. Reporting on levels of effectiveness is also important to public and stakeholder confidence in whether investments are well targeted and achieving their goal. For this reason, the audit teams examined the performance management arrangements of the responsible agencies.

4.67 Table 4.6 outlines the performance management arrangements of responsible agencies that are in place in the audited countries/states.

**Table 4.6 Performance Management Arrangements**

Audit Office	Performance indicators used by implementing agencies to measure performance	Effectiveness of overall water management system monitored and reported to stakeholders	Data is available and used to forecast impacts on supply of safe water, eg effects of climate change and population growth	Improvements in access to and safety of drinking water can be demonstrated
Cook Islands	No	No	No – only on ad-hoc basis	No
FSM - Kosrae	No	No	No, national responsibility	No
FSM - Yap	Annual Reports by YSPSC <sup>1</sup> . EPA <sup>2</sup> reports on quarterly basis	YSPSC reports on annual basis	No, national responsibility	Yes
Fiji	Yes – KPIs listed	No	Yes	Yes, can be seen
Kiribati	Yes	No	No	No
Palau	Water Utility – No EQPB – Yes	No, monitored but not reported	No	Water Utility - No EQPB – Yes
PICT 1	Yes	Yes	Yes	Yes

Samoa	No	Yes	Yes	Yes
PICT 2	No	No	No	No
Tuvalu	No	No	Yes	Yes

Source: Country/state audit reports.

Notes: 1. YSPSC is the Yap State Public Service Corporation.

2. EPA is the Environmental Protection Agency.

4.68 The use of performance indicators to measure agency performance is a well-accepted public and private sector practice. There is a degree of variability by public sector organisations responsible for access to safe drinking water in the audited Pacific island countries/states. Where performance indicators are not in use, as reported in five of the above audits, it is difficult to demonstrate that improvements in access to and the safety of drinking water are occurring. This in turn could potentially jeopardise future investments by donor agencies if current investments are unable to be identified and outcomes reported.

4.69 A further important use of water supply and water quality data is the ability to forecast demand taking into account climate change and population growth scenarios. The Government of Tuvalu provides a good practice example of an integrated water management approach to regular and more intense droughts in Tuvalu.

**As part of its legal and policy framework, the Government of Tuvalu has enacted the *Emergencies and Threatened Emergencies Act* which is used in times of drought. It has the following relief measures. In a state of emergency, the Act can authorise the government to increase monitoring the delivery of water to private individual tanks and ration the general public when necessary. Testing of water volumes in houses is usually carried out twice a month, but in times of drought or a critical situation it may be carried out more frequently. The results are reported to the director of works, then to the secretary, then to all the disaster coordination committee members for consideration. In turn, this may result in a decision to call a national emergency if the drought persists.**

4.70 A key message from the Palau audit was the need for the Water Utility in Palau to forecast water demands arising from population and commercial growth in the republic:

- the audit found that there had been a growth in water connections over the last two years including from some major hotel developments. However there was no process in place to forecast future water demands arising from these developments to assist the Water Utility to appropriately plan for increased demand on its water supply system.

4.71 One of the main challenges to managing water resources in the Pacific islands was identified in part 3 of this report:

- the lack of information and baseline data and poor monitoring capacity.

4.72 The findings of these performance audits across ten countries/states within the Pacific, reinforce the lack of information as a key challenge. Without useful data collected over time, it is difficult to assess whether investments are well-targeted and achieving government and stakeholder objectives. It is also difficult to assess whether government agencies are performing their functions efficiently and effectively and whether improvements can be demonstrated.



## 5. Executive Summaries

This part contains the executive summaries of those national reports that are in the public domain, and which include responses from the audited entities.

### Cook Islands

#### Performance Review on Access to Safe Drinking Water on Rarotonga

##### *Executive Summary*

There are many challenges in providing access to safe drinking water to the community. However as a basic human right, it is an essential part of daily life, and critical to our health and well-being. The quality of drinking-water may be controlled through a combination of protection of water sources, control of appropriate treatment processes and management of the distribution and handling of the water. Guidelines must be appropriate for national and local circumstances, including environmental, social, economic and cultural circumstances and priority setting.

The Cook Islands Audit Office has a responsibility under Section 27(g) of the *Public Expenditure Review Committee and Audit (PERCA) Act 1995-1996* 'to pursue any concern that arises in respect of the management of public resources which in its opinion justifies further investigation' and to report findings in accordance with Section 32 of the PERCA Act.

The objective of our performance audit was 'to assess the effectiveness of the actions taken by key agencies, to improve access to safe drinking water'. The scope of our audit focused on the capital of Rarotonga, because of the reticulated public water network and due to major public concern regarding water supply during dry periods.

To achieve our objective we assessed:

- the existence of a legal and policy framework;
- implementation of the legal and policy framework by key agencies; and
- compliance with the framework including monitoring arrangements.

We reviewed the effectiveness of the actions of the Ministry of Infrastructure and Planning (MOIP) and the Water Works Division, the Ministry of Health and the National Environment Service (NES), as the key agencies involved in the water quality and water supply process.

MOIP, through the Water Works Division, is responsible for the installation, operation and maintenance of the public water supply network. The Ministry of Health, through the Public Health Unit and hospital laboratory, is responsible for monitoring water quality supplied through the reticulation network and advising the public when it is unsuitable to drink. The NES is responsible for the protection of internal and inland waters, including catchment areas.

## *Key Findings*

### Existence of a Legal and Policy Framework

- Lack of an overarching policy and framework that ensures access to safe drinking water;
- MOIP's legislation is outdated and does not provide the Water Works Division with sufficient guidance or authority, including a lack of strategic planning;
- The Ministry of Health's legislation and policy does not sufficiently cover the Ministry's role in monitoring water quality, and quality standards do not apply to all consumers and all water sources;
- The proposed Water Resources Management Bill and draft National Water Policy address the deficiencies in the current legislation, including the establishment of a water authority and the introduction of water rates.

### Implementation of the legal and policy framework

- MOIP Water Works Division did not have operational policies or procedures in place;
- The MOH water quality policy is not aligned with the Public Health Act and provided very limited operational standards for water sampling and analysis.

### Compliance with the Legal and Policy Framework

- All of the key agencies did not have proper monitoring arrangements or performance indicators in place in order to assess the effectiveness of their actions.

## *Overall Conclusion*

Currently, there is no one overarching policy or legal framework that ensures access to safe drinking water or provides a coordinated approach to water delivery, quality or management. The current legislation deals with various aspects of water supply and water quality. With the exception of the Environment Act, the current legislation requires urgent review as it is outdated and fails to provide the Ministries of Infrastructure and Planning and Health with adequate guidance or authority for their specific roles.

The lack of an overarching framework contributes to poor coordination of resources and communication between agencies. Water strategies from the National Sustainable Development Plan have not been met within the required timeframe, although most of the initiatives are now underway.

The general lack of proper implementation procedures means that key agencies, (with the exception of the National Environment Service) cannot achieve their legislative standards or obligations. MOIP and the Ministry of Health have undertaken steps to address these issues.

The proposed Water Resources Management Act will repeal the *Rarotonga Waterworks Ordinance 1960* and will provide for the better investigation, use, control, protection,

management and administration of water resources including formulation of a National Water Policy. The bill addresses many of the deficiencies in the current legislation and provides a cohesive approach to water management service delivery and water quality. The government must consider the impact of a user pays system for water and ensure that a consistent supply and better water quality can be provided to the consumer.

Because the three key agencies did not have sufficient monitoring and recording mechanisms against key performance indicators in place, we were unable to provide a definitive conclusion on our objective 'to assess the effectiveness of the actions taken by key agencies to improve access to safe drinking water'.

#### *General Recommendations*

We recommend that key agencies review their present implementation and compliance procedures and ensure that proper monitoring mechanisms and reporting standards are put in place, to assess their effectiveness in providing the community with access to safe drinking water.

We also recommend that parliament consider the enactment of the Water Resources Management Bill as soon as possible, to provide much needed guidance for the management of water and water resources in the Cook Islands.

We have made recommendations regarding the issues identified during the course of this review. The recipients of this report, where specific recommendations have been made, should provide us with a response, within 14 days from the date of the report. Your response is a vital part of the performance review process and I encourage everyone to provide us with your views before the report is tabled in parliament.

I would like to thank those who have assisted my staff during the course of this performance review and I look forward to your replies.

Yours sincerely,

Paul Allsworth

**Director of Audit**

**Cook Islands Audit Office**

## Fiji

### Report of the Auditor-General on Access to Safe Drinking Water in Fiji

#### *Executive Summary*

#### Background

Safe drinking water is water that is suitable for human consumption such as drinking, cooking and for personal hygiene, and is important for both rural and urban populations.

#### Coverage

The audit on access to safe drinking water looked into three main areas:

- the existence of a legal and policy framework:
- implementation of the legal and policy framework and
- effective monitoring of the implementation process and the improvements arising.

The audit centres on the Water Authority of Fiji (WAF), the Water and Sewerage Department (WSD), the Ministry of Health (MoH), and 10 rural local authorities within the Central, Western and Northern Divisions.

The audit focused mainly on these entities as they play a major role in the management of safe drinking water in Fiji. The WAF is the main water utility provider and is also responsible for water protection and allocation. The MoH through the RLA is the surveillance agency responsible for ensuring compliance with water quality standards. The WSD under the Ministry of Works, Transport and Public Utilities (MWTPU) is responsible for monitoring WAF in terms of its operations against its key result areas and key performance indicators.

#### Key findings

##### *Existence of a legal & policy framework*

- The Water Authority of Fiji promulgation has not been enforced since a notice to that effect has not been gazetted by the appropriate minister.
- Other key stakeholders who play a significant role in ensuring access to safe drinking water have not been defined in the promulgation.
- There is no National Water Safety Framework developed.
- The RLAs are not aware of the existence of the National Drinking Water Quality Standards (NDWQS).
- Water Safety Plans (WSP) for two out of four treatment plants are still in draft form and yet to be finalised.

### *Process by which the legal & policy framework is implemented*

- A number of factors affect the WAF's ability to effectively carry out its functions.
- A majority of the rural population don't have access to safe drinking water.
- Water sources are not properly protected due to inadequacy of the legislation
- Treatment Plants (TP) are concentrated in the Central and Western division.
- Although a treatment plant exists in the North, it is not utilised due to design defects. WAF water reserves in areas without TPs are treated only by plain chlorination.
- WAF faces difficulty in maintaining its existing infrastructures.
- There is no mechanism for WAF and MoH to gauge the effectiveness of their awareness program.
- WAF has no control over the revenue it collects and relies a lot on the capital and operating grant provided by government.
- Funds recovered from water fees (operating revenue) are not sufficient to cover for WAFs operation.

### *Effectiveness of Monitoring the Implementation Process*

- MoH has yet to develop a strategy to improve the WSP that have been formulated for the TPs.
- RLAs face some hindrances in carrying out their responsibility.
- WSD has not carried out any monitoring of WAF due to lack of legal framework to validate its functions
- WAF has yet to develop an annual corporate plan to support the statement of corporate intent that was prepared in November 2009. Furthermore the d corporate plan 2010 to 2020 is yet to be endorsed by the WAF Board
- WAF has not submitted its half yearly and annual report for 2010 to Ministry of Public Enterprise for monitoring purposes

### **Overall Conclusion**

Currently there is no legal and policy framework to ensure access to safe drinking water. The Water Authority of Fiji Promulgation 2007, which is meant to provide for the establishment of the WAF as the water utility provider is yet to be sanctioned. Despite the lack of a legal mandate, the WAF has made safe drinking water accessible to nearly 75% of the population. This is evidenced through the provision of various public water supply schemes operated and maintained by WAF nationwide and much improved services in the supply of water.

The absence of a legal mandate is also a deterrent to the successful establishment of the WAF as a commercial statutory authority. Since producing and supplying safe water is an expensive exercise the WAF would need to review water rates to support its commercial viability. However price reviews can only be implemented after a legal framework is in place.

Improvements in the quality of water provided by WAF have been further boosted by the endorsement of the NDWQS in January 2011 and the development of water safety plans for the four major treatment plants. WAF has been conscientious in ensuring that quality of drinking water is upheld and has been monitoring water quality using the draft NDWQS 2006. Routine monitoring and surveillance of the microbiological and physical chemical parameters of water is carried out by the MoH on a monthly basis.

In addition to the lack of a national water safety framework, the draft legal mandate does not implicitly assign responsibilities and powers of all stakeholder agencies involved in providing and ensuring accessibility to safe drinking water. The draft Promulgation only assigns responsibilities to the WAF and the MoH. The role of the monitoring agency however was assigned to the WSD by the cabinet. Monitoring has not been carried out by the WSD because of a lack of policy guidelines. There are a number of agencies involved in the different aspects of the water supply system. However there is little exchange of information between such agencies. This affects the management of water as a resource.

#### General Recommendation

To ensure access to safe drinking water for all, the audit recommends that the water utility provider urgently lobbies government for the enactment of a decree to endorse its existence and empower it and also define responsibilities of all related stakeholders and ensure cooperation and accountability.

Tevita Bolanavanua

Auditor-General, Fiji

## Kiribati

### Report of the Auditor-General on Access to Safe Drinking Water in South Tarawa

#### *Executive Summary*

#### Introduction

Access to safe drinking water is essential to our health, well being and economic development. Kiribati has unreliable annual rainfall, an increasing population and climate change variability, factors that tend to affect water quality and supply.

#### Coverage

This performance audit examined three lines of audit enquiry that include:

- the existence of a legal and policy framework;
- implementation of the legal and policy framework; and
- whether the implementation is monitored and improvement can be demonstrated or not.

The audit focussed on villages in South Tarawa, the most densely populated area where 50 per cent of the population<sup>8</sup> in Kiribati reside.

For the purpose of the audit we concentrated on agencies responsible for ensuring access to safe drinking water. These include:

- Public Utilities Board (PUB): water distribution, protection and management;
- Water Engineering Unit (WEU): water protection and monitoring;
- Environment Conservation Department (ECD): water protection; and
- Environmental Health Unit (EHU): water quality monitoring.

#### *Overall Conclusion*

Although the legal framework for access to safe drinking water existed, the enforcement of the various pieces of legislation is the main audit concern since these acts are outdated and have not been reviewed over the last 10 years. The *Public Utilities Act Cap 83*, for instance, is outdated and enforceability is lacking, which consequently affects the function of the PUB.

Moreover, the audit noted that most of the short term strategies identified in the National Water Resource Implementation Plan (NWRIP) have not been met. This is for various reasons, including lack of coordination and monitoring of the agencies' actions by the responsible lead agency, budget constraints to meet extensive maintenance and other water related projects and of course, lack of community participation and cooperation.

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<sup>8</sup> Census report 2010.

The list below summarises our audit recommendations, the government may consider relevant in its decision making to bring about a better result in protecting water resources to ensure sustainable access to safe drinking water in Kiribati, especially South Tarawa.

Of course, this list is not conclusive. It includes:

- reviewing existing acts or enacting new regulations specific to fresh water resources only;
- developing and implementing a national water resource monitoring, assessment and reporting system;
- providing adequate financial incentives to make the National Water and Sanitation Steering Committee (NWSSC) proactive;
- providing adequate financial and technical support;
- establishing community committees to assist in monitoring and reporting to improve compliance with the laws and regulations concerning water;
- establishing a centralised testing body with adequate financial support to function independently but under the management of the NWSSC. This independent body may take all the responsibilities from the key agencies. The reason is that people/officers currently involved are already preoccupied with their own responsibilities in their respective ministries.

### *Key Findings*

#### Existence of a Legal and Policy Framework

- Existing legislation has not been reviewed or amended over the last 10 years.
- There is no specific legislation on water.

#### Process by which the Legal and Policy Framework is Implemented

- Short term strategies or targets set under NWRIP have not been met by responsible agencies, which may result from the following:
  - insufficient funds to ensure efficient actions by the agencies;
  - lack of community participation and cooperation in water management and conservation;
  - water losses through pipe leakages have increased dramatically;
  - cost recovery for water supply system has not improved.

#### Compliance with the Legal and Policy Framework Including Monitoring Arrangement

- Poor monitoring of responsible agencies' performance;
- No water monitoring reports available from the NWSSC;
- No reliable data available to demonstrate improvement of the agencies;
- No monitoring policy or arrangements existed to monitor the actions of the responsible agencies.



### *General Recommendations*

- The audit recommends that the PUB, WEU, ECD and EHU should collaborate in ensuring access to safe drinking water in Kiribati. Allow sharing of information more efficiently and effectively through well set up channels within the NWSSC or between the responsible agencies;
- Further, we also recommend that the Ministry of Public Works and Utilities (MPWU) work strongly towards securing the commitment and full support of major stakeholders and particularly the community at large. This is if it is to see vast improvements in the implementation of, and compliance with, the legal and policy framework and monitoring of the legislation and policy framework and related activities in ensuring access to safe drinking water.

## **The State of Kosrae of the Federated States of Micronesia (FSM)**

### **Performance Audit of Kosrae State's Access to Safe Drinking Water**

#### *Executive Summary*

We have completed a performance audit of Kosrae's access to safe drinking water. This performance audit was undertaken by the Kosrae State Public Auditor's Office as part of an initiative developed by the Pacific Association of Supreme Audit Institutions (PASAI) with the support of the Asian Development Bank (ADB) and the INTOSAI Development Initiative (IDI). The purpose of the audit was to assess the state's access to safe drinking water. Specific audit objectives included determining:

- whether there is a legal and policy framework that governs access to safe drinking water;
- whether the existing policy framework has been implemented; and
- the extent to which all parties are in compliance with the legal and policy framework.

We conducted the audit in accordance with auditing standards generally acceptable in the United States of America and the standards applicable to performance audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. This performance audit covered the major plans and policies made, and activities towards access to safe drinking water for the years 2004 to February 2011.

The audit revealed that strong political leadership and close coordination among Kosrae state offices and the FSM National Government is vital to improve access to safe drinking water in the state.

With reference to the specific audit objectives we noted that the state does not have laws or an adequate policy framework that governs access to safe drinking water. State Legislative Bill No. 9-268 *Safe Drinking Water Act of 2010* is still a bill that needs to be finalised for approval to become a law. Regulation required by law to develop drinking water regulations from Kosrae Island Resource Management Authority (KIRMA) has not been established.

We further noted in the FSM Strategic Development Plan (SDP) and the Infrastructure Development Plan (IDP) that the target implementation to improve Kosrae water systems has been stalled for several years. As of today, a new project in line with the IDP to improve the existing Lelu/Tofol water systems is underway. However it is only expected to provide drinking water to the Lelu area that only comprises about 31% of the total households in the state. We noted also that household rainwater catchments is the main source of drinking water in the state. However only 60% of households are provided for. Its adequacy is in question and its sustainability during dry seasons is doubtful.

The existing policy framework on access to safe drinking water, as called by the FSM SDP, has not been fully complied with. Improvements in the remaining water systems to serve the 3 municipalities have not been clear. Programs of the state, based on its FY 2011 performance budget, lacked consideration to address access to safe drinking water. There is a need to reinforce the capability of the state in water testing functions and to strengthen its public awareness campaigns on safe drinking water.

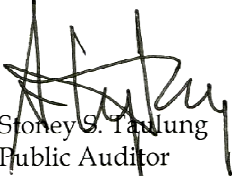
Based on the foregoing findings, we recommend that strong political will and close coordination among the offices in the Kosrae state and the FSM National Government is necessary to improve access to safe drinking water in the state of Kosrae. This is necessary to put into action the following recommendations, that:

- the state government establish laws and/or regulations in ensuring access to safe drinking water for the public;
- the state government must work relentlessly and the Division of Planning take the lead and monitor SDP/IDP and pull together coordinated efforts to utilize available financing to implement necessary water system improvements;
- programs to ensure access to safe drinking water should be adequately funded and manned with trained staff.

We also recommend that the unit evaluate its current testing capabilities for other contaminants. Hiring additional staff for the Health and Sanitation Unit will strengthen its capacity to collect, analyse, store and disseminate quality water reports. We further recommend that the Department of Health Services and its Sanitation Unit structure its public awareness campaign towards the importance of safe drinking water.

Details of the result of our examination were discussed in the findings and recommendations section of this report. The Office of the Public Auditor provided draft copies and discussed the contents of this report with the Kosrae State Legislature, Department of Health Services, KIRMA, Department of Transportation & Infrastructure and Division of Planning and Statistics. We received their responses on Date of response\_\_\_\_, 2011 attached as Annex III-V which.....

Respectfully submitted,

  
Stoney S. Taulung  
Public Auditor

## **The Republic of Palau**

Final report of the cooperative performance audit on access to safe drinking water for the period from October 1, 2008 to September 30, 2010

### *Executive Summary*

This audit report presents the result of our audit on access to safe drinking water for the two year period ended September 30, 2010. Specifically, the audit covered the period from October 1, 2008 through September 30, 2010.

The objective of the audit is to assess the effectiveness of the Water Utility Division, Bureau of Public Works, in providing access to safe drinking water within the Republic of Palau; in particular, the Koror-Airai public water supply system by auditing:

- the existence of a legal and policy framework for access to safe drinking water;
- the process by which the legal and policy framework is implemented, including whether risks to implementation have been considered; and
- compliance with the legal and policy framework, including monitoring arrangements.

In the audit of access to safe drinking water, the Office of the Public Auditor (OPA) selected the Koror-Airai public water supply system because it is the biggest water supply system in Palau and provides water to a majority (80%) of Palau's population and commercial district.

As a result of the review, the Office of the Public Auditor found that the Division of Water Utility of the Bureau of Public Works, Ministry of Public Infrastructure, Industries and Commerce, provided access to safe drinking water for both the residents of Koror and Airai in fiscal years 2009 and 2010. And although the water utility agency's operations met the standards (water quality) in providing access to safe drinking water, there were a number of problems and deficiencies noted relating to access to safe drinking water that we believe should be brought to the attention of management for appropriate corrective action. We also propose recommendations, which we believe, if implemented, will correct these problems/deficiencies.

### *Findings and Recommendations*

#### Existence of a Legal and Policy Framework

There is no legal and policy framework to guide the work of government agencies responsible for operating and delivering a supply of safe drinking water to the people of Palau:

- we recommend the management of the Division of Water Utility in coordination with the Minister of Public Infrastructure, Industries and Commerce, discuss with the President of the Republic and the National Congress the urgency of passing the

proposed *Water and Sewer Corporation Act Bill (Senate Bill No. 8-153)* so that a policy framework can be created.

There exists a proposed National Water Safety Plan for Palau but it is still in draft form pending finalisation and implementation:

- we recommend that upon the proposed Water and Sewer Corporation Act Bill becoming a law and the National Water Safety Plan is finalised and approved, then the Steering Committee, or its successor, be given the legal authority to implement the national plan.

There exists a Drinking Water Safety Plan for the Koror-Airai public water supply system but the plan has not been transmitted to the President for his review and approval and therefore the plan has not been implemented:

- we recommend that the Koror-Airai Drinking Water Safety Plan be transmitted to the President of the Republic for his review and approval so that the plan can be formally adopted and implemented.

The water utility has not identified risks associated with drought conditions, increased development, and wasted water the impact of which can affect the supply and quality of water:

- we recommend the water utility identify risks associated with drought conditions, increased development, and wasted water, and develop strategies to mitigate the risks in anticipation of their occurrence in the future.

While there are public water supply system regulations in place, the regulations need to be reviewed and updated on a regular basis:

- we recommend that the Environmental Quality Protection Board (EQPB) review and update the public water supply system regulations on a regular basis to ensure that the Republic's regulations conform to international standards.

Recent developments took place on March 22, 2011, World Water Day. The Environmental Quality Protection Board organised and hosted the 1<sup>st</sup> Palau National Water Summit. The goal of the summit was to create a water policy framework. The EQPB is responsible for this ongoing activity:

- we commend that the EQPB for its initiative and leadership in organizing the 1<sup>st</sup> Palau National Water Summit that brought to the forefront water issues and agencies and stakeholders to discuss the issues and challenges.

### Process by which the Legal and Policy Framework is Implemented

Presently, water operators at the Division of Water Utility are not certified. The EQPB performs analysis of water quality on behalf of the division:

- we recommend that the Division of Water Utility water operators obtain the required certification in order to take over the functions of water testing and the roles of the EQPB laboratory technicians be separately and distinctly assigned to monitoring and enforcement.

The Division of Water Utility does not have a scheduled maintenance program for its water treatment and distribution infrastructure, including, for example, pipe replacements, leakage repair, main flushing programs, etc.:

- we recommend that it prepare a scheduled maintenance program to include, but not limited, to pipe replacements, leakage detection and repair procedures, main flushing, and that it request funding from the National Congress for the maintenance program.

The positions of Chief of Division of Water Utility and Manager of Water Connection and Repair remain vacant and the divisions lack the proper equipment to perform their duties and responsibilities:

- we recommend the Water Utility Division be provided sufficient financial resources to facilitate filling of vacant management positions and to purchase essential equipment that is critical to the operation of the agency.

Water utility rates and fees are not regularly reviewed and updated and water users were charged different rates and fees:

- we recommend that water rates and fees be regularly reviewed and updated and water users be charged uniformly.

EQPB's roles and responsibilities include full chemical screening of the public water supply system. The last full chemical screening for the Koror-Airai public water supply system was done in 2000:

- we recommend that the EQPB seek technical assistance from experts and necessary funding to enable the agency to undertake full chemical analysis of the Koror-Airai public water supply system as required by the public water supply system regulations.

The water utility and EQPB have a system in place to warn consumers when water is not safe for consumption. They have not devised a counterpart process to advise consumers when water is safe for drinking:

- we recommend the EQPB and water utility not only issue boiling-water notices when the water is not safe to drink but also issue notices when the water is safe for drinking.

#### Compliance with the Legal and Policy Framework Including Monitoring Arrangements

Water Utility Division does not have performance indicators in place that set the type and frequency of tests required so it is difficult to determine if the agency is in compliance with public water supply system regulations:

- we recommend that a performance management system be established to record and document performance indicators such as the type and frequency of tests to be conducted to facilitate monitoring and analysis of test results, the outcome of which leads to improving the quality of water.

The audit revealed that there have been no documented water-borne diseases from users of the Koror-Airai public water system in 2009 to 2010. The water utility agency provided clean and safe drinking water and the EQPB regularly monitored the agency and the public water system to ensure that water is safe for public consumption:

- we commend that the water utility for its unrelenting work to provide safe drinking water to the public and, similarly, the EQPB's relentless efforts in monitoring and regulating water quality.

The water utility should be able to demonstrate improvements in the effectiveness of its operations by setting benchmarks (goals or desired results) and evaluating and comparing results of operations to those benchmarks:

- we recommend that the water utility set benchmarks or goals for specific activities (i.e. chlorine residual levels or turbidity levels, etc.) that the agency can establish strategies for achievement over a set time period.

EQPB performed more than the regulated number of tests for bacterial and turbidity but testing for chlorine residual was less than the regulated number:

- we recommend that the EQPB executive officer coordinate with the laboratory technicians to ensure that the regulated number of tests for chlorine residuals for the Koror-Airai public water system are performed.

The water utility agency and EQPB did not submit their performance reports for fiscal year 2009 as required by *Republic of Palau Public Law No. 6-11*:

- we recommend that the EQPB executive officer as well as the Director of Bureau of Public Works submit to the President, the Olbiil era Kelulau and the Public Auditor their annual performance reports in accordance with RPPL No. 6-11 and related amendments.

The EQPB has a complaints section that registers all complaints received. However, the Water Utility Division has not established a similar system to record and keep track of customer complaints:

- we recommend that the Division of Water Utility establish a complaints section that registers customer complaints, informs customers of the system, and monitors the system to ensure that corrective actions are taken to address these complaints.

The water utility agency does not have a strategic plan in place to forecast the quantity of water supply that may be affected by climate change, population growth, and development (household/hotel construction):

- we recommend that the management of the water utility agency prepares a strategic plan that forecasts future demand of water supply based on estimated growth of population, household and commercial development, and the hydrological effects of climate change affecting water supply.

Finally, we would like to extend our appreciation to the management and staff of the Division of Water Utility of the Bureau of Public Works, Division of Water Utility of the Bureau of Revenue, Customs and Taxation, and the Environmental Quality Protection Board for their cooperation and professional courtesy extended to us during the audit.

Satrunino Tewid

Acting Public Auditor



## Samoa

### *Executive Summary*

Access to safe drinking water is a basic right for all. Water is generally regarded as the critical natural resource for sustainable human and economic development. The geographic and physical characteristics of small island nations in the Pacific impact on their fragile water resources. Therefore it is important for the Pacific region to have cohesive efforts in achieving sustainable management of our water resources and ensuring that everyone has access to safe drinking water.

Over recent years, the Government of Samoa has progressively made developments to the management of water resources. This included the formation of a water sector to take a collaborative approach to water resource management in Samoa given the scattered roles and the number of agencies involved.

The objective of this audit is to assess the effectiveness of the actions taken by key agencies to ensure access to safe drinking water. The key agencies are the Ministry of Natural Resources and Environment (MNRE), Samoa Water Authority (SWA) and the Ministry of Health (MOH). To achieve this objective the audit focused on the following aspects:

- the existence of a legal and policy framework to ensure access to safe drinking water;
- the process by which the legal and policy framework is implemented;
- monitoring the effectiveness of implementation efforts and any improvements.

### *Key Findings*

#### Existence of a Legal and Policy Framework

- There is a legal and policy framework that ensures access to safe drinking water;
- The sector plan addressed all aspects of access to safe drinking water.

#### Implementation of the Framework

- Compliance with the Water Abstraction Licensing Scheme is not enforced;
- Delay in finalising water safety plans for all treatment plants;
- Non-compliance with national drinking water standards;
- Land management and ownership hinders efforts towards protecting water resources and water quality;
- Agencies have made considerable efforts in public awareness;
- Lack of resources required for specific activities.

#### Monitoring the Effectiveness of Implementation

- Reduction in level of complaints;
- There is a need to improve coordination of sector performance management;
- Lack of public reporting on drinking water quality;
- MOH's certification is required before registration of new bottled water companies.

### *Conclusion*

The sectoral objectives support Samoa's national development agenda as explained in the SDS 2008-2012 and aim to ensure the realisation of improved public health and alleviation of poverty through community access to water of suitable quality and appropriate quantities to meet all reasonable health, environmental and economic development needs. A number of policy and regulatory documents have been reviewed and revised to provide a comprehensive and coherent institutional and regulatory setting for the sector to undertake its developments.

While recognising that progress has been made in the management of water resource and water related issues to ensure access to safe drinking water in Samoa, the audit found areas requiring further attention by the responsible agencies. Areas that need improving included the effective implementation of the legal and policy framework and monitoring and reporting of effectiveness in implementing the legal framework.

One of the sector's objectives is ensuring access to safe drinking water. Monitoring the results of sector performance is critical to an assessment of the water sector's achievements. In addition, reporting these results to the public as well as the status of drinking water quality is equally important.

Enforcing compliance with Part V of the *Water Resource Management Act 2008 on Water Abstraction Licensing* should be revisited by the Joint Water Sector Steering Committee (JWSSC) to ensure that the legislation is effective in protecting water resources.

Finalising water safety plans for the water supply system is crucial in minimising risks that might affect the quality of drinking water supply.

Because of insufficient resources in the form of finance, human and capital, there is a need for agencies to prioritise the activities that should be implemented.

### *Agencies' Overall Response*

Management of the three implementing agencies covered in this audit agreed with the audit findings and recommendations proposed in this report.

**Fuimaono Camillo Afele**

**Auditor General**

**Samoa**

## Tuvalu

### Access to Safe Drinking Water in Tuvalu

#### *Executive Summary*

##### Introduction

This is the Office of the Auditor General of Tuvalu's second performance audit report. The audit was conducted on access to safe drinking water in Tuvalu as part of the Pacific Association of Supreme Audit Institutions (PASAI) cooperative performance audit initiative.

The Audit Office's mandate, as per Part 3 section 25 of the *Audit Act 2008*, permits the Auditor-General to conduct an audit of all or any particular activities of a public sector entity that may be considered appropriate and to report findings accordingly to parliament.

The Water Division of the Public Works Department (PWD) and the Environment Health Unit (EHU) are the key agencies involved in dealing with water distribution, monitoring and water quality.

The objective of the audit is to assess the effectiveness of the Water Division and the Environment Health Unit in enabling access to safe drinking water by determining the following:

- is there a legal and policy framework to ensure access to safe drinking water?
- has the framework been implemented?
- is the effectiveness of implementation monitored and can improvements be demonstrated?

#### *Key Audit Findings*

##### Existence of a Legal & Policy Framework

The following audit findings were noted during the review process:

- no national water policy is in force in Tuvalu. It remains in an early draft form. The Environment Health Unit is currently using World Health Organisation guidelines for water monitoring and quality activities;
- the Tuvalu Public Health Regulations (PHR) and *Public Health Act (PHA)* have both been revised in 2008. Both emphasise the prevention of pollution and the requirement to maintain clean water storage devices;
- the Integrated Water Resources Management (IWRM) Plan is in draft form and is awaiting approval from parliament. It covers most of the goals and actions required in the Pacific Regional Action Plan as well as the Millennium Development Goals.

- the *Emergencies and Threatened Emergencies Act* is used in times of drought and has relief measures;
- the *Water Supply Act* which was enacted in 2008 does not provide a clear institutional legal framework for the management and supply of water in Tuvalu. The *Water Supply Act* requires a national water management strategy that specifies the roles and responsibilities of key agencies;
- the roles and responsibilities set out in the IWRM Plan have not been adequately disseminated and are not accessible to key agencies because the plan is awaiting approval;
- the National Water Policy and Water Resources Bill remain in draft form. These should be finalised and parliamentary approval obtained.

#### Process by which the Legal & Policy Framework has been Implemented

- There are no written procedures for the PWD (Public Works Department) in terms of water distribution;
- Duties and responsibilities for the water section staff are set out in their letter of appointment, however, nowhere else;
- The *Water Supply Act* and *Public Health Act* should be revised and amended to meet the changing environment and the new requirement of Millennium Development Goal number 7;
- The *Water Supply Act* and *Public Health Act* do not clarify key agencies' roles and responsibilities in addressing access to safe drinking water that have been covered by the KAKEEGA II – Tuvalu National Sustainable Development Plan 2005 -2015;
- The fees for obtaining desalination water charged by the PWD are below cost of production and distribution. The fees have not contributed significantly to the operational cost of maintaining the plant. They are used to offset part of the electricity power costs;
- Unstable and inadequate funding is available to improve water monitoring and quality services. Implementation of activities is heavily reliant on donor agency funding;
- Staff in key agencies are under qualified to effectively operate and manage the water quality test kit equipment and facilities;
- There is no coordination of roles and functions of key agencies involved with access to safe drinking water. Consequently, there are overlapping roles of some key agencies which lead to unnecessary costs.

#### Is the Effectiveness of Implementation Monitored and can Improvements be Demonstrated?

- There is an improvement in the documentation and maintenance of statistical data on the volume of water collection, supply and leakage. Statistical data has been collected from 2006 to the present;


- The reporting on the volume of water collected and distributed by the PWD to the Ministry of Works is done on a monthly basis;
- There is regular monitoring by the Water Division twice a month of the level of water (sounding) in government reserves. Monitoring is increased during drought to 4 to 5 times per month;
- The Environmental Health Unit (EHU) is up to date with statistical data on the results of the testing activities that they have conducted on a monthly basis. However, as the current process is very slow, further improvements can be made through speeding up the process of compiling its quarterly data report to the Chief of Public Health for further evaluation;
- The EHU performed nine water quality tests on government housing in which twelve tests should be performed annually according to their department work plan requirement. The work plan requirement is consistent with WHO requirements. Tests for non-government housing are only conducted if there is direction made by the outpatient doctor due to an observed outbreak of disease caused by drinking water;
- The lack of human and financial resources were the major problems faced by EHU and the Water Division that resulted in them not meeting set targets and activities set out in their strategic plans.

### *Conclusion*

To support the full implementation of the National Water Policy and Water Resource Bill and ensure that access to safe drinking water is available, a National Sanitation and Water Management Committee needs to be developed to coordinate the roles, responsibilities and functions of key agencies involved with water quality management and monitoring arrangements. Coordination is also required for the donor agencies as they provide technical and financial support that has come to be heavily relied upon.

The audit concludes that the Environmental Health Unit, Water Division, IWRM Project and the Water & Sanitation Committee should address the following issues when updating the National Water Policy and Water Resource Bill and IWRM plan:

- responsibilities for the supply of water in Funafuti needs to be rationalised;
- there is a need for stable and adequate funding of water quality, supply and monitoring services;
- new operational approaches need to be implemented;
- community awareness on water issues needs to be raised from the grass roots level;
- appropriate monitoring mechanisms need to be established;
- capacity building programs need to be in place for staff involved in water quality and monitoring activities.

A handwritten signature in black ink, appearing to read 'Isaako K. Kine', enclosed within a large, loopy circular flourish.

Isaako K. Kine

**Auditor-General for Tuvalu**

## **Yap State – Federated States of Micronesia**

### **Access to Safe Drinking Water in Yap State**

#### *Executive Summary*

This report presents the results of our performance audit of the effectiveness of access to safe drinking water in the State of Yap, in particular the area serviced by the Yap State Public Service Corporation (YSPSC).

The purpose of our audit was to assess:

- the existence of a legal and policy framework for access to safe drinking water;
- the process by which the legal and policy framework is implemented, including whether risks to implementation have been considered; and
- compliance with the legal policy and framework, including monitoring arrangements.

This audit was conducted pursuant to the authority vested in the Public Auditor and in accordance with the standards for performance audits contained in Government Auditing Standards issued by the Comptroller General of the United States.

Our audit disclosed the need for improvement in the existing legal and policy framework and the lack of an operational plan by YSPSC for implementing that framework. Additionally, we were not able to confirm compliance with the legal and policy framework, including monitoring arrangements.

A copy of this report was circulated to YSPSC and the Yap Environmental Protection Agency (EPA), neither of which provided a response to our findings and recommendations.

Ronald C. Yow

Acting Public Auditor

March 5, 2012

## APPENDIX A: Capacity Building through the Cooperative Performance Audit Approach

The Cooperative Performance Audit (CPA) program was launched at the 12<sup>th</sup> PASAI Congress in Koror, Palau in 2009, as part of the broader Pacific Regional Audit Initiative (PRAI). It was decided that the first round of the program would focus on environmental topics for two reasons. There is a considerable body of guidance available through the INTOSAI Working Group on Environmental Auditing (WGEA) to support cooperative performance audits. In addition, the cooperative performance audit approach lends itself to auditing environmental topics that, because of their nature, cross country borders and can be regional in their impact.

The CPA program, conducted under the auspices of PASAI, has a tiered objective. This is to build performance audit capacity within individual SAIs to ultimately identify and promote improvements in the effectiveness, efficiency and economy of public administration within the countries of the Pacific region. Over the course of the CPA program, a core of skilled performance auditors within individual SAIs is emerging. This will enhance the performance of individual SAIs and contribute to more effective auditing of the use of public sector resources in the Pacific.

### The First Cooperative Performance Audit

At the commencement of the CPA program in 2009, performance auditing capacity within individual SAIs varied considerably. Table A1 indicates the level of experience of both audit offices and also the audit team members participating in the first cooperative performance audit.

**Table A1 Participants in the First Cooperative Performance Audit**

SAI	Level of SAI experience	Level of audit team experience
Cook Islands	high	3 – mixed
FSM	medium	2 – mixed
Fiji	high	2 – high
Guam	high	1 – high
Marshall Islands	low	2 – low
Palau	high	2 reduced to 1 - mixed
PNG	low	2 – low
Samoa	low	2 – low



Tonga	low	2 reduced to 1 - low
Tuvalu	low	1 – low

The mix of skill levels of participants in the first cooperative audit was an important contributor to success. This was because, in addition to training in the technical aspects of performance auditing, participants engaged in a peer review of the work of other audit teams. This supported mutual sharing of experiences and learnings and assisted building capacity across all participants. An increase in confidence in the performance audit process was a demonstrable outcome of the first cooperative performance audit across all audit teams.

*Results of the First Cooperative Performance Audit on Solid Waste Management:*

- Ten SAIs were involved, five new to performance auditing;
- 19 auditors were involved of whom 13 developed performance auditing skills and knowledge, and six auditors enhanced existing skills;
- Ten individual, country specific audit reports were produced. Eight are now in the public arena. As well, the SAI of Fiji lodged its report with the Public Accounts Committee that oversees its operation;
- Individual audit reports recommended areas where improvements could be made. The implementation of those recommendations should lead to improved solid waste management in the Pacific island countries audited and associated environmental benefits; and
- A regional overview report was produced for release at the PASAI Congress in August 2011.

**The Second Cooperative Performance Audit**

Table A2 provides similar information to Table A1 on audit offices and audit team members participating in the second cooperative audit.

**Table A2 Participants in the Second Cooperative Performance Audit**

SAI	Level of SAI experience	Level of audit team experience
Cook Islands	high	2 - low
FSM – State of Kosrae	low	1 - low
FSM – State of Yap	low	1 - low

Fiji	high	2 - mixed
Kiribati	low	2 - low
Palau	high	1 - high
PNG	medium	2 - low
Samoa	medium	2 - mixed
Tonga	medium	2 - mixed
Tuvalu	medium	2 reduced to 1 - low

***Results of the Second Cooperative Performance Audit on Access to Safe Drinking Water:***

For the second cooperative performance audit, the auditors-general of participating SAIs adopted a range of strategies to build and sustain long-term performance auditing capacity within their offices. These are outlined below:

- ten SAIs participated, three new to performance auditing;
- 16 auditors were involved, of whom eleven developed performance auditing skills and knowledge and five enhanced existing skills;
- of the ten SAIs participating in the second cooperative performance audit, seven SAIs had participated in the first cooperative audit. Of these seven, four included audit team members who had not previously participated in the cooperative performance audit program. They were Cook Islands, Fiji, PNG and Palau. The remaining three introduced a new team member with the team led by a participant from the previous cooperative audit.



They were Samoa, Tonga and Tuvalu. These team members were supported by a body of performance auditing experience within their SAIs that can be drawn upon. The three SAIs of Kosrae, Yap and Kiribati and their team members were new to the

cooperative performance auditing approach and decided to build performance auditing capacity through this approach;

- ten individual, country/state specific audit reports were developed and as at 30 June 2012, eight are in the public arena; and
- a regional overview report was developed based on the results of individual SAI audit reports.

### **Performance Audit Skills**

Performance audit skills gained by participants in the CPA program include:

- developing a detailed audit work plan and suitable audit methodology related to the broad audit objective, that was endorsed by heads of SAIs, and tailoring the plan to the circumstances of each Pacific island country/state being audited;
- gaining an understanding of auditing standards that underpin each stage within the performance audit cycle. These are planning, consultation, evidence gathering, analysis, drafting and reporting;
- peer review support for other teams;
- presentation skills for audit plans and reports;
- fieldwork, evidence gathering and testing the adequacy of evidence;
- analysis of audit evidence and translating this into audit findings and potential recommendations; and
- report writing, focusing on key messages.

## PASAI cooperative audit methodology



### *Topic Identification*

While the broad topic to be audited had previously been identified by auditors-general, it is important that a more precise, auditable topic be developed for endorsement at the subsequent PASAI Congress. Where the topic is environmentally focused, this work is generally undertaken by the coordinator of the Regional Working Group on Environmental Auditing (RWGEA) in conjunction with the ADB performance audit advisor and a technical expert on the topic to be audited. Technical experts are generally sourced from non-government organisations (NGOs), which are regionally based and have proven expertise in a particular subject area, for example, solid waste management. It is important that

contact is made with these organisations as early as feasible to ensure that what is proposed to the PASAI Congress is achievable and is also of relevance to the region and regional stakeholders.

After the topic, audit objective and high-level lines of enquiry are endorsed by the PASAI Congress, SAls that decide to participate are asked to nominate up to two staff members to take part in the audit, with a preference for one senior and one junior team member and a mix of experience and inexperience. While optimal, this mix within audit teams is often not possible to achieve due to competing audit work demands within SAls.

Once the audit teams are assembled, they undertake a preliminary study before attending a planning meeting for the audit. The objective of the preliminary study is to ensure that the teams are fully acquainted with issues concerned with the audit topic in their individual countries/states.

### *Planning Meetings*

Typically, a planning meeting of six days duration takes place. The session is jointly led by the ADB performance audit advisor and the IDI regional training manager. Where possible, subject technical experts attend part of the planning session to provide technical advice on related issues and information on Pacific initiatives in the area being audited. This support may continue over the course of the audit. In addition, the Regional Co-ordinator of the Working Group on Environmental Auditing (RWGEA), attends to present international advice on auditing environmental topics. Support is also provided by the PASAI Secretariat.

The objectives of the planning meeting are to:

- develop individual, country/state specific audit work plans of a quality to be approved by respective auditors-general that can be productively used to guide field work; and
- strengthen capacity to develop audit work plans by working together with audit teams and experts from different audit offices.

### *Outcomes of the Planning Meeting*

Each audit team produces an audit work plan tailored to their individual country/state circumstances. Following the planning meeting, auditors-general review and approve these plans. They are then subsequently used to guide audit field work.

A feedback session is generally conducted on the final day of the planning meeting. Results to date indicate that participants value the peer review approach and contribution from other audit teams in the Pacific. They also indicated that their confidence levels have increased sufficiently so that they feel able to conduct the necessary fieldwork. The contribution of experts was also valued including the contribution of the technical experts.

### *Audit Fieldwork*

Audit fieldwork generally takes place over a three to four month period. This is largely dependent on the availability of the audited agencies as well as other audit work commitments within audit offices.

Audit fieldwork and analysis of results and the initial drafting phases can be supported on-site by the ADB performance audit expert and the PASAI capacity building expert. This support is targeted to those SAIs with minimal or no performance audit experience. Time with each SAI can vary and depends on SAI capacity needs and the requirements of the audit teams. In addition, off-site support is provided to all of the audit teams through regular email contact. Technical experts also may provide off-site support and respond to issues raised by audit teams.

### *Reporting Meeting*

Typically, a reporting meeting of six days duration takes place towards the end of the audit cycle. A similar peer review process is again used.

Reporting session expectations include:

- finalising individual country audit reports to a reporting standard sufficient for review by their respective auditors-general;
- identifying key themes across Pacific island countries/states concerning issues with the audit topic for inclusion in the regional report; and
- sharing ‘lessons learned’ from cooperative audit experiences and highlighting what could be done better next time.

### *Outcomes of the Reporting Meeting:*

For each cooperative performance audit to date, all of the reporting session expectations were realised. Ten individual country reports were drafted for head of SAI review. Key themes were identified for the regional overview reports; and audit teams reflected on their cooperative audit experience and made suggestions as to what could be done better next time.

At the reporting meeting, the audit teams agreed to a



timetable for report clearance through respective auditors-general and associated quality control measures; the distribution of draft reports to audited agencies for comment; and the preparation of audit reports for public release or tabling in respective legislatures.

### *Regional Overview Report*

Following the tabling/public release of individual SAI audit reports, a regional overview report is prepared by the ADB cooperative performance audit expert and the co-ordinator of the RWGEA. This report consolidates findings from individual SAI reports to provide a regional perspective on the particular audit topic that was examined. To date, the number of SAIs participating in a cooperative performance audit has averaged ten per audit. This enables the regional overview report to be broadly representative of administrative arrangements in Pacific island countries and, as such, provides a well based regional perspective on a particular topic.