

**The Australian / SPREP
Coastal Vulnerability Initiative for Atoll States**

**Confidence Building in Management,
Planning and Assessment
in the Republic of the Marshall Islands**

October 1998

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1. Introduction

1.1 Background

In October 1997, Environment Australia and the South Pacific Regional Environment Programme (SPREP) sponsored a project that was undertaken at the Republic of Marshall Islands Environmental Protection Authority (RMI EPA). This project is part of Phase III of the Australia/SPREP Vulnerability Initiative for Atoll States. An overview of this initiative is given in Attachment 1.

The Phase III project was originally conceived to assist staff from the RMI EPA in the development and application of an integrated coastal environment management system based on the International Standards Organisations (ISO) 14000 Series Standards. The ISO 14000 is currently the most appropriate framework for integrating environmental impact assessment, planning and monitoring. This framework can be tailored to local needs, resources and capabilities of the nation where it is being implemented. Additionally, the system provides a strategic approach to making climate change vulnerability assessment an integral and ongoing component of environmental impact statement (EIA) practises and procedures in an overall Integrated Coastal Management framework.

The project was also designed to build on the confidence and skills of RMI EPA staff whilst encouraging the development of a network of resource people from other atoll countries in order to maximise the possibility of exchange of experiences and expertise in those countries. It built upon previous work done in Phase I and II of the Australia/SPREP Vulnerability Initiative for Atoll States (see Attachment 1), the preparatory vulnerability assessment missions undertaken in the South Pacific, and the work of both the US Country Studies Program and Japan.

1.2 Goals of the Atoll States Initiative

The overall goals of the Australia/SPREP Vulnerability Initiative for Atoll States are as follows:

- to assist in building the capability of Pacific Island Countries in the assessment of and response to coastal impacts of climate change and sea level rise; and
- To improve communication between Pacific Island Countries, Australia and SPREP with respect to those impacts and the development of adaptations and response strategies.

1.3 Objectives of the Phase III Project

The objectives of the Phase III Australia/SPREP Vulnerability Initiative for Atoll States RMI EPA project were as follows:

- to enhance the capability of the RMI EPA to develop and apply techniques for the preparation and evaluation of environmental impact assessment (EIA) and monitoring compliance with licences, development provisions and permits issued by the RMI EPA in an overall integrated coastal management framework; and

- to build confidence and improve the skills and knowledge of RMI EPA staff in the assessment of, and response to, coastal impacts of climate change and sea level rise, through the sharing of expertise, experience and ideas.

1.4 Project Program

Work was undertaken on Majuro from 13 to 23 October, 1997 by Peter Waterman (Environmental Management Services, Canberra), Seluka Seluka (Ministry of Natural Resources and Environment, Tuvalu) and James Aston (SPREP). The following tasks were carried out.

- Familiarisation with the scope of the EIA and environmental management issues confronting RMI EPA personnel through field visits and discussions with staff.
- Clarification of the competencies required and training needs for RMI EPA staff in terms of practical problem solving.
- A review of EIA procedures being used by the RMI EPA and the information available for use in the assessment process.
- A review of the professional competencies in EIA and information management.
- Determination of the in house training requirements by assessing the skills and information required to assess environmental impacts and responses to the effects of climate and associated changes to coastal areas.
- A report was prepared describing the activities undertaken during the project.

2. Management Issues

2.1 Approach Taken

A workshop was conducted with key staff of the RMI EPA to enable the project team to become familiar with the roles, procedures, processes, responsibilities and the regulatory basis for the RMI EPA functions. The purpose, background and programme for the workshop is given in Attachment 2.

2.2 Programme Management

RMI EPA have seven major programmes including Conservation and Biological Diversity; Environmental Education; Earth Moving and Solid/Hazardous Wastes; Health and Sanitation; Climate Change; Coastal Management and; Water Quality (Attachment 3). The resources of 11 staff with an annual operating budget of approximately US \$360,000, are currently inadequate to enable the RMI EPA to carry out the range of legislative responsibilities assigned to it by the government.

The EPA is limited in its ability to administer and manage its complex programmes because of its small size and the ex-colonial nature of the bureaucracy it operates within. There is also evidence of a disjunction between the RMI government and other areas of governance. These characteristics and settings have particular implications for the development of appropriate institutional arrangements for sustainable Integrated Coastal Zone Management (ICZM). This is illustrated by the apparent division of effort between the Majuro Atol Local Government (MALGOV) and the EPA in developing a coastal management program.

2.3 Institutional Framework

The institutional framework in which RMI EPA operates is still being developed. Currently there are few consultative mechanisms for dealing with coastal and climate change problems in an integrated way and little incentive for the wider community to participate in the decision making process. Consequently, conservation and development are still seen as conflicting ideals. Decisions are most often made on a reactive, ad hoc and piecemeal basis, without the benefit of an informed community at large. This situation is not unusual and is found in many developed nations as well as developing nations in the Pacific.

2.4 Understanding Cumulative Impacts

There is little understanding of the cumulative impacts of decisions relating to land use and utilisation of coastal resources (eg reef materials, coral sands from the lagoon). Rampant development and population growth in Majuro, coupled with its small land area, have effectively magnified the impacts of these small resource utilisation decisions on that island.

2.5 Immediate Problems

The Marshall Islands are also faced with large scale coastal erosion; water quality degradation and supply shortages; solid waste disposal problems as well as a range of issues associated with resettlement to other islands (see Phase II Workshop Report). Land ownership, central and island government priorities, education, awareness and development project evaluation were identified as some of the constraints that need to be taken into account in improving environmental management and planning. The resources, the environmental policy and planning tools are currently inadequate to deal with these issues. This effectively reduces the options for managing the effects of sea level rise and climate change in the future.

The problem of trying to manage solid wastes and the associated health issues is particularly acute on Majuro. These problems are seen as immediate priorities and are far more important in peoples minds than climatic and other environmental changes because they are slow to manifest observable impacts.

2.6 Government Arrangements

The division of responsibilities among the various government departments is not embodied in national agreements or legislation. Although the RMI EPA is a national body it is also obliged to deal with local level issues. This is because the RMI EPA was originally set up as a national body before the functions of the local authorities such as the Majuro Atoll Local Government Council (MALGOV) were developed and formalised. Consequently, the RMI EPA has assumed many functions that would normally be delegated to local government.

The lack of an overarching governmental institutional framework affects the governance ability of the RMI EPA. There are few government arrangements, goals or policy to guide decision making in the RMI EPA. The enforcement of legislation is not well resourced. Hence it is rarely carried out. These basic building blocks for an integrated environmental management system have yet to be put in place. Some of the components of the EIA process are carried out, but not within a holistic framework. In that context, there does not appear to be an understanding of the pathways and outputs of environmental management.

2.7 Dependence on Aid Programs

Additionally, there is heavy dependence on the support of aid programmes, both financially and in terms of expatriate advisers and consultants. The provision in the RMI EPA Regulations to have one percent of the total cost of development projects be used for EIA activities has not yet been put in practice. Project developers have always claimed that they cannot meet this cost and have sought to have the fee waived at the highest political levels.

In 1997 the RMI EPA was faced with a severe budget cut and reduction of three staff. Currently, there are no other mechanisms for self funding or sustaining the activities of the RMI EPA such as royalties, competitive bidding for permits or other monetary allocative mechanisms. New such mechanisms are needed to provide financial or other resources for the RMI EPA.

2.8 Information Management

Information is critical for environmental impact assessment and coastal management. At the RMI EPA, data and information is sometimes managed by individual staff for specific activities such as the results of water quality monitoring. However, the data that is collected is rarely properly processed or analysed in a way that can be used effectively in the decision making process. In general, there is a non strategic and uncoordinated approach to information acquisition, management, analysis, interpretation, dissemination and application at the local and national levels. Consequently, many government decisions impinging on the coast are not grounded on established policy or the best available information.

It has been suggested that a simple directory system be established within the Republic of the Marshall Islands EPA to assist with the management of environmental information. The framework for this directory, which can be developed with word processing packages, is given in Table 1.

2.9 Image of the RMI EPA

The RMI EPA also has an image problem. This was confirmed following discussions with General Manager of the RMI EPA as well as representatives of the private sector. The RMI EPA tend not to be seen by the community and private sector as an integral and positive part of the process of the development of the islands.

There are some reports where permits for development projects have been approved as a result of political pressure. In other cases, the RMI EPA have not been consulted at any stage of the governmental project approval process. Consequently, the RMI EPA often has to rely on external sources such as the media to acquire information on development projects. This situation needs to be reversed as a matter of urgency.

3. Outcomes of the Project

3.1 Majuro Coastal Management Planning Process

The Majuro Coastal Zone Management Project is a three-year programme with a total budget of US \$260,000. The Management Plan will provide alternatives for individuals, business and community to develop conservation measures to ensure the survivability of the coastal resources of Majuro. The project is a joint venture between the RMI Government and the United Nations Development Programme (UNDP). Currently the project is administered by MALGOV. However, it was previously managed under the RMI EPA. An Interagency Project Implementation Team comprising nine members, including two staff from the RMI EPA, has been formed and meets regularly.

The SPREP team members were on hand as resource people for the inaugural meeting of the project with the Council. Advice was provided on a range of issues including the conduct of the workshop, scope and activities of the plan, EIA and development issues, water resource management and coastal fisheries issues. The RMI EPA is in a prime position, as a collaborating agency, to influence the processes and outcomes of the Majuro Coastal Management Plan. Further, the RMI EPA, as the national body, is in a position to take the framework developed for Majuro (together with the lessons learnt through the planning process) and apply them at other atolls across the island nation.

3.2 RMI EPA Corporate Plan and Annual Work Programme

Currently there is no formal Corporate Plan for the RMI EPA for which the RMI EPA staff have ownership. Key components of a corporate plan for the RMI EPA were developed in a workshop setting. This was done in detail for the water resource unit and in broad outline for each of the other sectors (see Attachment 6).

Wayne King (SPREP) also assisted in this planning exercise by providing examples from the Cook Islands. Also the role for the Pacific Island Climate Change Assistance Project (PICCAP) in the overall Corporate Plan and Annual Work Programme, was explained.

The process of developing an Annual Work Programme for the various programme areas of the RMI EPA was also demonstrated by example during the workshop sessions (see Attachment 7). This workshop process is to be carried further by RMI EPA personnel as a corporate planning tool.

In taking a bottom up approach, the vision, mission, issues of concern and goals provide a framework for identifying issues that are critical for the management of the environment of the RMI. A further set of issues covering application of tools for management and information, corporate resources and leadership were also identified using 'the bottom up' process. Previous work towards a Corporate Plan was 'top down' with little input or ownership by RMI EPA personnel.

The process of developing the Corporate Plan and Annual Work Programme drew upon the National Environmental Management Strategies (NEMS) developed previously for the Marshall Islands. It is intended that the finalised Corporate plan will be a A1 poster which provides an overview of the strategic issues which will need to be addressed by the RMI EPA over the next 3 to 5 years. The poster format was adopted so as to provide some clear direction and targets to RMI EPA staff and clients and other stakeholders. The Annual Work Programme will be developed in a matrix format.

It is recommended that the corporate plan and annual work programme continue to be developed by the RMI EPA staff under the guidance of the RMI EPA General Manager, with assistance from the Australian Volunteer.

3.3 Improvements to the Permitting Process

The legislative basis of the regulatory functions of permits is not well understood by RMI EPA staff. The RMI EPA currently do have the capacity to develop and process permits for water resources management and earth moving developments.

Water resources are only partially de facto managed through the EPA regulations. For example, the EPA Act directs that new dwellings have a private catchment for water but there are no mechanisms for ensuring compliance of those regulations. Water management at the RMI EPA is also focused on monitoring of the water quality. However, sampling and analysis is at longer intervals than that specified in the legislation.

The Regulations provide a range of powers, but the process for assessing development applications ends at the assessment of the permit. A more integrative approach is to put EIA in a framework which considers the management phase of policy, planning, implementation, corrective actions and management review as used in the ISO 14000 series of standards (Figure 1 and Table 2). Such a framework will allow the factors, actions and outputs for assessing and responding to the environmental impacts of climate and associated change in the coastal areas (Figure 2).

Although a range of permits are required under the EPA regulations, only the earth moving permit application is regularly used. This type of permit is required for projects ranging in size from siting of a small residential dwelling to construction of large hotel complexes. However, the *Earthmoving Permit Application* form is poorly designed and there is little scope for using the information to make informed decisions. A copy of the current form is at Attachment 4.

Through the workshop process the *Earthmoving Permit Application* form was redesigned to maximise the collection of relevant information. This proposed form has a series of attachments of separate applications. It consists of a front page, buildings, earth moving works, other project proposals, service connections and permit conditions. It is expected that the new forms will be used to illicit information about the project through a series of questions such as who?, what?, how?, where?, when?, how much? and the levels of impacts?. Due to time constraints, the new forms could not be completely developed but should be finalised with the assistance of the Australian Volunteer.

3.4 ISO 14000 Environmental Management System

The ISO 14000 framework for holistic environmental management was explained to the RMI EPA General Manager and a few select staff. Figure 1 and Table 2 provide for an overview of the environmental management system (EMS) framework which is being increasingly used by government and industry. The goal of an EMS is to seek continuous improvement of the quality of environmental management (Figure 1). The system can be used at any scale and can be operated from existing word processors. An example framework which could be applied to coastal and port environmental management is given in Figure 3.

3.5 Effectiveness of the Phase III Project

The focus of the training on direct face to face contact with Pacific Island environmental management staff within their home country provided the means to clearly identify and encourage ownership of a range of localised coastal problems and their respective solutions. It specifically provided a starting point and platform from which to:

- address the institutional constraints holding up the development; and
- initiate the implementation of new tools and techniques for assessment and response to climate change impacts in an integrated coastal management context.

In developing the solutions to the problems, a consensus based participatory determined and driven process was followed. Meetings and workshops were convened and the RMI EPA staff were asked to define to their own processes for achieving certain objectives. Through that process, the participants developed, at their own pace, a solution that they could 'live with'. Such decision making processes are particularly critical in countries like the Marshall Islands where it is important to have many meetings both to provide information as well as arrive at a consensus decision.

The utilisation of atoll country expertise identified during Phases 1 and II of the Vulnerability Initiative was very successful. There are several environmental issues common to all atoll nations and low islands resulting in exchange of views and experiences and use of examples and solutions similar to those of other atolls. This is seen as an important and integral step to the development of a network of expertise of Pacific Islanders. Also, it encourages a form of camaraderie and competition among the islands and Atoll States.

Initial indications and feedback from the RMI EPA staff indicate that the main goal of building confidence and improving the skills and knowledge of RMI EPA staff in the assessment of, and response to, coastal impacts of climate change and sea level rise has been achieved. However, the team only managed to initiate the process. There is much work to be done to give the RMI EPA the capacity to completely develop and apply techniques for the preparation and evaluation of environmental impact assessment (EIA) in an overall integrated coastal management framework.

4. Recommended Future Activities

Some of the ideas explored but not developed during the project include:

- A special meeting and briefing session of the RMI EPA Board should be held to outline the current problems and possible solutions facing the EPA. At the time of the field work the RMI EPA Board had not met formally since 1994.
- The institutional strengthening component of this initiative could be further enhanced through the activities of the SPREP Capacity 21 project and other initiatives.
- The work of the RMI EPA should be marketed to the wider community and private sector interests. The objective being to change the image of the EPA from a regulator of development to a strategic partner in the development process.
- A communication strategy should be developed for the RMI EPA to elicit better understanding of the roles, responsibilities and importance of the EPA.
- The complete range of water resource management issues should be discussed with other agencies. Specific attention needs to be given to water capture on public and private buildings; ground water pollution; and the quality of marine waters, especially in areas used by residents and tourists for swimming and water sports.
- Follow up, one-on-one training in the development of skills in project planning and management, budgeting, and preparation of duty statements is needed. This should include professional mentors and participants from other island nations who have had experience in these areas. The training and development sessions need to facilitate ownership of the approach and materials by all personnel working at the RMI EPA
- Awareness raising materials such as videos could be translated into local languages and used to empower the traditional landowners to help enforce the Republic of the Marshall Islands EPA regulations. Again the objective being to change the image of the EPA from a regulator of development to a strategic partner in the development process.
- The RMI EPA should pursue opportunities to build on networks and the work of other government task forces. For example, some of the PICCAP activities could be integrated with any future activities of the Australia/SPREP Vulnerability Assessment Initiative.

- The private sector should be encouraged to have a greater involvement in management of the environment. There are opportunities to build environmental and climate change knowledge into the Sustainability of Development Centre of the College of the Marshall Islands, currently under development. Other opportunities include working with the dive operators to conduct basic monitoring of fringing coral reefs. Similar joint venture projects are possible with student groups.
- Attention needs to be given to the management of domestic rubbish as an urgent coastal and environmental management issue. Work undertaken by the USEPA has recommended the use of incinerators to dispose of waste materials. Although this technology is effective it is not environmentally efficient. There is a need to evaluate the use of incineration technology, which uses waste materials (solids and only wastes) for the production of cement and clinker materials which can be used for construction work on the atolls. Assistance should be given to assessing the feasibility of this approach to the disposal of waste materials. This could be done as a joint governmental (national and local) and private sector initiative. Experience with such an approach should be sought from other developing nations.
- Further consideration should be given to the development of an environmental management system based on the ISO 14000 standard framework to integrate the activities and actions of national and local government. A simple system could be developed with mentor assistance to cover coastal related activities including ports, gravel extraction and waste disposal (solid and liquid). Also the system could be used as a strategic environmental assessment tool to enable issues such as coastal erosion, introduced marine pests and the pressures of development on marine biodiversity to be dealt with in a more integrated and holistic manner.

Table 1 Generic Checklist of Environmental Information Management Requirements and Resources

1. CONTACTS	<ul style="list-style-type: none"> • List of research organisations and workers and with regional and local experience and knowledge of coastal environmental conditions and issues <ul style="list-style-type: none"> - government departments, agencies and programs - international and regional research and aid organisations - schools, universities and research institutions - private consultants (environmental, planning, engineering) - community based organisations - commercial and industrial (port, fishing industry) - environmental/conservation
-------------	--

<p>2.</p> <p>INFORMATION SOURCES</p>	<ul style="list-style-type: none"> • Document maps and spatial information systems <ul style="list-style-type: none"> - scales - reproduction - availability and acquisition procedures - thematic coverage (topographic, geological and geomorphic, vegetation and habitats, coastal hazards, land use, tenure and settlement patterns) • List available aerial photography <ul style="list-style-type: none"> - flight plans and areas covered - dates of photography - scale of photography - enlargement procedures - acquisition of imagery in hardcopy and electronic form • Commence reference list of reports and publications held in filing systems, libraries and collections of: <ul style="list-style-type: none"> - governmental departments and research organisations, agencies (international, national, regional, local) - community organisations - schools, universities and research institutions
<p>3. RESEARCH</p>	<ul style="list-style-type: none"> • Investigate and document climate change and coastal management research activities <ul style="list-style-type: none"> - international bodies (eg International Panel on Climate Change) - governmental, academic and research institutions - private consultants servicing aid agencies • Establish links with coastal and marine monitoring programs <ul style="list-style-type: none"> - governmental programs - universities and research institutions - community organisations and projects/programs
<p>4. DATA BASES</p>	<ul style="list-style-type: none"> • Prepare a list of data bases and their access procedures and protocols for: <ul style="list-style-type: none"> - national and international information systems on the Internet - downloadable files from governmental and other sources - community accessible information including CD ROM materials (census data, topographic maps, research reports) • Document electronic data processing capabilities and sources of assistance in data base development encompassing: <ul style="list-style-type: none"> - graphics and computer assisted mapping capability - climatic and meteorological data analysis and tidal data and predictions - storm surge and flood inundation data and mapping

**Table 2 Framework for the ISO 14000 Series Standard
Environmental Management System**

General
Environmental Policy
Planning
Environmental Aspects
Legal and Other Requirements
Objectives and Targets
Environmental Management Program
Implementation and Operation
Structure and Responsibility
Training, Awareness and Competence
Communication
Environmental Management System Documentation
Document Control
Operational Control
Emergency Preparedness and Response
Checking and Corrective Action
Monitoring and Measurement
Non Conformance and Corrective and Preventative Action
Records
Environmental Management System Audit
Management Review

Figure 1 The Key Elements Of An EMS

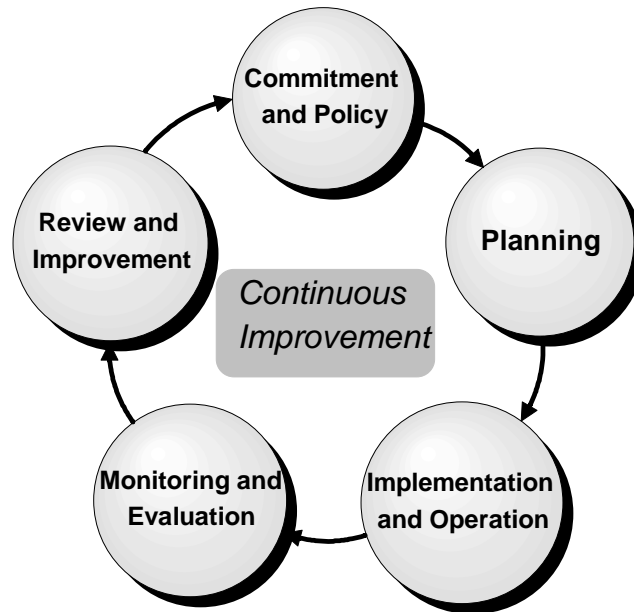


Figure 2 Conceptual Framework for the Preparation of an Integrated Port Operations and Development Plan and Environmental Management Program

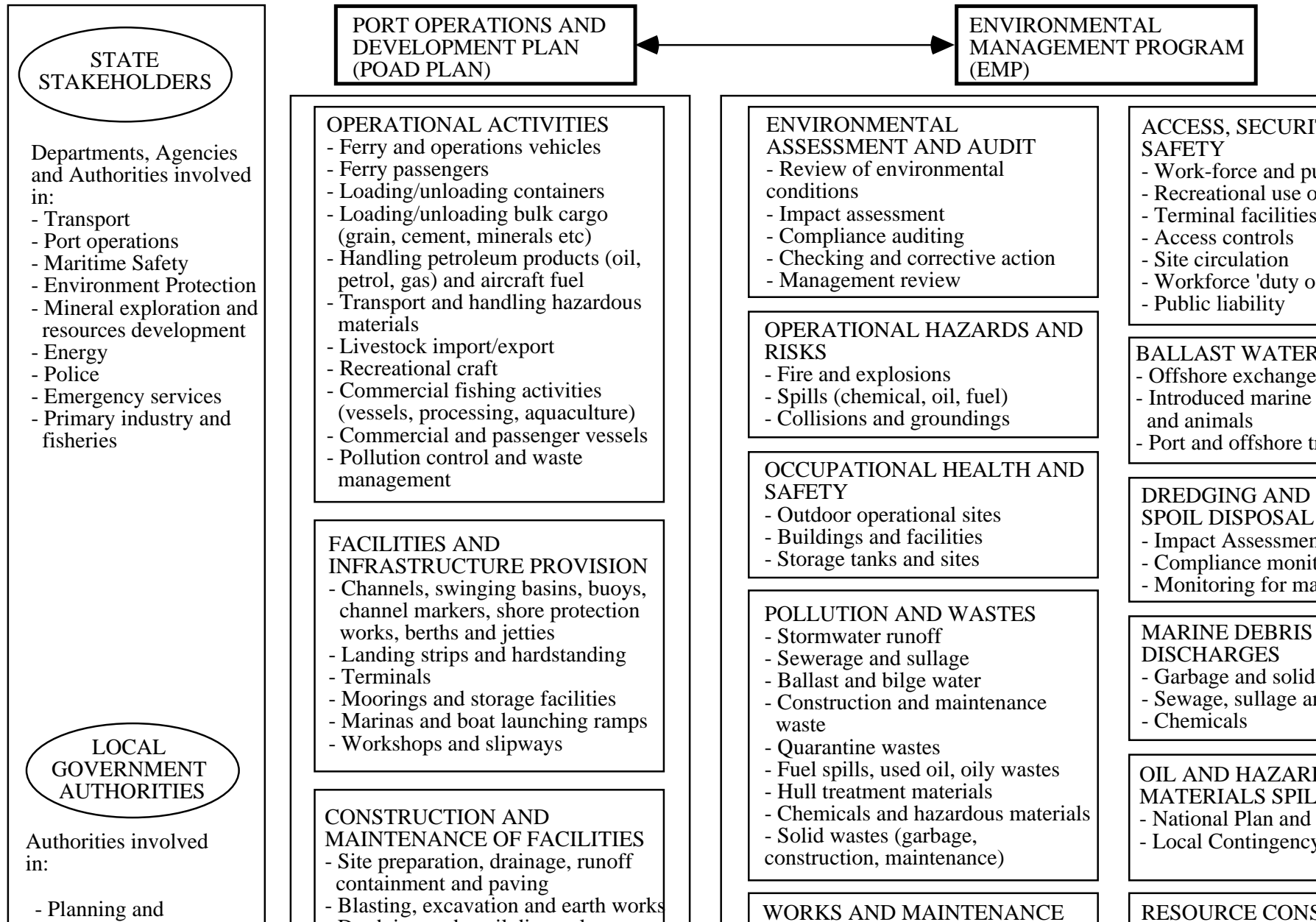
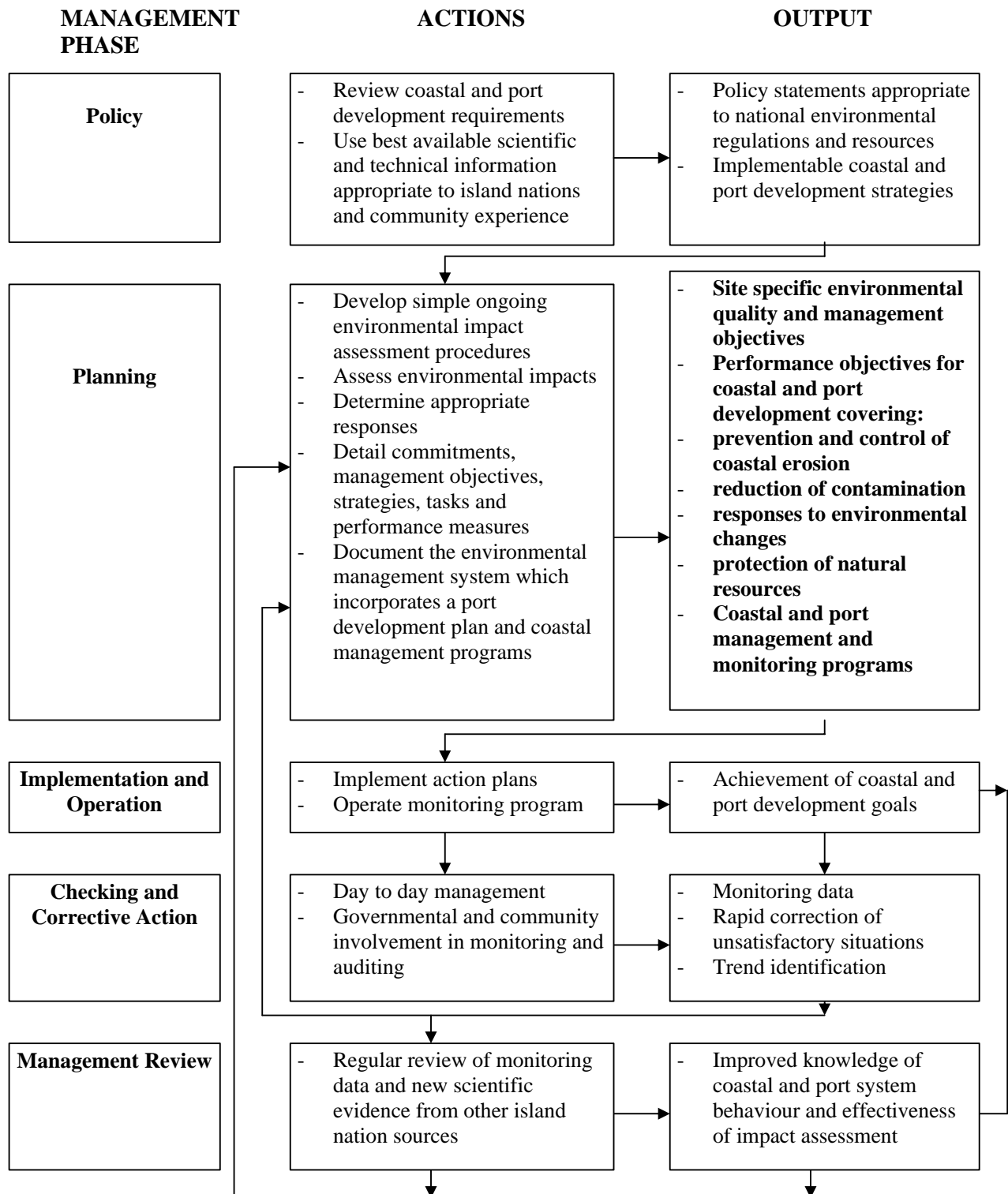


Figure 3 The Proposed Framework for Establishing a Coastal and Port Environmental Management System for Atoll Nations



Attachment 1

1.1 Overview to the Australia/SPREP Coastal Vulnerability Initiative for Atoll States

The Australia/SPREP Vulnerability Initiative was proposed at the South Pacific Environment Ministers Meeting in Brisbane in 1995, when the Australian Minister for the Environment offered to support a joint Australia/SPREP project. The project aims to build upon previous work done by SPREP, the preparatory vulnerability assessment missions which have been undertaken in the South Pacific and the work of both the US Country Studies Program and Japan. A key element of the Initiative is that workshop development and subsequent training focus on direct face to face contact with Pacific Island environmental management staff within their home countries wherever possible.

A steering committee comprising officers from Environment Australia and SPREP as well as two non-government members from Australia was established to oversee the project with Professor Roger McLean as Chair. Steering Committee members are Professor Roger McLean, Chalapan Kaluwin (SPREP), James Aston (SPREP), Louise Rose (Environment Australia) and Peter Waterman (Australia).

1.2 Goals of the Initiative

The overall goals of the Initiative are as follows:

- to assist in building the capability of Pacific Island Countries in the assessment of and response to coastal impacts of climate change and sea level rise; and
- to improve communication between Pacific Island Countries, Australia and SPREP with respect to those impacts and the development of adaptations and response strategies.

1.3 Description of the Initiative

The project is being conducted in three phases.

Phase 1 consisted of preliminary visits to the atoll nations of Tuvalu, Kiribati, Marshall Islands and Federated States of Micronesia by three members of the steering committee Roger McLean (Australia), Chalapan Kaluwin and James Aston (SPREP). During this phase the critical issues relating to climate change and sea level rise were identified from the perspective of the environmental managers in each of the atoll countries. In-country expertise was also identified as well as potential contributors to the workshop. Phase 1 was completed in October 1996.

Phase 2 consisted of the workshop which brought together a range of environmental practitioners and other operational staff from atoll states to discuss issues in their countries both among themselves and with experts from Australia and SPREP.

The governments of atoll countries nominated one or two representatives to participate in and contribute to the workshop. Participants presented technical papers based on themes identified during Phase I including:

- coastal erosion;
- management of water resources;
- resettlement;
- resources and tools required; and
- environmental policy and planning.

The case studies presented at the workshop revealed that the concerns of atoll nations and low-lying islands about their vulnerability to climate change and sea level rise are regarded as both serious and urgent. They are also quite similar, although the manner in which island resources are utilised and the nature of the adaptive and response strategies are surprisingly diverse.

The exchanges of information about the possible impacts, adaptations and responses to climate change at the workshop provided a good opportunity to identify suitable projects to be undertaken in Phase 3 and others that will require significant further funding.

Phase 3 will focus on some of the critical issues identified during Phases 1 and 2. It will provide targeted in-country and, if appropriate, regional training opportunities. Where possible, atoll country expertise as identified in the workshop and during Phase 1 will be utilised.

Attachment 2

RMI EPA WORKSHOP WITH SPREP 17 October, 1997

Purpose

To familiarise the SPREP team with RMIEPA roles, responsibilities, procedures, processes and the regulatory basis for the Agencies functions.

Background

The SPREP Team need a clear understanding of the way in which the RMIEPA currently operate on a day to day basis so that they can assist Agency personnel with key areas of issue such as:

- climate change, sea level rise and global warming;
- management of solid wastes and landfill sites;
- maintaining the quality of groundwaters;
- pollution of lagoon and ocean waters;
- monitoring the effects of changes to the shoreline due to the construction of sea walls;
- land reclamation works
- the extraction of sand and gravel from lagoons; and
- understanding of EIA for small and large projects.

Workshop Program

Part 1 Review of Current Practises

0900 - 1015 - how the RMI EPA carries out its activities
 - roles, responsibilities and resources available to personnel; and
 - the legislation and the regulatory basis for EPA's activities.

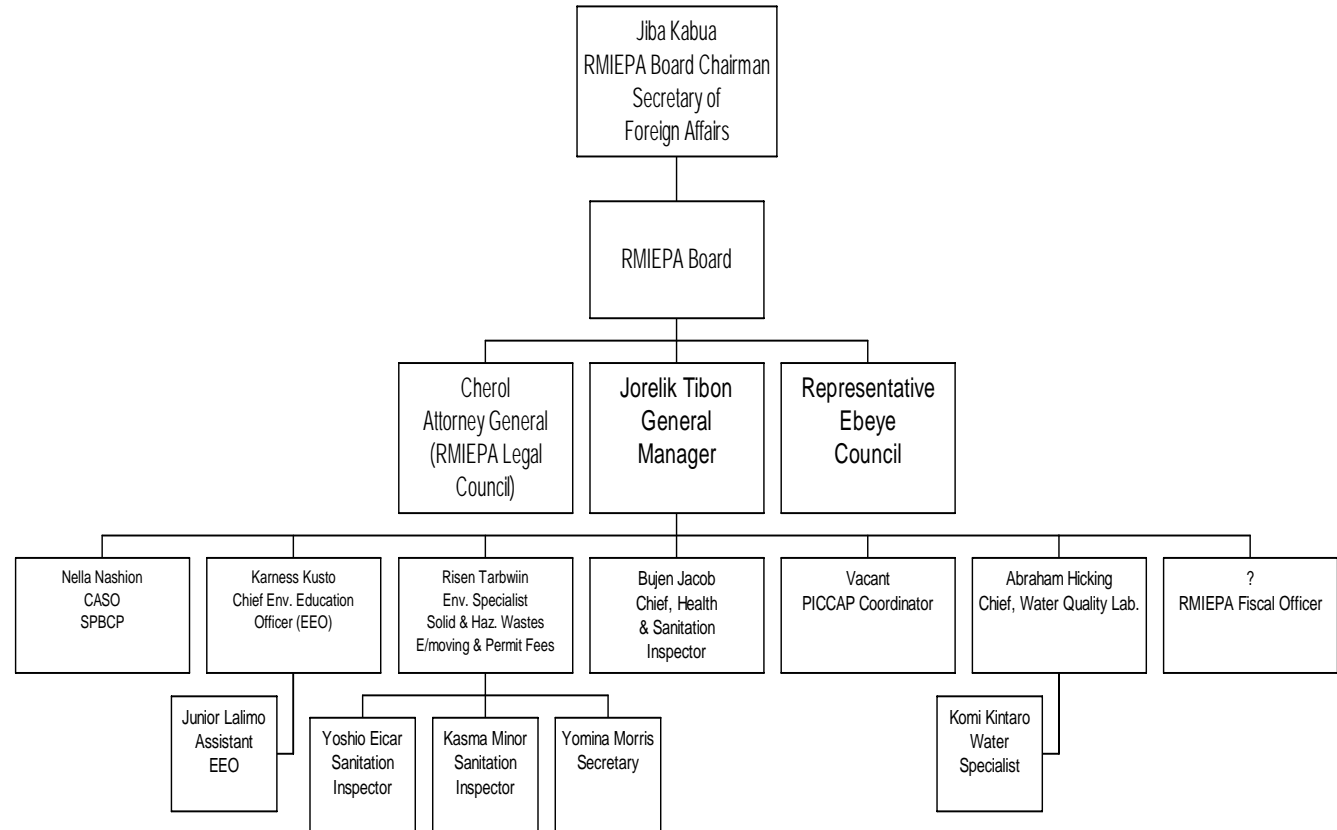
1015 - 1045 Tea Break

Part 2 The EIA Process

1045 - 1200 - when are EIAs required;
 - preparation of EIS;
 - assessment of EIA/EIS submitted to the RMI EPA;
 - resource and information needs.

Attachment 3

RMIEPA ORGANISATIONAL CHART



Attachment 4

**REPUBLIC OF THE MARSHALL ISLANDS
ENVIRONMENTAL PROTECTION AUTHORITY
EARTHMOVING PERMIT APPLICATION**

FOR EPA USE ONLY			
APPLICATION # :		PERMIT : ISSUED/DENIED	
APPLICATION DATE :		PERMIT DATE :	
FEE RECEIPT # :		PERMIT # :	
R E W E W E Y	TITLE	NAME	DATE
	ENV. SPECIALIST		
	GENERALMANAGER		
	OTHERS		
	OTHERS		

To the Applicant :

Answer all questions fully; use “N/A” when question is not applicable.
Enclosed 2 sets of the following:

- i) detailed map of the project showing location and character of the proposed activity;
- ii) proposed Erosion and Sedimentation Control Plan;
- iii) proposed Cultural Preservation Measures, if any. Enclose Processing Fee of \$200.00

(REFER TO THE EARTHMOVING REGULATIONS OF THE NATIONAL ENVIRONMENTAL PROTECTION ACT 1984)

b. a) Name, address, phone number and title of person or agency applying for permit:

_____ Phone: _____

b) Name, address, phone number and title of applicant’s representative, agent or contractor:

_____ Phone: _____

2. Location of proposed earthmoving:

Atoll: _____

Island: _____

Weto: _____

3. Starting and completion date of project: _____
4. Name of project: _____
5. Proposed earthmoving will be: _____ on land only
 _____ in water only
 _____ both on land and in water
6. a) Describe vegetation at proposed site:

- b) To what extent will be proposed activity disturb existing vegetation:

- c) List the common names of trees that will be removed during the proposed activity:

7. Description of proposed activity:
- a) Purpose and intended use _____

- b) Type of structure to be erected _____

- c) Type of machinery to be used _____

- d) Composition and quantity of materials to be moved _____

- e) Location of dredging area (s), quarry site (s) and disposal site (s) (refer to project site-use map if appropriate) _____

- f) Size of proposed earthmoving (cubic footage) _____

- g) Work to be undertaken : Grading _____ Filling _____
 Clearing _____ Blasting _____ Trenching _____
 Pile driving _____ Compaction _____ Excavation _____
 Use of heavy equipment _____

h) Dimension of soil disturbance (width, length and depth of any proposed trenches or pits)_____

i) Disposal plans for excavated materials _____

8. Describe possible impact of the proposed activity on potential cultural resources: (investigation required pursuant to regulation 14 of the EPA Earthmoving Regulations): _____

9. Describe possible impact of the proposed activity on the environment, including any air, noise, or water pollution which may be associated with the project: _____

10. List all regulatory permit approvals or plan reviews, or both, which may be required by other Republic of the Marshall Islands governmental, public or private bodies to undertake the proposed activity:

reviewing agency _____

required approval _____

11. Has any governmental, public or private body denied approval for the proposed activity or for any activity directly related to the proposed activity: _____ if "yes" explain:

12. Does applicant have a clear right of ownership, or use of land, where proposed activity will take place:

Having completed this application and having attached all required enclosures, I hereby apply for an Earthmoving Permit. I agree to conduct the proposed activity in accordance with the law and regulations that govern the Republic of the Marshall Islands and to comply with any conditions that may be specified in this permit. I certify that the information contained in this application is true, complete and accurate. I further certify that I possess the authority to undertake the proposed activity.

Signature of Applicant

Date

Attachment 5

RMI EPA DRAFT PERMIT APPLICATION			
Note: Definitions of the terms used in this Permit are in Appendix 1 and Appendix 2 Further information can be attached as separate pages marked as page 1(2), 1(3) etc			
1. RMI EPA ADMINISTRATION			
File number:		Application number:	
Type of permit sought:		Date of application:	
Processed by:		Date processed:	
Position in RMI EPA:			
Do RMI regulations apply to permit?	Yes	No	
If yes, specify:			
Do MALGOV regulations apply to permit?	Yes	No	
If yes, specify:			
Is an environmental assessment required?	Yes	No	
2. APPLICANT'S DETAILS			
Name of applicant(s) / agent(s):			
Position:	Owner	Operator	Other (specify)
Address(s) for applicant / agent:			
Telephone contact no:		Facsimile contact no:	
Address of property where works are to be carried out by applicant / agent:			
3. INSTRUCTIONS TO APPLICANT(S) FOR PROCEEDING WITH APPLICATION			
Instructions:			
Permit issued?	Yes	No	
Permit no:		Date issued:	
Comments:			

• Earthworks project: What type of earthworks will be undertaken? (Tick if applicable)			
Shoreline protection		Comments:	
Road construction			
Building foundations			
Trenches for services			
Footpaths			
Drainage			
Water supply			
Liquid wastes			
Solid wastes			
Other (specify)			
• Service connections: What type of services will be connected? (Tick if applicable)			
Water		Comments:	
Electricity			
Telephone			
Gas			
Sewerage			
Other (specify)			
• Resource extraction: What type and quantities of materials are to be removed from where and to be used for what?			
Type of Material: (specify reef rock, sand, gravel etc)		Location: (from which it is to be removed)	
Quantity: (specify: tons/cubic yards)		To be used for:	
4. TYPE OF APPLICATION			
Provide maps/ plans which show the type of works to be undertaken and where on property / site the works will be carried out			
• Development Project: What type of development is to be undertaken? (Tick if applicable)			
Commercial		Comments:	
Residential			
Industrial			
Infrastructure			
Resource extraction			
Other (specify)			

• Building project: What type of building(s) (Tick as applicable)		
House		Comments:
Office		
Storage shed(s)		
Shop(s)		
Garage/workshop		
Restaurant		
Bar/night club		
Church		
Community building		
Other (specify)		
5. SUMMARY OF PROPOSED WORKS		
Who will be carrying out the work? (Name/Company)		
What works will be carried out? (Give details)		
How will the work be carried out? (Give outline of methods/equipment to be used)		
Where will the works be carried out? (Give the location/address of the property/properties or area)		
How much will it cost to carry out the works?		
When will the work be undertaken?		
What are the expected environmental impacts of the works to be undertaken and how will they be managed?		
6. SUMMARY OF ENVIRONMENTAL IMPACTS OF WORKS		
Noise from works/equipment		Comments:
Dust from operational activities		
Vibration from equipment		
Clearing vegetation		
Reduced ground water quality		
Reduced marine water quality		
Loss or disturbance to marine habitats (reef, seabeds)		
Shoreline instability		

Runoff from site		Comments:
Runoff from structures		
Constraints to access to property(ies)		
Disruption to traffic		
Solid wastes from activities		
Liquid wastes from activities		
Other (specify)		
7. SUMMARY OF PROPOSED PROCEDURES TO MANAGE IMPACTS		
Noise suppression checks		Comments:
Dust suppression measures		
Rehabilitation of disturbed areas		
Control of runoff from structures/site		
Access clearances/ authorisations		
Traffic redirection/diversion		
Onsite solid waste collection		
Onsite liquid waste collection		
Monitoring shoreline change		
Monitoring marine habitats		
Ground water quality monitoring		
Marine water quality monitoring		
Other (specify)		
8. OUTLINE OF REQUIREMENTS FOR FURTHER ENVIRONMENTAL IMPACT ASSESSMENT		
Comments:		
9. ENVIRONMENTAL MANAGEMENT REQUIREMENTS		
Comments:		

10. CONDITIONS OF PERMIT (See Attachment for Additional Information)			
Comments:			
11. COMPLIANCE AUDITING / MONITORING			
Comments:			
Responsible RMI personnel report attached			
Date completed		Date submitted	

Attachment 6

Framework Material for the RMI EPA Corporate Plan

Vision

People living in harmony with the environment of these islands.

Mission

Preserve and improve the environment of the RMI.

Water Quality

Issues of Concern

- Water Pollution
- Water Resources Management
- Water Quality (Marine And Fresh)
- Quality Standards
- Water Borne Diseases
- Public Awareness
- Reliability Of Water Supply (Surface, Ground, Desalination Etc.)
- Water Conservation
- Groundwater Protection
- Public Water Supply
- Surface Catchment
- Groundwater
- Source Of Information On Water
- Adequacy Of Resources (Human, Financial, Technical)
- Private Water Supply (Surface Catchment, Groundwater, Processed Water)
- Sources Of Revenue (Fees, Grants)

Goal

Protect and ensure the quality of water resources

Objectives

Ensure that waters for public and private consumption are safe.
Protect marine waters.

Strategies and Actions

- 1. Ensure that regulations are adequate and are complied with.**
 - 1.1 Enact regulations.
 - 1.2 Undertake compliance.
 - 1.3 Provide relevant training.
 - 1.4 Monitor water quality regularly.

- 1.5 Review of criteria/standards.
- 1.6 Audit reports of self regulated water quality analysis.
- 2. Ensure that human, technical and financial resources are adequate and wisely used.**
 - 2.1 Cost and budget estimates for departments and programs.
 - 2.2 Audit budget performance.
- 3. Assist in the coordination of the management of water resources.**
 - 3.1 Collate, analyse and review water quality data from Water Company and
 - 3.2 Private catchments.
 - 3.3 Raise awareness of water management and pollution problems across departments and agencies.
 - 3.4 Participate in interdepartmental and regional agency meetings and investigations.
 - 3.5 Consult with other agencies with regard to the coordination of water management.
- 4. Facilitate the dissemination, exchange and use of data and information.**
 - 4.1 Collate water quality data from water company and other sources.
 - 4.2 Use media to report results of water quality monitoring and events which raise public health concerns.
 - 4.3 Consult with appropriate agencies, NGOs and private sector.
- 5. Raise public awareness.**
 - 5.1 Develop a communication strategy.
 - 5.2 Convene workshops and seminars.
 - 5.3 Give lectures and presentations.
 - 5.4 Implement media communications programs.
- 6. Develop community monitoring program.**
 - 6.1 Determine appropriateness of techniques for community monitoring.
 - 6.2 Establish community monitoring network.
 - 6.3 Collate results of monitoring programs and feedback to communities.

Health and Sanitation

Issues of concern: *to be provided*

Goal: Protect public health

Objectives:

1. Implement health protection measures
2. Improve public and private sanitation

Strategies:

1. Ensure regulations and protective measures are adequate and are complied with
2. Ensure that human, technical and financial resources are adequate and wisely used
3. Collaborative implementation of public health and sanitation measures
4. Appropriate inspection of premises and facilities
5. Monitoring and auditing of processes and procedures
6. Raise public awareness of issues and protective measures
7. Involve community groups in health and hygiene programs

Environmental Specialist

Issues of concern: *to be provided*

Goal: Reduce degradation of the environment

Objectives:

1. Minimise the effects of earthmoving and land development
2. Minimise the impacts of solid and hazardous wastes

Strategies:
with

1. Ensure that regulations are adequate and are complied
2. Ensure that human, technical and financial resources are adequate and wisely used
3. Appropriate assessment of the impacts of earthmoving and land development activities
4. Collaborative management of solid wastes
5. Monitor the effects of earthmoving and development activities
6. Monitor landfill and waste storage areas
7. Promote waste immunisation
8. Safe storage and removal of hazardous wastes
9. Raise public awareness
10. Involve community groups in waste reduction and monitoring

Climate Change

- Issues of concern:**
1. Minimise intensity and frequency of storm events.
 2. Accelerated sea level rise.
 3. Shoreline erosion and deposition.
 4. Changes in marine and terrestrial biodiversity.
 5. Response to environmental change.
 6. Protection water resources.
 7. Information and awareness.
 8. Education and training.

Goal: Accommodate changing climate conditions.

Objectives: Minimise the environmental effects of changes.

- Strategies:**
1. Ensure that assessment and response measurements are adequate and integrated into environmental management processes and procedures.
 2. Ensure that human, technical and financial resources are used wisely.
 3. Collaborate in international programmes and projects.
 4. Promote intergovernmental initiatives to integrate adequate impacts.
 5. Raise public awareness.
 6. Involve community groups in monitoring and awareness programmes.

Attachment 7

RMI EPA MANAGEMENT PROGRAM

Implementation and Operations

- Tasks
- Resources Required

Checking and Corrective Action

- Monitoring and Auditing Provisions
- Performance Indicators
- Reporting Requirements
- Records Management

RMI EPA MANAGEMENT PROGRAM

Task	Personnel Time	Monitoring/Auditing	Performance indicators	Reporting	Records
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Example of Structure for the RMI EPA Management Programme for Water Quality

1.1 Enact Regulations					
1.1.1 Prepare permit application form.	10 days	Reviewed	User friendly	NA	Electronic copies of blank forms.
1.1.2 Disseminate Regulations	5 days including personnel briefing. Vehicle * 5 days	Check receipt of regulations and permit application.	Acceptance of requirement.	Record date of issue and number disseminated.	Open a file for applicant
1.1.3 Process permit applications.	10 days including issue of permits.	Check that form is complete and permit is correctly filled out.	Returned correctly completed. Permit returned on time.	Date Processed Date Issued.	File duplicate and note date to bring forward for renewal.
1.2 Undertake Compliance					
1.2.1 Check conditions are being met.	5 person days Vehicle * 5 days.	Confirm visits made and checks undertaken.	All permit holders complying.	Non compliance. - Warning - Retesting - Temporary closure - Memo to General Manager. - Notice of violation. - Legal proceedings.	Test results Incident log Permit holders file EPA filing for legal proceedings.

RMI EPA MANAGEMENT PROGRAM

Task	Personnel Time	Monitoring/Auditing	Performance indicators	Reporting	Records
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RMI EPA MANAGEMENT PROGRAM

Task	Personnel Time	Monitoring/Auditing	Performance indicators	Reporting	Records
1.2.2 Enforcing requirements for permits.	15 person days Vehicle	Confirm visits made and checks undertaken.	25% increase in compliance.	<ul style="list-style-type: none"> - Warning - Retesting - Temporary closure - Memo to General Manager. - Notice of violation. - Legal proceedings. 	Test results Open file on personnel approaches. Incident log Permit holders file EPA filing for legal proceedings.
1.3 Provide relevant training.					
1.3.1 Sampling – volunteers.	5 days (40 hours) laboratory assistant	Quality control on samples received.	Train 1 person/atoll/year 5 samples/month/atoll.	Site/catchment sampled with samples when dispatched.	Laboratory database.
1.3.2 Water plant operators	5 days (40 hours) prof	Water company undertakes monitoring	3 certified operators by 1998.	Monthly progress reports	Included in monthly report to General Manager.

RMI EPA MANAGEMENT PROGRAM

Task	Personnel Time	Monitoring/Auditing	Performance indicators	Reporting	Records
1.3.3 Community monitoring.	2 days (16 hours) Prof or lab assistant 2 days EEO. 2 days vehicle	Follow up on ongoing maintenance.	2 schools involved/year. 5 teachers	Data reports to EPA. Progress reports to USA (provided by schools)	Laboratory database included in monthly report to General Manager. Project web page.
1.3.4 Staff training on regulations and compliance.	2 days EEO (facilitator) Copies of regulations for all staff. 2 days trainer 2 days vehicle Attorney Generals Office to train on legal processes.	N/A	Increased confidence	Progress reports to USA (Provided by schools) Memo to GM on progress	
1.4 Monitoring Water Quality Regularly					
1.4.1 Sample Collection – public water supply (surface water)	Lab Assistant 40 days/yr (surface) Lab Assistant 10 days/yr (GW Laura)	Quality assurance procedures US EPA standards.	250 samples/yr	Log sheet	Lab database Monthly report Annual report

RMI EPA MANAGEMENT PROGRAM

Task	Personnel Time	Monitoring/Auditing	Performance indicators	Reporting	Records
1.4.2 Sampling private catchment.	Lab Assistant 20 days/yr.	Quality assurance procedures US EPA standards.	75 samples/yr.	Log sheet	Lab database Monthly report Annual report
1.4.3 Sample analysis.	80 days for surface 20 days for groundwater.	Quality assurance procedures US EPA standards.	250 * 3 determinations. 75 * 3 determinations.	Log sheet	Lab database Monthly report Annual report
1.4.4 Marine Waters	30 days (US EPA standards).	Quality assurance procedures US EPA standards.	530 samples * 1 determination.	Log sheet	Lab database Monthly report Annual report
1.4.5 Analysis of marine waters.	18 days	Quality assurance procedures US EPA standards.	10 visits/month.	Log sheet	Lab database Monthly report Annual report

RMI EPA MANAGEMENT PROGRAM

Task	Personnel Time	Monitoring/Auditing	Performance indicators	Reporting	Records
1.4.6 Marine pollution abatement.	6 days.	Quality assurance procedures US EPA standards. Check carried out in timely manner.	Unknown	Log sheet. Investigation report	Record file.
1.4.7 Reporting	120 days	Checking by lab assistants	All activities reported.	Lab reports Monthly report Annual report.	Database and laboratory file.

RMI EPA MANAGEMENT PROGRAM

Task	Personnel Time	Monitoring/Auditing	Performance indicators	Reporting
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