GEF Pacific IWRM Demonstration Project

Integrated Water and Land Management for the Sustainable Use of the Laura Water Lens

Marshall Islands

Final Report

Majuro, Republic of the Marshall Islands

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An Initiative of the Global Environment Facility Supported Project:
"Implementing Sustainable Water Resources and Wastewater Management in Pacific Island Countries"
GEF Pacific IWRM Project

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PREFACE

The phrase "water is life" is an understatement in the Republic of the Marshall Islands (RMI), where there is a chronic shortage of water and the population is at high risk of disease due to poor sanitation. The strong connections between water and sanitation and the health and quality life, combined with the risks associated with climate change, make effective water resource management one of the highest priorities in RMI. All of RMI's 26 coral atolls and 5 islands are low lying, with extremely limited freshwater resources, difficult sanitation challenges, and vulnerability to extreme weather events and natural disasters. At least 74% of the population now lives in the two urban centers of Majuro and Ebeye, and this brings with it additional challenges.

Improved water supply coverage is high, at least 97%, yet limited water availability, contamination, and drought all present high risks to the people of the Marshall Islands. The primary source of freshwater is rain, which is mostly harvested via rainwater catchments, and which also acts to recharge several groundwater lenses which are found in some favorable locations. On Majuro Atoll, the water system is more than 75% rainwater collection with the remainder coming from the Laura groundwater lens. On Ebeye, the water supply system is based solely on desalinization through expensive reverse osmosis filters. Water quality testing conducted by the RMI EPA show that the majority of household catchments, in both urban and rural settings, are contaminated.

At least seven severe droughts were recorded in the last half century, with Majuro receiving less than 35 inches of rainfall over 7 months during these droughts. It is anticipated that should current climate predictions play out, gradual sea level rise and more frequent and severe droughts will exacerbate the high natural variability in freshwater availability in RMI. Progressively more urban households are installing private rainwater catchments, with more than 64% on Majuro and 37% on Ebeye. It is estimated that 49% of all households in the RMI have less than 4 days of freshwater storage.

Sanitation severely lags behind water with only 70% improved coverage, 82% in urban areas and 53% in rural areas. Despite a law mandating the use of toilets many households are still without improved toilets, with 35% of the population in rural areas and 3.6% in urban still defecating in the open. Additionally both urban sewer systems on Majuro and Ebeye dispose raw sewage directly into open water adjacent to populated areas severely impacting the environment and health. This trend is especially concerning in dense urban areas and in areas above freshwater groundwater lenses where there is contamination of critical resources and high potential for disease outbreaks.

On 22 and 23 March 2011, a National Water Summit convened in Majuro highlighted the key sector issues and confirmed the urgency of water and sanitation improvements. In particular it was agreed that while there are a number of official policies, laws, regulations, plans and agreements that articulate RMI's intentions and standards with respect water and sanitation, they have been developed over several decades in a relatively uncoordinated fashion. In March of 2014 a National Water and Sanitation Policy was endorsed that brings together and addresses these concerns.

The National and Water and Sanitation Policy articulates the RMI's overarching vision for water and sanitation which is: "To provide all Marshallese citizens access to clean and adequate water supplies and a level of hygiene and sanitation comparable to world standards".

Mr. Jorelik Tibon

Chairman of the Laura Integrated Water and Land Management Advisory Group

1. Water and Sanitation Issues in the Development of the RMI GEF Pacific IWRM National Demonstration Project

In 2007 the RMI completed a diagnostic IWRM analysis. The diagnosis provided a detailed assessment of important water and sanitation issues in the country and aimed to: help the RMI develop a sustainable integrated water resource management system; help ensure that water resources used effectively for wellbeing and development; and help safeguard water resources for future generations.

The ten key findings of the diagnosis are as follows:

1. Overall, water resource management in the RMI is more non-integrated than it is integrated;
2. While there is some cooperation among water related agencies, overall collective management remains weak;
3. All organisations with direct and indirect responsibilities for water and sanitation management and the network that connects them need capacity development and strengthening;
4. The absence of a formally established and authorized national water apex body and lack of a clear and credible water and sanitation policy result in a relatively unclear future for the water and sanitation sector;
5. Majuro, Ebeye and the outer islands face both water quantity and quality challenges;
6. The two main water utilities continue to face severe financial and operational challenges which affect the effectiveness and quality of their services;
7. Conservation and demand management remain weak;
8. Water resources assessment and monitoring remains limited, although this is improving;
9. The RMI faces increasing vulnerability from floods and other natural and man-made disasters and yet its disaster preparedness capacity remains fundamentally weak;
10. IWRM is common sense, but it is not commonly practiced in the RMI and there is much room for improvement across the board.

As part of the 2007 diagnosis, the RMI also conducted a Hot Spot Analysis (HSA) exercise to identify and evaluate areas of national, regional or global significance and where conditions adversely affect human health, threaten ecosystem functioning, reduce biodiversity and/or compromise resources and amenities of economic importance in a manner that would appear to warrant priority management attention. In addition to hot spots, a number of sensitive areas were also identified and evaluated. These sensitive areas are areas of national regional and/or global significance which, although not degraded at present, are threatened with future degradation.

The HSA considered nine hot spots and sensitive areas. These were of different types: thematic, geographic, institutional, and policy/ legislation. After conducting its evaluation and rating of each of these, using the prescribed HSA methodology, Laura Village's fresh water lens was selected as the most suitable hot spot for a Global Environment Facility supported National IWRM Demonstration Project. Located on the western tip of Majuro Atoll, Laura Village is the third largest population center in the RMI The groundwater lens at Laura is increasingly relied upon by the greater population of Majuro and yet it faces mounting threats, and it offers an ideal microcosm and laboratory for an IWRM demonstration project in that it integrates a number of water and wastewater issues, socio-economic factors, and other considerations. Laura was also selected based on the fact that success in this endeavour is directly applicable for replication in other areas in the RMI. A case study on the Laura area and factors influencing the management of the Laura water lens has been prepared and is available in hard copy and electronic format at the office of RMIEPA.

The Laura water lens is a critical resource in that it supplies a significant portion of fresh water for the Majuro population, and yet it faces multiple threats and has not been managed very effectively or sustainably over the years. It is therefore imperative and critical that steps be taken to introduce more sustainable use of water lens – this is the main objective of RMI's GEF supported IWRM National Demonstration Project.

The project is entitled "Integrated Water and Land Management for the Sustainable Use of the Laura Water Lens" and is commonly referred to nationally as the "Laura Lens Project". In summary, the key demonstration project components of are:

1: Strengthened Coordination for Integrated Land and Water Management at Laura

2: Identification of Key Threats and Management Issues for the Water Lens

3: Development of a Laura Integrated Water and Land Resources Management Plan

4: Targeted Stress Reduction Demonstrations for the Water Lens, including:

4.1: Reducing Stress from Overloaded and Leaking Septic Systems

4.2: Reducing Stress from Domestic Solid Waste Leachate Pollution

4.3: Building Capacity of Pig Farmers to Reduce Stress on the Water Lens

5: Enhancing Awareness and Understanding of the Water Lens, including:

5.1: Public Awareness

5.2: Training and Education

6: IWRM Policy and Plan Development

2. Management of the GEF Pacific IWRM National Demonstration Project in RMI

Overview of the Lead Agency, IWRM Focal Point, and Project Management Unit

The RMI Environmental Protection Authority (RMIEPA) is the lead agency for both the Pacific IWRM Program in the Marshall Islands. The Authority's executive function is headed by the General Manager, Mr. Lowell Alik who provides overall leadership in administering the affairs of the Authority. The General Manager facilitates cooperative efforts with other Ministries/Agencies and supplies the Board with policy advice and assistance with Cabinet-level concerns. The General Manager is assisted by a Deputy General Manager in directing the areas of Policy and Planning, in order to improve the delivery of services nationally and within communities. The Authority strives to be innovative in strengthening its capacity to provide more effective leadership. The organizational chart is provided below in Figure 1, and illustrates how the Pacific IWRM project has been embedded in the core work of RMIEPA.

EPA's strategic direction is guided by the 3-year Rolling Strategic Plan which serves as the foundation for the development of the annual Portfolio Budget Statement. The EPA Strategic Plan follows the direction as detailed in the Environment Protection Authority Act.

Alignment with the National Vision 2018

In working into the future, the Authority takes into account the national Goals and Objectives as stated in the Vision 2018 Strategic Development Plan Framework, 2003-2018 with a firm commitment to ensuring that the preservation of the culture and heritage of the RMI is aligned with these overall national goals.

The specific functions and duties of the EPA, are mandated under the following Acts and Legislation:

- An Act to provide for the establishment of a National Environmental Protection Authority for the protection and management of the environment National Environment Protection Act 1984 [P.L. 1984-31][P.L. 1987-2]

- The EPA is responsible for the administration, control, custody and management of the Coastal Zone, and for the implementation of the provisions of the Coastal Conservation Act (1988), with respect to the obligations and mandates described above in the Environment Protection Act (1984)[P.L. 1988-13].

- Public Health, Safety and Welfare Act, Chapter 1 Public Health and Sanitation, EPA and the Ministry of Health work together to perform food inspections to improve safety of foods sold by grocery stores, restaurants and cooked food, and continues to do public awareness on the importance of having sanitary toilet facilities and septic systems.

- EPA is also mandated to administer and enforce the following regulations: Ozone Layer Protection Regulations (2004) and the Pesticides and Persistent Organic; Pollutants (POPs) Regulations (2004); Public Water Supply Regulation; Marine Water Quality Regulations; Toilet Facilities and Sewage Disposal Regulations; RMI Sustainable Development Regulations; Solid Waste Regulations.

Lead Agency RMI Environmental Protection Authority

Memorandum of Agreement Signed 29th May 2009

National IWRM Focal Point

Mr. Lowell Alik

General Manager, RMI Environmental Protection Authority

National IWRM Project Manager

Mr Julius Lucky

RMI Environmental Protection Authority

Signing of the Memorandum of Agreement and Establishment of the Project Management Unit

The Memorandum of Agreement between RMI and the Pacific Islands Applied Geoscience Commission (now the Applied Geoscience and Technology Division of the Secretariat of the Pacific Community) was signed on 29th May 2009 by the then General Manager of RMIEPA, Mr. John Bungitak. Mr. Bungitak and Mr. Glann Lewis attended the Inception Workshop for the GEF Pacific IWRM Project convened in Nadi, Fiji in September 2009. Shortly thereafter, Mr. Bungitak's employment with RMIEPA was discontinued and he was replaced by Ms. Barker-Manase in late 2009. At that time, Ms. Barker-Manase formally assumed the role of RMI's National IWRM Focal Point for the regional Pacific IWRM Programme. See Table 1 and 2 for summary information and contacts.

There followed the recruitment of a National Project Manager for RMI's National IWRM Demonstration Project. Ms. Moriana Phillip was appointed National Project Manager on 20th December 2009. The Project Management Unit (PMU) was formally established at RMIEPA in January 2010, including the appointment of Mr. Glann Lewis as Demonstration Project Assistant. Both Ms. Barker-Manase and Ms. Phillip attended the Second and Third Pacific IWRM Regional Steering Committee Meetings convened in the Republic of Palau (July 2010) and the Cook Islands (July 2011)

As at 30 September 2011, the PMU for the RMI GEF National IWRM Demonstration Project had been operational for 21 of the 60 months initially identified as being required to successfully deliver the project. RMI worked during 2010, to strengthen the implementation of the European Union supported IWRM Policy and Planning component of the Pacific IWRM Programme. This culminated in the development of a detailed national costed work plan aimed at stimulating this much needed area of work during 2011. Ms. Tamera Heine was subsequently appointed National Water Policy Support Officer and joined the Project Management Unit in December 2010.

The project management unit for the RMI have changed recently replacing the project manager, the focal point and appointing a new project assistant. The new PMU consists of Mr.Julius Lucky, the new project manager, Mr.Lowell Alik the new EPA general manager and the new IWRM focal point, and Mr.Roderick Kabua the new project assistant.

3. Establishment of a Coordinating Body for the Operation of the GEF Pacific IWRM Demonstration Project in RMI

A start-up committee for the IWRM Demonstration Project was first established in 2009 with members limited to traditional leaders, major landowners, and Council officials from the Local Government. Following establishment of the Project Management Unit In 2010, effort was made to revitalise and expand the membership of this group. Initially, traditional leaders and Laura residents were invited to consultations to re-introduce project goals, objectives, and to ensure all key traditional leaders were adequately represented in these discussions.

The idea of establishing a formal body for the coordination of the GEF IWRM Demonstration was first raised amongst key stakeholders in March 2010, and shortly thereafter the "Laura Integrated Water and Land Management Advisory Committee" was formed. This is informally referred to as the "Laura Lens Committee" or "Committee in Kejparok Aiboj Lal eo ilo Laura" in Marshallese. Discussions with stakeholders resulted in the following suggested actions to further strengthen membership and participation within the Committee:

- Revitalization of participation through face-to-face consultations with key traditional leaders of Laura. These consultations resulted in an expanded membership list to include representation of community leaders not in original membership list;

- Establishment of an Advisory Sub-Committee to act as Working Group of the Committee;

- Elaboration of Committee Terms of Reference to guide the work of the Committee.

The (1) Membership List and (2) Terms of Reference for the Laura Integrated Water and Land Management Advisory Committee and the Advisory Sub-Committee/Working Group are included in this report as Annex 1 and Annex 2, respectively.The following diagram illustrating how the Committee links to National decision making bodies.

Overview of National Coordination Mechanisms and Linkages with RMI's GEF IWRM Demonstration Project

In October 2008, a Cabinet resolution established a National IWRM Water Task Force (NWTF) and appointed EPA as the Chair of this. The resolution however, contained no clear no clear specifications for membership. and at the time of establishment of the RMI IWRM Project Management Unit in 2010, there was no evidence of the NWTF ever having met. As such it was identified that the GEF IWRM demonstration project would work to make the NWTF operational in order to strengthen national coordination in the water and sanitation and to work towards the development of a National Water and Sanitation Policy and IWRM Plan.

Accordingly, RMI EPA assembled a National Taskforce team. This taskforce is comprised of officials from Governmental, Non-Governmental organizations, and executive members of the Laura Integrated Water and Land Management Advisory Committee. Letters were dispatched to all relevant water stakeholders, both in Government and Non-Governmental Organizations, inviting participation in the work of the taskforce. Whilst broad representation of all stakeholders was encouraged, high level representation from each Government Ministry was encouraged with the assistance of the Office of the Chief Secretary. The full list of NWTF members is included in this report as Annex 3.

Once established, a key initiative of the National IWRM Task Force was the organisation and conduct of a National Water Summit from 22nd-23rd

March 2011. This Summit was used inter alia to: launch the Task Force; identify its priority areas of work; and to agree on the steps needed to strengthen national coordination of water and sanitation initiatives (e.g. establishment of a formal Water Commission) and to develop the National Water and Sanitation Policy and IWRM Plan. A Policy Sub-Committee of the National Task Force Force was formed in support of water policy development.

Development of a National Water and Sanitation Policy and the Establishment of the "RMI Water and Sanitation Commission"

The RMI Water and Sanitation Policy calls for the formal establishment of the "RMI National Water and Sanitation Commission" to strengthen and formalise the functions and roles of the National IWRM Task Force. Since its establishment in October 2008, the Task Force has served a useful purpose in terms of coordinating water and sanitation policy and planning. However, the constitution, functions, and roles of the Task Force require further elaboration to better support the implementation of a National Water and Sanitation Policy and IWRM Plan. The body will also benefit greatly from strengthened institutional authority as a "Commission".

There is strong support among key stakeholders in the RMI on the need to establish this more formal, fully-functional and authoritative institution to serve as the RMI's WatSan needs. The concept of a new Water and Sanitation Commission has received support by the members of the Task Force, through consultations with policy makers, and during the March 2011 National Water Summit. The adoption of the new policy and the establishment of the Commission are two key components in the larger effort to institutionalize and strengthen IWRM in the RMI. The draft National Water and Sanitation Policy can be obtained by contacting Ms. Barker-Manase at RMI EPA.

Basic Functions and Roles of the Commission

The primary purpose of the Commission will be to govern overall water and sanitation policy, planning, decision making and resource allocation in the RMI.

It has been identified that the Commission shall:

- Be established at the highest level of authority and through well-designed enabling instruments. Initially this would be via a detailed resolution to be jointly adopted by the Cabinet and the Nitijela. Later on, this institution should be formally established and authorized via a new comprehensive IWRM Plan and Law (proposed for late 2012);
- Have oversight and responsibility for the effective implementation of the Water and Sanitation Policy;
- Institutionalize its internal working relations through a multi-party 'compact' that clearly articulates each member's roles and responsibilities and that commits the members to active participation in the NWAB and its activities and endeavors;
- Have a very clearly articulated mandate, constitution (membership), structure, functions, roles, powers, procedures and protocols;
- Be inclusive, with representation from all key stakeholder groups in the country;
- Be comprised of geographic and thematic sub-bodies or sub-committees, structured along the main priorities and action areas for IWRM in the RMI (e.g. Laura Committee, Sanitation and Health Committee, Ebeye Committee, Utilities Committee, Landowners, etc.);
- Include a 'core' working group (which meets more frequently) and a larger working group.
- Be well organized and coordinated, primarily through the services of a Secretariat, in the form of a IWRM Coordination Office (also to be established in 2012);
- Be active and proactive, meeting regularly (e.g. bi-monthly) and looking 'beyond the horizon' to anticipate emerging challenges and opportunities;
- Focus on effective coordination, both domestically (intergovernmental, national-local-community), regionally, and internationally (e.g. with donor and development partners);
- Utilize efficient resource allocation principles, including cost-benefit analysis and other objective criteria to inform decision making; and
- Be responsible for coordinating annual National Water Day activities.

An active and effective national-level water institution that follows these main principles would constitute 'key ingredient' for more integrated and sustainable water resources management in the RMI.

4. Planning Stakeholder Participation in the Execution of the RMI GEF Pacific IWRM Demonstration Project

A stakeholder analysis was undertaken in early 2010 to identify key stakeholders and brainstorm strategies for engaging these key groups and individuals. As part of the analysis an Action Plan for Stakeholder Engagement was developed (see Annex 4). The following table summarizes the key stakeholders identified and strategies to engage them.

Some strategies have been successful to date in terms of engaging high ranking traditional leaders at the outset to encourage more community participation and support in the planning stages. Other strategies will be undertaken starting end of 2011 such as the establishment of a "Laura Lens Learning Center" located in Laura, to be accessible to schools and members of the general public. This center will exhibit educational materials, demonstration activities, models and other media. The table on the following page highlights key stakeholders and engagement strategies.

In the Community, the traditional leaders and the landowners are the most influential; engaging them in decision making processes for the IWRM demonstration project has encouraged community ownership of the project. Their participation has also been effective in encouraging interest from other community members. Because community ownership of the project is essential for the sustainability of the initiative, it is crucial that these key groups are involved in the process of the development of the key output, i.e., the Laura Water and Land Management Plan.

Similarly, the involvement of high level government stakeholders in the National IWRM Task Force has been equally beneficial for the long term water and sanitation policy and planning initiatives of the project. This has stimulated high level government buy-in. The project was effective in facilitating the appointment of First Lady Hannah Zedkaia as RMI's National Water and Sanitation Champion in lead-up to the First National Water Summit convened on World Water Day 2011. The First Lady has provided high level, instrumental support to all key project initiatives which has proven very effective in terms of raising the awareness of the initiative and water and sanitation issues generally in the RMI.

To improve stakeholder participation, particularly with respect to the National Water and Sanitation Policy and IWRM Plan development, the PMU plans to work closely and focus on the most influential stakeholders, including Traditional leaders, the First Lady, Politicians and active and influential community members to lobby support from groups that are against or are indifferent to the project.

Stakeholder	Key Interests & Why Engage?	Strategies for Engagement
Traditional Leaders (Chiefs and Landowners)	○ Highest ranking in traditional system ○ Landowner and Community Leader. ○ Advice, especially on traditional land issues	Need to be engaged during the planning stages at each stage of the project. Need to be fully informed and have clear understanding of project objectives to avoid high expectations. Risk of opposition from high ranking community members is reduced if this group has clear understanding of project objectives. This will facilitate community support during implementation on the ground.
Community Leaders (Active Community members, may have some land title rights)	Landowner and Community Leader. Community advisor and participation	Policy-Planning and implementation. Community Leaders may range from those with traditional land title and those without. Both are key to implementation. Engagement through committee meetings and advice and input on decision making for project activities, assign as points of contact in the community.
Local Government Council Members	Local government representatives for Majuro-specifically Laura Village. Can assist with mobilizing resources and/or organizing community events	Provide updates and information on project progress throughout implementation. Should be involved in decision making and enforcement at local government level
High Level Government Officials	Landowner, traditional leader, Farming and Business. Assistance & Support from the Local Government and local communities	Political representatives from Majuro, President is currently Paramount Chief and has much traditional influence in Laura. Engagement through establishment of Water and Sanitation Champion – First Lady. High Level Briefings throughout project implementation
Community Associations/ Organizations including Womens Groups	Farmers Association, Womens Groups-Handicrafts, Catering of local foods. Activities impact water resources, can help promote water campaigns Traditional advise, education and participation	Laura water lens meeting & Laura community meeting. Involvement in training programs relating to water and agriculture organized by the project.
Non Government Organizations	Synergies with existing programs and campaigns	Technical meetings/trainings, community meetings and advisory group meetings
School Children	Future leaders and take home messages	Study tours, Educational Center, School visits, activities and games

5. Results Oriented Planning and Implementation of the GEF Pacific IWRM Demonstration Project in RMI

5.1 Logframe Development

The National GEF supported IWRM demonstration project in the RMI focuses on Integrated Water and Land Management for the Sustainable Use of the Laura Water Lens, Majuro Atoll. The overall aim of the Demonstration Project is to achieve sustainable use of the Majuro groundwater supply, namely the Laura lens, focusing on practical demonstration of best practices to address national priority water issues and raise political will to act in the interests of IWRM. In 2010, the original scope of work was re-evaluated and the PMU and Laura Lens Committee worked to adjust planned activities to meet local needs, priorities, and available resources. A detailed project logical framework matrix (logframe) incorporating SMART indicators was developed during the first half of 2010 for final review and endorsement by the Second Regional Steering Committee for the GEF Pacific IWRM Project.

To assist with improving stakeholder awareness and understanding of the key areas of work and anticipated results of the project, the completed project logframe was translated into Marshallese language for public comment. Using inputs from several landowners and community representatives, the logframe was subsequently finalised in June 2010. The English and Marshallese versions of the logframe are included in this report as Annex 5.

5.2 Priority Areas of Work and Results

The following table summarises the priority objectives and activities of the IWRM project. The full project logframe is included with this report as Annex 4.

Project Objectives	Activity
Goal:	
Component 1: Strengthened Coordination for Integrated Land and Water Management at Laura, Majuro Atoll	1.1 Review of socio-economic and political factors influencing IWRM and Water Use Efficiency in the Laura Area of Majuro Atoll, including: (a) incentives; formal and informal institutions; and economic structures relating to water and land use in the Laura area; (b) recommendations for national level reform of water sector
	1.2 Establishment and Operation of a National Integrated Water Resource Management Task Force, to: (a) promote the effective development and management of water resources; (b) oversee development and implementation of a Laura Integrated Water and Land Resources Management Plan (LIWLRMP)
	1.3 Formalise the Laura Integrated Water and Land Management Advisory Committee, including endorsement from the National Integrated Water Resource Management Task
	1.4 Develop and Implement a Laura Community Stakeholder Engagement Plan, including identification of roles and responsibilities of local partners in project implementation
	1.5 Develop and Implement an IWRM and Water Use Efficiency Capacity Building Programme for the Laura Integrated Water and Land Management Advisory Committee
	1.6 Develop and Implement a Community Based Project to Foster Involvement of Women's Groups in Water Management and Decision-Making in the Laura Area
Component 2: Identification of Key Threats and Management Issues for the Laura Water Lens	2.1 Development of a fine scale topographical map of the Laura Area
	2.2 Review of sanitation and waste management systems in Laura, including: (a) identification of all septic systems and those requiring remediation; (b) solid waste disposal methods and sites; and (c) farm waste management. Summary of sanitation and waste management recommendations for Laura.

	2.3 Review of the status of Laura water and land resources, including identification of current and projected impacts, and recommendations for land use zoning.
	2.4 Compilation of existing data and information to produce a GIS map of land use and potential sources of pollutants in the Laura area
	2.5 Identification of the benefits and costs of integrated water and land management in the Laura area with: (a) identification of water allocation issues; (b) tariffs and price mechanism; (c) possible extraction fee; and (d) possible cost sharing arrangements (e.g. polluter versus beneficiary pays).
Component 3: Development of a Laura Integrated Water and Land Resources Management Plan	3.1 Establishment and Operation of a Technical Working Group of the LIWLMAC to develop a Laura Integrated Water and Land Resources Management Plan (LIWLRMP)
	3.2 Agreement between and amongst water related agencies and funding bodies (both Government and external) of priority water problems and required management interventions at Laura, including benchmarking of current and planned projects and financing levels.
	3.3 Community forum meetings to agree needs and vision for the Laura community for integrated water and land management at Laura, including desired management goals, objectives, and targeted management actions.
	3.4 Draft Laura Integrated Water and Land Resources Management Plan, including targeted costed action plan and financing mechanisms presented to Laura community for comment and reviewed by and endorsed by LIWLMAC for submission to cabinet
	3.5 Laura Integrated Water and Land Resources Management Plan and Action Plan submitted for Cabinet endorsement
Component 4: Targeted Stress Reduction Demonstrations for the Laura Water Lens	4.1.1 Development of a septic monitoring, collection, and disposal program to: (a) monitor sewage levels of septic tanks at Laura; and (b) initiate timely sewage collection from overloaded and leaking septic systems and subsequent disposal using Majuro's public sewer system. [Activity 2.2 to provide baseline information]
Sub-Component 4.1	4.1.2 Composting toilet designed and operational at central Laura location, including: survey of community perceptions; preferred design features; and operational considerations.
Sub-Component 4.2 – Reducing Stress from Domestic Solid Waste Leachate Pollution at Laura	4.2.1 Based on results of 2.2 develop community-based project for solid domestic waste management at Laura
	4.2.2 Community survey of numbers, types, and suitable locations for solid waste bins and disposal areas
	4.2.3 Development of education materials and activities to inform the community on domestic waste management (link to component 5).
Sub-Component 4.3 – Building Capacity of Pig Farmers to Reduce Stress on the Laura Water Lens	4.3.1 Identification of priority pig farms for involvement in trial, preferably farms located in low-lying coastal lands adjacent to water lens
	4.3.2 Identification and development of techniques for the use of coconut husk in dry litter waste management at selected piggeries, specifically to produce compost for market garden fertiliser
	4.3.3 Establishment of communal composting site for production of pig waste fertiliser

Component 5: Enhancing Awareness and Understanding of the Laura Water Lens	
Sub-Component 5.1: Public Awareness	5.1.1 Laura Water Lens Learning Center in the Laura Area to assist with promotion of demonstration project and dissemination of information materials
	5.1.2 Exhibition materials for the Learning Center, including: learning displays (e.g. posters), interactive database/DVD-ROM of information and data relating to Laura water lens, and audio-visual materials (e.g. videos).
	5.1.3 Promotion of Learning Center role via local radio, local and regional television and print media, and a programme of visits by schools and other civil society groups
	5.1.4 Network of local journalists and government communications staff to organise television and radio broadcasts and news articles about water conservation and stress reduction demonstration activities
	5.1.5 Laura Water Lens website based on Open Source Content Management System Software (e.g. Joomla) to act as a central repository of information and data relating to integrated water and land management at Laura
	5.1.6 Electronic dissemination of a quarterly demonstration project newsletter
Sub-Component 5.2: Training and Education	5.2.1 Training needs assessment and preparation of a training programme targeting government officers and local communities, including, identification of needs for specific training in areas such as sanitation, composting toilets etc.
	5.2.2 Implementation of the training programme at the community level. I tis envisaged that training needs may include but not be limited to: principles and practice of water resource management; sanitation and sustainable solid waste disposal methods; septic maintenance and remediation techniques; water quality monitoring; and resource use zoning.
	5.2.3 Implementation of the targeted training programme for government agencies and personnel. It is envisaged that training needs may include but not be limited to: economic valuation and cost sharing principles; interpretation of socio-economic and scientific data and its use in planning and zoning land use; and IWRM policy and planning
	5.2.4 Identification of needs and opportunities for a group study tour (including RMIEPA management staff and selected NGO community group members from Laura) to selected GEF IWRM demonstration projects in the Pacific region.
	5.2.5 Preparation and distribution of posters, brochures and booklets on topics of relevance to IWRM and Water Use Efficiency as identified in the training needs assessment.
Component 6: Management and Coordination of the Laura Demonstration Project	6.1 Successful management, coordination, and implementation of: the project to achieve the Demonstration objectives and to meet the strategic needs of the Republic of Marshall Island's Environmental Protection Authority.
	6.2 Effective planning and control of the endorsed
	6.3 Establishment and effective operation of a Demonstration Project Management Unit (PMU) to: (a) manage the interface between the lead agency and the regional Project Coordinating unit, user groups, and other stakeholders and government agencies; and to (b) manage the consultation process to ensure comprehensive input from user groups and other stakeholders into the development and implementation of the project
	6.4 Consistency between the various project components and related activities provided or funded by other donor organisations, including realisation of co-financing where possible
	6.5 Participation of project representatives in meetings of the Regional Project Steering Committee Meetings, and associated regional training and capacity building sessions

The following table provides a summary of key results linked to the projects goal and objectives. A comprehensive review of National Results Notes linked to performance indications can be found in Annex 6.

ISSUE	KEY RESULT
Institutional management of pressing water resource issues	Establishment and Operation of the National IWRM Task Force as RMI's APEX Body for Coordination and Planning of Water and Sanitation Investments and Actions
Public awareness of water resource issues	Strengthened Community Engagement with National Government on Water and Sanitation Issues via Establishment and Operation of the Laura Lens Committee
Contamination of the criticial Laura Lens from domestic and animal wastes	Reduced stress on the Laura Water Lens by development and operation of septic remediation programme, pilot ECOSAN, and conversion of piggeries from wash down waste disposal systems to dry litter systems

5.2.1 Co-financing

The following tables highlights the co-financing that was realised and the additional funding that was leveraged from success of the project activities.

5.2.4 Key Awareness Materials

The RMI GEF Pacific IWRM demonstration project has adopted a storyline approach to documenting project progress and its impact on the social and natural environment. The Marshall Islands Journal (MIJ) is the RMI's regular newspaper and features weekly cartoons known by all Marshallese. The demonstration project has established a partnership with the MIJ to regularly update the community on project progress and activities via cartoon sketches.

5.3 Catalytic Impacts

The Dry-litter piggery systems were identified as the most effective methods of reducing the amount of pig waste issues. Through piloting dry-litter systems, it has been brought into considerations by community members including local government council members to be the right solution in dealing with the pig waste management issues on Laura. Currently the only form of governance for pig waste management is the local government ordinance on pig waste management stating all pig farms are required to use septic systems for pig farming. With the good outcomes of the pilot project, suggestions have been made to revise the current ordinance to using dry-litter systems for pig waste management.

5.4 Participatory Planning, Monitoring, and Evaluation

During the inception period, the project focused on engaging traditional leaders in the planning stages to ensure overall agreement on and understanding of the project objectives. To date, the project has expanded its stakeholder focus to include high level officials in Government. Table 3 above provides a summary overview of which stakeholders where particularly important and influential during the planning, monitoring, and reporting aspects of the project. The following summarises how different stakeholders are engaged in IWRM demonstration project planning, monitoring, and reporting. The Participatory Planning, Monitoring, and Reporting Plan is provided in Annex 6.

The Laura Integrated Water and Land Management Advisory Committee's (or Laura Lens Committee) main role is to provide direction and strategic guidance to the PMU and the Environment Protection Authority as the Lead Agency regarding the design and implementation of the national demonstration project. These include, but are not limited to: review and endorsement of quarterly work plans; evaluation of project progress; and assessment and oversight of stakeholder participation in the project.

In 2010 the Project Management Unit reviewed the status of the Laura Integrated Water and Land Management Advisory Committee's (or Laura Lens Committee) with a view to further elaborating the role of the Committee in both the Demonstration Site as well as in national planning processes relating to water and sanitation issues. Consultations were undertaken in early 2010 with members of the Committee to identify ways to improve participation at the community level. As a result of the consultations the following suggested actions were undertaken:

- Representation of traditional leaders, landowners, church groups, women's groups, and residents of demonstration site expanded to include leaders not in original membership list

- TOR updated

- Advisory Group established to act as working group of the committee PMU meets quarterly with the main committee (Laura Lens Protection Committee) to provide updates on overall project progress.

The PMU organises the meetings of the Laura Integrated Water and Land Management Advisory Committee to provide updates on overall project progress and ensure full participation in the planning of project activities, expenditures, and communications.

The Advisory Sub-Committee meets more frequently than the Committee and acts as a small working group of the Committee to: monitor progress of planned activities; work closely with the PMU in facilitating communications between the PMU and the Community in Laura; draft quarterly work plans and reports for review and endorsement by the full Advisory Committee. Copies of Quarterly Work plans and Budgets are provided to the Advisory Committee to inform members on upcoming project activities and get feedback and approval of quarterly plans.

Regular meetings of the Advisory Sub-Committee also allow discussion on lessons learned from the perspective of the community and other stakeholders. Members were selected by the main committee to allow more frequent input into planning, decision making and implementation. During these consultations, the PMU provides updates on activities and results achieved. Lessons learnt are then shared with the group and feedback and suggestions for alternative approaches are agreed on.

The detailed plan guiding the Participatory Planning, Monitoring and Reporting of the project is included in this report as Annex 6.

6. Strengthening National Coordination and IWRM Policy and Planning in RMI

6.1 Linkages of Demonstration Activities with IWRM Planning

The IWRM demonstration project has demonstrated effective stress reduction pilot projects that have been part of the process for developing the water and sanitation policy. From the demonstration activities, the Laura community recognizes the need for scaling up these demonstration pilot projects and the need to develop something that will help sustain the projects. Through series of consultations and meetings, the IWRM national task force and the Laura lens committee recognized that there was develop a formal National Water and Sanitation Policy.

The development process included a national water summit that convened on March 2011 capturing the community needs in terms of water and sanitation. These needs were then developed into the key elements of the policy document. This National Water and Sanitation Policy was endorsed by government in March 2014.

6.2 National IWRM Planning

The RMI National Water Task Force, established by Cabinet in 2008 (see Cabinet resolution in Annex 2), currently serves as the tentative NWAB for the RMI and has adopted a five-step approach for institutionalizing IWRM in the RMI over the next two years.

In summary, the major steps to institutionalizing IWRM are as follows (with target dates indicated):

1. Develop and adopt a new comprehensive, IWRM-based National Water and Sanitation Policy
2. Formally establish and authorize a permanent and fully-functional RMI Water and Sanitation Commission to serve as the overarching NWAB and governance body for IWRM (target date: early 2012)
3. Formally establish a permanent National IWRM Coordination Office to serve as the primary coordinating unit for water and sanitation policy and to serve as the Secretariat for the Commission (target date: early 2012)
4. Develop and adopt an IWRM Medium-term Action and Investment Plan (target date: late 2011)
5. Develop and enact a new IWRM Law to further solidify RMI's commitment to integrated and sustainable management in the water and sanitation sector (target date: late 2012)

7. Capturing Lessons Learned for Replication and Scaling-up of IWRM Best Practice in RMI

7.1 Lessons Learned

Committee Involvement in Planning and Decision Making

One of the lessons documented by the project involved postponement of a particular capacity building activity. The activity had been prescheduled prior to final agreement from all members of the committee. As a result the committee members suggested that alternative activities be prioritized. This issue may have been avoided if members were involved earlier in the planning of quarterly activities. It is very important that the committee adds insight can help improve the project; however, it is also very important to be careful as to be able to manage the inputs of the group as to not hinder progress.

Transparency and Honesty

A key lesson learned to date from the demonstration project is the importance of transparency when dealing with community groups, it is important to be clear that your efforts are dedicated to assisting them and that their ideas and time are valuable too. You do this carefully by allowing everyone (landowners or not) space to think, time to contribute, by doing this you give them a sense of ownership and responsibility to their decisions (for example, by agreeing on where the Laura Lens Learning Center should be, they are likely to make sure that it is safe all the time)

High Level Support

The IWRM GEF PMU was heavily involved in the pre-planning and conducting the National Water and Sanitation Summit held in March 2010. One of the successes of this event was the very high level of participation even though the summit was a 2 day event. Nominating a National Water and Sanitation Champion – the First Lady, was key to turning the event into a very high level and participatory event. This same approach has been recently used for the area of Climate Change.

Community

Key lesson learned during the implementation of the project was the appointment of the former first lady Hannah Zedkeia to be the national water champion for the RMI with the role of incorporating more women and local community members into the IWRM policy and planning. Her role demonstrated to be effective by leading the national water summit heavily involving major community land owners, women's groups, and other potential members that contributed inputs that lead to the development of the key elements of the water and sanitation policy.

7.2 Replication and Scaling-up

The draft replication and scaling up plan for the demonstration project is included in this report as Annex 7. It is envisaged that this replication and scaling up plan will be further elaborated as the project moves into activities to pilot water and land use management practices aimed at reducing stress on the Laura Lens. The capture of lessons learned from the activitieshave been used to inform the drafting of the RMI Water and Sanitation Policy that was endorsed in 2014, IWRM Investment Plan, and IWRM law.

8. Planning the Transition from IWRM to the Regional Ridge to Reef Initiative

8.1 Scaling-Up to broader Integrated Land, Water and Coastal Management

To be completed

Annexes

Annex 1: Laura Lens Committee

Jorelik Tibon		Chairman Assistant Chief Secretary, Chief Secretary's Office
Ruth Harris		Advisor
Joubon Kabua		Council Woman, Iolap, Laura Village
Shirolynn Kawakami		Council Woman, Iolap, Laura Village
Jina David		CMI Land Grant Officer, Arrak, Laura CMI Campus

Sepe Joash	**Maria Joash**
Paul Rilang	**Anta Elbon**
Silash Malachi	**Ain Kabua**
Anthonio Rear	**Royal Ceasar**
Aki Samuel	**Rondio Jormuly**
Zebty Zebty Jnr.	

Annex 2: Laura Lens Committee ToR

Terms of Reference for the Laura Integrated Water and Land Management Advisory Committee

(Commonly referred to as the Laura Lens Committee)

Rationale

The Laura groundwater lens and associated infiltration galleries and treatment facility is over 30 km west of the DUD area. Water is drawn from 7 infiltration galleries, all constructed around 1990. There is already a real risk of significant contamination of the water lens and if Laura is to be retained as a viable water resource for the greater Majuro population, action is urgently required.

Role

The Committee's main role is to facilitate safeguarding the Laura Lens from unsustainable use and over pollution from land-based activities

Responsibilities

Goals and Objectives

1. **To provide direction and strategic guidance to the PMU and Lead Agency regarding the design and implementation of the national demonstration project**

- Receive, review and approve reports from the Project Management Unit regarding the outputs and outcomes of project activities
- Review stakeholder involvement in project activities and take action where necessary to ensure appropriate levels of government, NGO, community, and private sector engagement
- Review and evaluate, at the national level, progress in implementation of the project, and provide guidance for improvement to the PMU and Lead Agency (EPA) when necessary

2. **To build community capacity in the implementation of the Groundwater Protection Plan**

- To establish a Working Committee of the Laura Lens (Groundwater) Protection Plan
- Periodically consult/inform the community of the status/condition of the lens.
- Identify potential sources of pollutants/contaminants to the Laura lens.
- Produce awareness and educational materials for the community-schools, residences, and churches.
- Involve participation of Laura communities to assist in the campaign of the groundwater protection plan.

3. **Periodic meetings (monthly, quarterly or annually):**

- To consult/share new/update information-regarding implementation of the GEF Demonstration Project
- Make/propose (action or strategic) plans,
- Develop/review policies, guidelines or standards for the development of the Laura Groundwater Protection Plan.
- Review and revise TOR and role of Committee and members on an annual basis to ensure adequate representation by key stakeholders.

4. **Annually assess the plan, policies, guidelines or standards for the Groundwater Protection Plan**

5. Membership & Roles

Chairman – Chairing of regular Integrated Water and Land Management Advisory Committee Meetings, Review of Agenda Items-facilitate discussions. Also to sit on National IWRM Task Force and update members of issues affecting water and sanitation in Laura, and input into national level advice to government regarding water and sanitation.

Traditional Leaders & Landowners (*Iroij* and *Alabs*)
There shall be adequate representation from Iroij and Alaps in the Committee. This membership shall be reviewed on an annual basis to ensure traditional leaders are informed of activities relating to water and sanitation in Laura.

Traditional leaders and landowners are one of the most influential decision makers in Laura and will need to be informed of results of studies on Laura Groundwater Lens in order to provide support in the implementation of plans, policies, guidelines and standards for Laura in relation to water and sanitation.

Local Government Representation

Councilmen/women
There are (4) seats in the Majuro Atoll Local Government (MALGOV) council allocated to Laura Village. There shall be adequate representation of councilmen/women in the Committee to ensure close coordination with MALGOV.

Each councilman/woman represented in the Committee is responsible for coordinating with the Advisory Group in informing their constituents of any plan, policy, guidelines or standard that may be developed relating to water and sanitation in Laura. Council members are also responsible for informing Communities in Laura of any ordinances relating to water and sanitation and to assist the Committee in enforcing violations.

The Committee shall inform MALGOV Executive Council and Mayor on any recommendations affecting local ordinances for water and sanitation in Laura. As needed the Mayor and any other Executive Council Member may be invited to Committee meetings.

Laura Farm Association

There shall be (1) representative from the Laura Farm Association on the Committee.

The Laura Farm Association will be responsible for providing information on use of fertilizers (chemical and non chemical), water usage, waste disposal methods relating to agricultural activities in Laura. The representative of the Laura Farm Association shall also be responsible for informing the members of the association of any recommendations, activities, plans, standards or guidelines developed and agreed on by the Committee.

Government and Technical Representation
The following offices shall be represented on the Committee and shall provide information and technical advice and recommendations to the Committee on matters relating to water and sanitation

Environmental Protection Authority- The RMI EPA as PMU for the IWRM GEF Demonstration Project shall provide to the Advisory Group and Committee quarterly reports on progress of the IWRM GEF Demonstration Project and may also provide quarterly updates on water quality**-**Total and Fecal Coliform (*E.coli*), Conductivity Total Dissolved Solids (TDS) Salinity Chloride Nitrates, Heavy Metals, Pesticides, and other parameters as required to develop adequate guidelines for protecting the groundwater lens.

Majuro Water and Sewer Company - The MWSC shall provide to the Committee at its quarterly meetings, updates on extraction and pumping rates per quarter. Updates on septic suction operations for Laura residents requiring pumping of septic systems shall be provided listing schedule for residential pumping.

National Weather Services-The National Weather Services shall be responsible for providing on a quarterly reporting on rainfall data, and forecasts, including data on rainfall collected at the demonstration site.

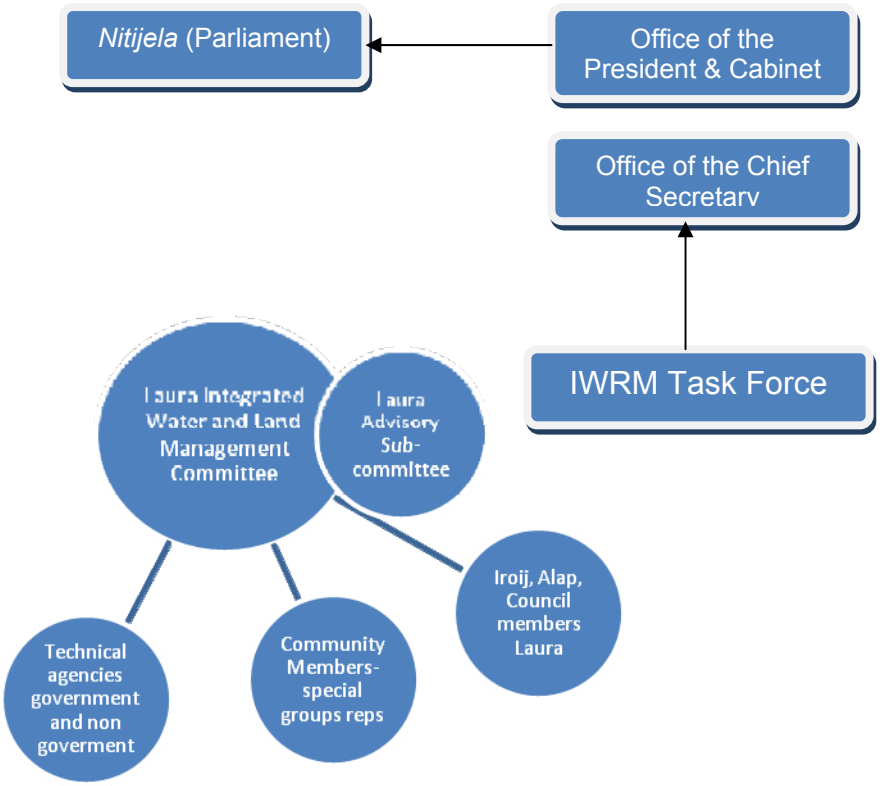
NON-Government/Community Based Organization Representation-There shall be at least one active NGO or CBO in the Laura community represented in the Committee. Each group shall coordinate with initiatives of the Committee to ensure activities are coordinated and complimentary.

ROC Taiwan Farm Technical Assistance to RMI-As needed a representative from the ROC Taiwan Farm Technical Assistance Program located in Laura shall be invited to quarterly or special meetings of the Committee. The Technical Mission shall provide information on all agriculture and animal husbandry activities that may impact on the laura groundwater lens. In addition the ROC Taiwan Farm shall be required to comply with any plan, guidelines, standards, policies developed and endorsed by the Committee.

Project Management Unit (Demo Project) - Administrative functions The PMU will consult with members of the Laura Committee and Advisory Group in work planning and will be responsible for providing quarterly updates to the Laura Lens Protection Committee on GEF Demo project activities

Meetings
The Committee will meet regularly on a quarterly basis, and may call special meetings as required. The PMU will act as Secretariat for Committee meetings initially. The Chairman in coordination with the PMU shall organize and call quarterly and/or special meetings of the Committee.

Laura Integrated Water and Land Management Advisory Committee



GEF-Pacific IWRM Project **Country Stakeholder Engagement Analysis and Plan** **Country: Republic of Marshall Islands ____**

	Stakeholder Analysis						RMI-Action plan for stakeholder engagement			
	Demonstration Project Component 1 / 2 / 3 / 4 / 5 / 6 / 7						[For inclusion in annual workplan (and budget) if appropriate]			
	Component focus……..									
	1 Stakeholder (Organisation/post/ name/contact)	2 Key interests, concerns	3 How does the project affect them?	4 How support-ive will they be? ++; +; =; -; --	How much influence Very 5 – 0	6 Priority to engage Top 5 - 0	7 What do we need /want them to do?	8 What (& how) do we do to engage them? (to get what we need)	9 When do we engage them?	10 Who leads?
1.	Witten Phillipo Private Legal Attorney	Landowner and Community Leader	Greater awareness of the project & appreciation for needs to protect Laura water lens sources	++	5	5	Provide legal advice, especially on traditional land issues	Policy-Planning and implementation	IWRM National stakeholder meeting	Laura Water lens selected committee with IWRM's support
2.	Jorelik Tibon Deputy Chief Secretary (RMI)	Landowner and Community Leader	Access to improve water quality and quantity	++	5	5	Community advisor and participation	Policy-Planning and implementation	IWRM National stakeholder meeting	Laura Water lens selected committee with IWRM's support
3.	Joubon Kabua Council Woman	Landowner, traditional leader, Farming and Business	Promote public relation, access to improve water quality and quantity & benefit of the project attainments	++	5	5	Assistance & Support from the Local Government and local communities	Decision making & Implementation	Majuro Local Government meeting, IWRM National stakeholders meeting, & Laura water lens committee meeting	Laura Water lens selected committee with IWRM's support
4.	Ruth Harris Senior Land Owner	Compensation, sitting fee & financial reward	Extra source of income, participate in decision making & benefit of the projects attainments	++	5	5	Traditional advise & participations	Traditional & decision making & implementation	Laura water lens meeting, Laura community meeting	Laura water lens committee, IWRM support office & MWSC
5.	Ain Kabua Senior Landowner	Community Leader & Business	Public relation, access to improve water quality and quantity & benefit of the project attainments	++	5	5	Traditional advise & participation	Traditional & Election making & Implementations	Laura water lens meetings & Laura community meetings	Laura Water lens selected committee with IWRM's support
6.	Jasper Lanki Traditional leader & Senior employee of the Majuro Atoll Local Governement	Landowner & Community Leader	Public relation & serve people as traditional leader	++	5	5	Traditional Advise, education & participation	Traditional & Decision making & implementation	Laura water lens meetings & Laura community meetings	Laura water lens committee, IWRM support office & MWSC
7.	Ronny Bokmej Chair person for the Laura Farmers Association	Farming & Commercial development	Public relation & serve people as traditional leader	++	5	5	Traditional advise, education and participation	Traditional & Decision making & implementations	Laura water lens meeting & Laura community	Laura water lens committee, IWRM support

									meeting	office & MWSC
8.	Tommy Laibwij Councilman & Business	Community leader & commercial development	Access to water quality and quantity, improve capacity building of farming & benefit from projects'attainment	++	5	5	Assistance & Support from the Majuro Atoll Local Government & Participation	Traditional & Decision making & implementation	Laura water lens meeting & Laura community meeting	Laura water lens committee, IWRM support office & MWSC
9.	Antonio Rear Councilman & Traditional leader	Community leader & business development	Public relation, access to improve water quality and quantity & benefit from projects attainments	++	5	5	Assistance & Support from the Majuro Atoll Local Governement	Decision making and Implementation	Majuro atoll local government meeting, Laura committee meeting	Laura Lens committee, IWRM support office & MWSC
10.	Titus Langrine Mayor, Majuro Atoll Local Government	Landowner, community leader	Promote political achievement and public relation, influence community action	++	5	5	Assistance & support from Majuro Atoll Local Government & Participation	Decision making and implementation	Majuro Atoll local Government & Laura community meeting	Laura water lens committee, IWRM support office & MWSC
11.	Isaiah Alee Council & Executive member of Majuro Atoll Local Government administration and traditional leader	Landowner & Community leader	Public relation, serve people as traditional leader, greater awareness and appreciation of beneficial purpose of the project	++	5	5	Assistance & support from Majuro Atoll Local Government & Participation	Decision making and implementation	Majuro Atoll local Government & Laura community meeting	Laura water lens committee, IWRM support office & MWSC
12.	Shroline Kawakami Official staff of the Majuro local government	Landowner, community leader & active member for the womens's NGOs groups	Increase appreciation and understanding of the project's goal & objective, access to improve water quality & quantity & benefit from the projects' attainment	++	5	5	Assistance & support from Majuro Atoll Local Government & Participation	Decision making and implementation	Majuro Atoll local Government & Laura community meeting	Laura water lens committee, IWRM support office & MWSC

GEF-Pacific IWRM Project Country Stakeholder Engagement Analysis and Plan

	Stakeholder Analysis Guidance Notes
Purpose	Through stakeholder situation analysis, identify effective actions that will capture the potential positive impact of supporters and minimise the potential negative impact of opposers, in order to achieve planned project IWRM outcomes.
Before you start	Decide how to do this stakeholder analysis. Either do it globally for the whole demo project. Or do it project component by project component. Doing it globally may be quicker. Doing it by component may help focus the analysis and the engagement action plan more precisely on stakeholder interests, issues and contribution needed; and help to link the timing of the engagement action plan with the implementation of the component's activities. Start each component on a new sheet. Are there any Action Plan actions that will need to be reflected in the 12-month workplan, 12-month budget and the log-frame? Most countries have a stakeholder diagram that was prepared during the Niue Workshop in July 2008. This could be a starting point to be developed. But keep it simple and useful.
Stakeholder analysis	
1 Stakeholder	Identify the main stakeholders (organisation; section; post; name; contact) who will contribute to, be affected by, be supportive of or opposing the demo project (component).

	Focus on in-country stakeholders.
2 Key interests, concerns	Identify what are the main reasons why the stakeholders are /would be interested in or concerned about the project (component). They want an adequate and reliable supply of clean water? They want a free supply of water? They want to minimize flood damage? They do not want to change their land management or pig effluent management practices? They want to be able to build on wasteland plots in the flood-plain? They do not want to handle their own sanitation products?
3 How does project affect them	Identify the ways in which the project (component) (activities and outputs) will affect the stakeholder? Will it affect (lead to changes in, increase or decrease) and if so how will it affect: their authority? their power? their autonomy? their aims? their property? their work? their budget? their livelihoods & practices? their status? etc
4 How support-ive will they be ++ + = - --	Considering the above, will the stakeholder be supportive of the project (component) or opposing or blocking the project (component). Will the stakeholder be very supportive (++), supportive (+); neutral (=); opposing (-) or strongly opposing (--) the project (component)?
5 How much influence Very 5 – 0	Your assessment of how much the stakeholder will be able to influence the implementation and achievement of the project (component) – by direct support or blocking; or indirectly by influencing others to support or block. Extremely influential 5; Very influential 4; Quite influential 3; Some influence 2; Very limited influence 1; No influence 0;
6 Priority to engage Top priority 5 down 4,3,2,1 to 0 least	Considering the above, assess how important it is to engage the stakeholder in order to achieve the project (component) outcome. For example, a stakeholder with limited influence and already supportive of the project may be less important to achieving the project (component) outcomes than a very influential stakeholder who is strongly opposing the project. More effort would be directed to engaging (or effectively sidelining) the influential and negative stakeholder
Stakeholder engagement action plan	
7 What do we need /want them to do	Decide which priority groups to focus on for the engagement action plans, considering resources available. Priority 3 upwards (3-5)? Priority 2 upwards (2-5)? Or all? Analyse what it is that is needed from each stakeholder in order to achieve the project (component) outcomes: Sanction and endorsement? Financial or human resources? High profile public support? Collaboration and incorporation of activities into their work plans? Expertise?
8 What do we do to engage them &/or how (in order to achieve what we need)	Based on the preceding analysis, what will we need to do to engage the stakeholders, in order to maximise the positive influence of supporters; win over stakeholders who are negative; and/or minimise the negative influence of those who remain opposed? Use influential supporters as figure heads? One-to-one meetings? Joint planning discussions? Harmonising workplans? Site visits? Joint implementation? Joint M&E and review? Regular briefings – electronic, hard copies? Targeted communication/information campaign? An advocacy campaign? Lobbying senior decision makers? Funding? Provide alternative sources of livelihood, land, water, status, authority etc
9 When do we engage them	When do the engagement activities need to start in order to implement the project activities on time. When do sequential and follow-up engagement activities need to be done to match the stakeholder's planning and implementation cycle?
10 Who leads	Who within the lead agency, the PMU, or other stakeholders, will be responsible to initiate, develop and follow through with the action plan step?
Remember too	The community are also stakeholders! Include them in the stakeholder analysis . The community is made up of different sub-groups: leaders, men, women, youth, elders, more influential, less influential, better resourced, less well resourced all of whom may have different concerns, interests and influence.

Output No.	Output/Outcome	Key Indicators	Means of Verification	Assumptions/Risks	Responsible Partners
	Component 1: Strengthened Coordination for Integrated Land and Water Management at Laura, Majuro Atoll				
1.1	Review of socio-economic and political factors influencing IWRM and Water Use Efficiency in the Laura Area of Majuro Atoll, including: (a) incentives; formal and informal institutions; and economic structures relating to water and land use in the Laura area; (b) recommendations for national level reform of water sector	Terms of Reference and Key Deliverables for study identified by August 2010 Consultant/personnel for study recruited by October 2010 Draft report presented to NIWRMTF and LIWLMAC for review and comment by January 2011 Final report endorsed by March 2011	Call for expressions of interest in appropriate national and regional media Consultant or RMIEPA staff contract List of comments from national and Laura committees Final endorsed report	In-country capacity and access to consultants able to address complex scientific, technical, socio-economic, institutional, and political factors influencing water resource management in Majuro/Laura	RMIEPA, GEF IWRM Project Management Unit (RMI), consultant
1.2	Revitalisation and Operation of a National Integrated Water Resource Management Task Force, to: (a) promote the effective development and management of water resources; (b) oversee development and implementation of a Laura Integrated Water and Land Resources Management Plan (LIWLRMP)	Terms of Reference; Membership List; and Programme of Work, including Meeting Schedule agreed between RMIEPA and water stakeholders by September 2010. Quarterly meetings of the National Integrated Water Resource Management Task Force, chaired by RMIEPA	Report of Inception Meeting to launch Integrated Water Resource Management Task Force, containing agreed Terms of Reference; Membership List; and Programme of Work. Minutes of quarterly meetings.	Sufficient buy-in/support from relevant government Ministries and agencies for Integrated Water Resources Management Demand from government officials for sitting fees	RMIEPA, GEF IWRM Project Management Unit (RMI), Ministry of Resources and Development
1.3	Formalise the Laura Integrated Water and Land Management Advisory Committee, including endorsement from the National Integrated Water Resource Management Task Force	Agreed Terms of Reference; Membership List; and Programme of Work, including meeting schedule by September 2010. Quarterly meetings of the Laura Integrated Water and Land Management Advisory Committee	Report of Meeting including agreed Terms of Reference; finalised Membership List; and Programme of Work 2010-2011 Minutes of quarterly meetings.	Sufficient buy-in/support from Laura landowners, farm operators, and private sector (including Marshalls Water and Sewage Company) Cost of sitting fees	RMIEPA, GEF IWRM Project Management Unit (RMI)
1.4	Develop and Implement a Laura Community Stakeholder Engagement Plan, including identification of roles and responsibilities of local partners in project implementation	Community Stakeholder Consultation Workshop(s) convened by December 2010 Roles of local partners in project implementation identified and stakeholder engagement plan endorsed by LIWLMAC by March 2011	Documentation of consultation workshops (summaries, news items, audio-visual materials) Endorsed engagement plan	Local partner commitment to consultative process Conflict of interests between and among local community representatives and local partners (e.g. NGOs)	RMIEPA, GEF IWRM Project Management Unit (RMI), LIWLMAC
1.5	Develop and Implement an IWRM and Water Use Efficiency Capacity Building Programme for the Laura Integrated Water and Land Management Advisory	Capacity needs assessment of LIWLMAC conducted by September 2010 Capacity building programme developed by December 2010	Capacity needs assessment report, including survey results Report summarising capacity building programme Workshop documentation	Availability of engaging and interactive training materials and activities Willingness of committee members to participate	RMIEPA, GEF IWRM Project Management Unit (RMI), and LIWLMAC

	Management Advisory Committee	2010 Workshops conducted in conjunction with quarterly meetings of the LIWLMAC	Workshop documentation, audio-visual materials, e.g., (PowerPoint slides)		
1.6	Develop and Implement a Community Based Project to Foster Involvement of Women's Groups in Water Management and Decision-Making in the Laura Area	Project concept developed in conjunction with NGO and Women's Groups by December 2010 Project funding source identified by March 2011 Project operational and completed by December 2012	Project concept note and proposal to funding agency (e.g. GEF Small Grants Programme) Project approval and funding received Project implementation reviews and reports	Availability of funds for community projects on water in the Pacific Island Countries Commitment from NGO's and Women's Groups to develop and execute project	RMIEPA, GEF IWRM Project Management Unit (RMI), NGOs, and Women's Groups
	Component 2: Identification of Key Threats and Management Issues for the Laura Water Lens				
2.1	Development of a fine scale topographical map of the Laura Area	Terms of Reference for survey agreed by LIWLMAC by July 2010 Consultant/personnel for study recruited by September 2010	Agreed Terms of Reference Consultant/personnel contracts Topographical map	Availability of surveyors	RMIEPA, GEF IWRM Project Management Unit (RMI), consultants
		Survey conducted and map produced by March 2011			
2.2	Review of sanitation and waste management systems in Laura, including: (a) identification of all septic systems and those requiring remediation; (b) solid waste disposal methods and sites; and (c) farm waste management. Summary of sanitation and waste management recommendations for Laura.	Terms of Reference for survey agreed by LIWLMAC by September 2010 Consultant/personnel for study recruited by December 2010 Review completed and report including recommendations produced by March 2011	Agreed Terms of Reference Consultant/personnel contracts Review report endorsed by LIWLMAC	Availability of suitable sanitation and waste management expertise Participation of landowners and	RMIEPA, GEF IWRM Project Management Unit (RMI), and consultant(s)
2.3	Review of the status of Laura water and land resources, including identification of current and projected impacts, and recommendations for land use zoning.	Terms of Reference for survey agreed by LIWLMAC by December 2010 Consultant/personnel for study recruited by February 20111 Review completed and report produced by June 2011	Agreed Terms of Reference Consultant/personnel contracts Review report	Availability of specialist with capacity to reconcile scientific, technical, and political issues relating to the Laura area	RMIEPA, GEF IWRM Project Management Unit (RMI), and consultant(s)
2.4	Compilation of existing data and information to produce a GIS map of land use and potential sources of pollutants in the Laura area	Land use, pollutant sources, groundwater wells, and water quality (DO, pH, Salinity, coliform) for the Laura Water Lens mapped to establish baselines by June 2011	Report including maps of land use, pollutant sources, riparian zones, groundwater wells, and water quality of the Laura Water Lens reviewed and endorsed by the LIWLMAC	Capacity and access to information and data Existing information provides data representative of baseline conditions for the Laura Water Lens	RMIEPA, GEF IWRM Project Management Unit (RMI)
2.5	Identification of the benefits and costs of integrated water and land management in the Laura area with: (a) identification of water allocation issues; (b) tariffs and price mechanism; (c)	Terms of Reference developed by March 2010 Initial survey of stakeholders and information gathering by June 2010 Draft report produced for review by LIWLMAC by	Study design document Consultant/economist recruited Committee comments Final endorsed report, outlining costs and benefits of water use and	Capacity and access to information and data Bias, inconsistencies, and Secondary data sources Primary data sources provide representative information without bias and about water	RMIEPA, GEF IWRM Project Management Unit (RMI), SOPAC Economics Adviser

Output No.	Output/Outcome	Key Indicators	Means of Verification	Assumptions/Risks	Responsible Partners
	possible extraction fee; and (d) possible cost sharing arrangements (e.g. polluter versus beneficiary pays).	September 2010 Final report published and endorsed by LIWLMAC by December 2010	management, and recommendations for pricing mechanisms and cost sharing	use system Assumptions used in economic analysis are closely aligned to realities of water use and management systems in Majuro	
	Component 3: Development of a Laura Integrated Water and Land Resources Management Plan				
3.1	Establishment and Operation of a Technical Working Group of the LIWLMAC to develop a Laura Integrated Water and Land Resources Management Plan (LIWLRMP)	Terms of Reference and work programme developed by March 2011 Working group members identified with agreed membership list by June 2011	Terms of Reference Work programme and timetable Membership list Summary report of LIWLMAC meeting with endorsement of members Minutes of	Available expertise in the LIWLMAC for integrated management plan development Willingness and commitment of LIWLMAC members to commit to plan development	RMIEPA, GEF IWRM Project Management Unit (RMI), and LIWLMAC
3.2	Agreement between and amongst water related agencies and funding bodies (both Government and external) of priority water problems and required management interventions at Laura, including benchmarking of current and planned projects and financing levels.	Round-Table meeting of amongst water related agencies and funding bodies convened by September 2011 Priority water problems at Laura identified Priority management interventions agreed by December 2011, including commitments to support management plan approach	Report of Round-Table meeting Agreed list of priority water problems at Laura Concept notes on priority management interventions required for integrated water and land management at Laura	Representatives of government agencies and donors familiar with Laura water issues Inability of agencies and funding bodies to agree on priority actions due to limited scientific and technical information available for the area	RMIEPA, GEF IWRM Project Management Unit (RMI), and LIWLMAC
3.3	Community forum meetings to agree needs and vision for the Laura community for integrated water and land management at Laura, including desired management goals, objectives, and targeted management actions.	Community forum meetings convened to June 2013 Community needs and vision agreed by community representatives by August 2011 Community aspects of management plan developed for presentation at Round-Table (see 3.2)	Summary reports of community forum meetings Community statement on need, vision, management goals, objectives, and priority management actions List of key considerations for community elements of management plan	Capacity of participants in community forum to conceptualise broad range of issues in planning integrated water and land management at Laura	RMIEPA, GEF IWRM Project Management Unit (RMI), LIWLMAC, and community members
3.4	Draft Laura Integrated Water and Land Resources Management Plan, including targeted costed action plan and financing mechanisms presented to Laura community for comment and reviewed by and endorsed by LIWLMAC for submission to cabinet	First draft management plan developed for comment from government, private sector, community, NGO and other civil society groups by December 2012 Laura stakeholder workshop(s) to present and discuss management plan and targeted costed action plan (January-March 2012) Management plan submitted to cabinet by June 2013	First draft management plan Stakeholder comments Summary reports of stakeholder workshops including participant lists Final management plan submitted to Cabinet	Willingness and commitment of stakeholders to contribute to Ability to reach agreement between government, landowners, and other stakeholders on the financing of management plan implementation	RMIEPA, GEF IWRM Project Management Unit (RMI), and LIWLMAC
3.5	Laura Integrated Water and Land Resources	First draft action plan for community consultation by	First draft management plan Stakeholder comments	Willingness and commitment of stakeholders to contribute	RMIEPA, GEF IWRM Project

	Management Plan and Action Plan submitted for Cabinet endorsement	March 2013 Action plan agreed and endorsed by LIWLMAC and submitted to cabinet by June 2013	Summary reports of stakeholder workshops including participant lists Final management plan submitted to Cabinet	to Ability to reach agreement between government, landowners, and other stakeholders on the financing of management plan implementation	Management Unit (RMI), and LIWLMAC
	Component 4: Targeted Stress Reduction Demonstrations for the Laura Water Lens				
	Sub-Component 4.1 – Reducing Stress from Overloaded and Leaking Septic Systems at Laura				
4.1.1	Development of a septic monitoring, collection, and disposal program to: (a) monitor sewage levels of septic tanks at Laura; and (b) initiate timely sewage collection from overloaded and leaking septic systems and subsequent disposal using Majuro's public sewer system. [Activity 2.2 to	Landowner agreement on system for monitoring septic status by December 2011 Remediation actions including pumping of overloaded and leaking septics underway by June 2012 All overloaded and leaking septics clean and operational by June 2013	Technical report and education materials on septic monitoring, collection, and disposal system Number of clean septic systems Volume of septic waste collected and safely disposed	Willingness and agreement of landowners to participate in septic monitoring Availability of septic pump truck Ability of Majuro town sewage system to cope with septic waste disposal Available human resources for septic remediation works	RMIEPA, GEF IWRM Project Management Unit (RMI), LIWLMAC, Majuro Water and Sewage Company (NWSC)
	provide baseline information]	Reliable cost estimate of septic maintenance and annual collection volumes agreed by LIWLMAC by March 2013			
4.1.2	Composting toilet designed and operational at central Laura location, including: survey of community perceptions; preferred design features; and operational considerations.	Report of community perceptions and desired design feature survey by December 2011 Selection and installation of one demonstration composting toilet by March 2012 Community demonstration of composting toilet and use of compost by June 2013	Technical report of survey results Technical note on community preferred design(s) for composting toilet Composting toilet operational by June 2013	Willingness of community members to participate in survey Survey results provide representative information and data for setting realistic baselines	RMIEPA, GEF IWRM Project Management Unit (RMI), and LIWLMAC
	Sub-Component 4.2 – Reducing Stress from Domestic Solid Waste Leachate Pollution at Laura				
4.2.1	Based on results of 2.2 develop community-based project for solid domestic waste management at Laura	Community agreement on project concept for domestic solid waste demonstration by December 2011 Community based project executed by December 2012	Report of community meetings and project concept document Project proposal and evaluations	Willingness and commitment of landowners and community members to sustainable waste management	RMIEPA, GEF IWRM Project Management Unit (RMI), and LIWLMAC
4.2.2	Community survey of numbers, types, and suitable locations for solid waste bins and disposal areas	Technical report of survey by June 2011	Technical report Map of suitable locations for bins and disposal areas	Survey responses reflect community needs	RMIEPA and GEF IWRM Project Management Unit (RMI)
4.2.3	Development of education materials and activities to inform the community on domestic waste management (link to component 5).	Education materials produced by March 2012 Materials distributed to all Laura landowners and displayed at prominent locations in Laura (April 2012 – December 2013)	Posters, brochures, videos etc produced Number of education packages produced and distributed	Available expertise for production of community education and awareness materials	RMIEPA, GEF IWRM Project Management Unit (RMI), Marshall Islands Conservation Society (MICS)

Output No.	Output/Outcome	Key Indicators	Means of Verification	Assumptions/Risks	Responsible Partners
	farms for involvement in trial, preferably farms located in low-lying coastal lands adjacent to water lens	December 2011 Agreement of landowners/ farmers to participate in pilot activity	to be used in trial activity Minutes of meetings with landowners regarding their participation in trial	representative of priority areas for action Pig farmer willing to be involved in pilot activity	IWRM Project Management Unit (RMI), and landowners
4.3.2	Identification and development of techniques for the use of coconut husk in dry litter waste management at selected piggeries, specifically to produce compost for market garden fertiliser	Community training workshop convened by June 2012 Pig farmer using waste and shredded coconut husk to produce compost by September 2012 Method assessed for replication/uptake by other piggeries by March 2013 Cooperation with other projects as appropriate Reliable cost estimates of compost production by March 2013	Community training materials Summary report of community training workshop, including audio-visual presentations Number of pig farmers trialling coconut husk as dry litter for compost production Technical report detailing assessment of the method and reliable cost estimates	Willingness of landowners to trial new pig waste management techniques and participate in training events Availability of coconut husk	RMIEPA, GEF IWRM Project Management Unit (RMI), and landowners
4.3.3	Establishment of communal composting site for production of pig waste fertiliser	Communal composting site established and in operation, and following best practices for waste handling by December 2012	Composting site operating Volume of waste processed and compost produced	Availability of land Best waste management practices ensure compost production does not impact on Laura lens water quality	RMIEPA, GEF IWRM Project Management Unit (RMI), and landowners
	Component 5: Enhancing Awareness and Understanding of the Laura Water Lens				
	Sub-Component 5.1: Public Awareness				
5.1.1	Laura Water Lens Learning Center in the Laura Area to assist with promotion of demonstration project and dissemination of information materials	Community support for establishment of Center Learning Center location agreed, launched, and operational by June 2011	Minutes of LIWLMAC meetings agreeing to location Learning Center operational Number of days open and staffed Number of visitors	Agreement and support of LIWLMAC for Learning Center Availability and cost of premises	RMIEPA, GEF IWRM Project Management Unit (RMI), and LIWLMAC
5.1.2	Exhibition materials for the Learning Center, including: learning displays (e.g. posters), interactive database/DVD-ROM of information and data relating to Laura water lens, and audio-visual materials (e.g. videos).	Learning Center containing exhibition materials (ongoing June 2011-December 2013) Learning displays depicting progress and results of stress reduction demo activities on display from June 2011 and updated regularly Interactive DVD-ROM of Laura Water Lens information produced by June 2012	Number of Laura Water Lens management issues addressed by learning displays Frequency at which information from stress reduction demonstrations are displayed Number of requests for copies of learning materials, DVD-ROM, audio-visual products	Available expertise to produce engaging and informative exhibition materials Costs of exhibition material production and required technology (printing etc) on Majuro Atoll Stress reduction demo activities provide tangible examples of good practices in integrated water and land management	RMIEPA, GEF IWRM Project Management Unit (RMI), LIWLMAC, MICS, and student volunteers
5.1.3	Promotion of Learning Center role via local radio, local and regional television and print media, and a programme of visits by schools and other civil	Radio, television, and newspaper news items on Center (ongoing 2011-2013) Programme of visits by schools and other groups underway by March 2012	Number of radio, television, and newspaper news items Number of groups visits and total number of visitors Number of requests to visit Center or for information	Learning Center exhibitions and activities considered newsworthy by local news Interest of schools and other groups in Laura water lens issues	RMIEPA and GEF IWRM Project Management Unit (RMI)

	society groups				
5.1.4	Network of local journalists and government communications staff to organise television and radio broadcasts and news articles about water conservation and stress reduction demonstration activities	Meeting(s) of local journalists and government communications staff convened by December 2011 Information and press releases on demonstration project activities distributed to network of journalists on a quarterly basis	Minutes of meeting(s) with local journalists and communications staff Number of information packages and press releases issued to network Number of news items from press releases	Interest and support amongst local journalists for water resource management and sanitation issues on Majuro Availability of journalists to meet and plan water and sanitation communications actions	RMIEPA and GEF IWRM Project Management Unit (RMI)
5.1.5	Laura Water Lens website based on Open Source Content Management System Software (e.g. Joomla) to act as a central repository of information and data relating to integrated water and land management at Laura	Laura Water Lens website operational by March 2011 Website containing all project related documents, information, data, and audio-visual outputs (ongoing)	Website accessible at http://www.laurawater.org Number of project related documents, news stories, photographs, and other outputs accessible online Number of websites with links to Laura project site Google rank for search on "*Laura Water Lens*"	Accessibility to expertise for online Content Management System setup and management Local Internet connection speed and reliability enables efficient uploading of project information and outputs	GEF IWRM Project Management Unit (RMI)
5.1.6	Electronic dissemination of a	Project E-Newsletter sent	Copies of e-newsletter	Quarterly e-newsletter is	Project
	quarterly demonstration project newsletter	quarterly to project stakeholders	List of individuals the e-newsletter is sent to	sufficiently regular	Management Unit
	Sub-Component 5.2: Training and Education				
5.2.1	Training needs assessment and preparation of a training programme targeting government officers and local communities, including, identification of needs for specific training in areas such as sanitation, composting toilets etc.	Results of training needs assessment generated by December 2010 Training programme target audience, topics, delivery mode, and timetable agreed by LIWLMAC by March 2011	Report of training needs assessment Training programme report, including list of individuals to participate, topics, delivery mode and timetable	Availability of training needs assessment and capacity building expertise Availability of government officers and community members to participate	RMIEPA, GEF IWRM Project Management Unit (RMI), and LIWLMAC
5.2.2	Implementation of the training programme at the **community level**. It is envisaged that training needs may include but not be limited to: principles and practice of water resource management; sanitation and sustainable solid waste disposal methods; septic maintenance and remediation techniques; water quality monitoring; and resource use zoning.	Training conducted as planned at 5.2.1 during period April 2011 – December 2012 Training materials and summaries loaded to Laura project website within 2 weeks of training activity completion Summaries of all training events included in quarterly electronic newsletters Survey to measure skill development (ongoing April 2011 - March 2013)	Number of training events Number of community members involved Number of training materials produced and accessible on the project website Number of training event summary reports and their inclusion in the quarterly e-newsletter Results of skill development survey	Availability and interest of community members to participate in training activities Available expertise to develop and deliver training materials to address priority needs for community members Skill development survey provides realistic baselines and measures of improvement	RMIEPA, GEF IWRM Project Management Unit (RMI), and LIWLMAC
5.2.3	Implementation of the targeted training programme for **government agencies and personnel**. It is envisaged that training needs may include but not be limited to: economic valuation and cost sharing principles; interpretation of	Training conducted as planned at 5.2.1 during period April 2011 – December 2012 Training materials and summaries loaded to Laura project website within 2 weeks of training activity completion	Number of training events Number of government involved Number of training materials produced and accessible on the project website Number of training event summary reports and their inclusion in the quarterly e-	Availability and interest of community members to participate in training activities Available expertise to develop and deliver training materials to address priority needs for community members	RMIEPA, GEF IWRM Project Management Unit (RMI), and LIWLMAC

Output No.	Output/Outcome	Key Indicators	Means of Verification	Assumptions/Risks	Responsible Partners
	socio-economic and scientific data and its use in planning and zoning land use; and IWRM policy and planning.	Summaries of all training events included in quarterly electronic newsletters Survey to measure skill development (ongoing April 2011 - March 2013)	newsletter Results of skill development survey	Skill development survey provides realistic baselines and measures of improvement	
5.2.4	Identification of needs and opportunities for a group study tour (including RMIEPA management staff and selected NGO and community group members from Laura) to selected GEF IWRM demonstration projects in the Pacific region.	Learning and exchange needs and opportunities with other GEF demonstration projects identified at annual Regional Steering Committee Meetings Study tour convened by December 2013	Republic of Marshall Islands' learning and exchange needs and opportunities noted in annual RSC meeting report Number or participants and duration of learning exchange study tour	Availability of regional funds or national demo project funds to support learning exchange Suitability of other GEF IWRM demonstrations to learning needs of the Republic of Marshall Islands	RMIEPA, GEF IWRM Project Management Unit (RMI), and LIWLMAC
5.2.5	Preparation and distribution of posters, brochures and booklets on topics of relevance to IWRM and Water Use Efficiency as identified in the training needs assessment.	Learning materials produced and distributed (ongoing April 2011 - March 2013)	Number of books, brochures, booklets including dates of completion Distribution lists (i.e. who received them and how many)	Available expertise to develop materials	GEF IWRM Project Management Unit (RMI)
	Component 6: Management and Coordination of the Laura Demonstration Project				
6.1	Successful management, coordination, and implementation of: the project to achieve the Demonstration objectives and to meet the strategic needs of the Republic of Marshall Island's Environmental Protection Authority.	Completion of planned activities agreed with RMIEPA, LIWLMAC, the Regional Project Manager, and the Regional Project Steering Committee Production of specified Demonstration deliverables within the agreed period and cost	Quarterly progress reports Annual Demonstration Project Implementation Review Reports Mid-Term Evaluation Terminal Evaluation	Consistency of staffing arrangements at RMIEPA Consistent environmental conditions, e.g., no severe, lengthy droughts or other disasters which could require redirection of RMIEPA and project staff time Adequate participation of stakeholders	RMIEPA and GEF IWRM Project Management Unit (RMI)
6.2	Effective planning and control of the endorsed	Budget shows dissected estimates of the cost of key	Annual budgets and work plans	Consistency of staffing arrangements at RMIEPA	RMIEPA and GEF IWRM Project
	demonstration project budget, including development of cash flow predictions consistent with the approved project work plan and budget for the duration of the project	demonstration activities by UNDP Cost Codes Estimates of cost for a given year, future years and the demonstration as a whole endorsed by the Regional Project Steering Committee Cash flow predictions consistent with work plan and updated on a quarterly basis	Quarterly budgets and work plans Endorsement of budget by LIWLMAC and subsequent approval by Regional Steering Committee meetings	Financial planning and management expertise in Project Unit Management Unit	Management Unit (RMI)
6.3	Establishment and effective operation of a Demonstration Project Management Unit (PMU) to: (a) manage the interface between the lead agency and the regional	Project Manager and Assistant contracts Office established with necessary communication technology Project issues dealt with as	Quarterly progress reports Annual Demonstration Project Implementation Review Reports Mid-Term Evaluation Terminal Evaluation	Consistency of staffing arrangements at RMIEPA Consistent environmental conditions, e.g., no severe, lengthy droughts or other disasters which could require	RMIEPA and GEF IWRM Project Management Unit (RMI)

	Project Coordinating unit, user groups, and other stakeholders and government agencies; and to (b) manage the consultation process to ensure comprehensive input from user groups and other stakeholders into the development and implementation of the project	they arise, including identification of options for their resolution Project coordination meetings convened regularly and according to work plan Project progress and financial reports submitted quarterly to regional PCU Maintenance of accurate records of meetings, reports, financial monitoring data, specifications, and briefs related to the implementation of the project		redirection of RMIEPA and project staff time Adequate participation of stakeholders	
6.4	Consistency between the various project components and related activities provided or funded by other donor organisations, including realisation of co-financing where possible	Design of new water and land projects and programmes at Laura, both government and externally funded, consistent with demonstration project objectives and activities	Quarterly progress reports Annual Demonstration Project Implementation Review Reports Mid-Term Evaluation Terminal Evaluation	Consistency of staffing arrangements at RMIEPA Willingness of other projects and donors to collaborate	RMIEPA and GEF IWRM Project Management Unit (RMI)
6.5	Participation of project representatives in meetings of the Regional Project Steering Committee Meetings, and associated regional training and capacity building sessions	IWRM Focal Point and GEF IWRM demonstration project manager participate in annual Regional Steering Committee meetings	Regional Steering Committee Meeting Report participant list	Consistency of staffing arrangements at RMIEPA	RMIEPA and GEF IWRM Project Management Unit (RMI)
	NATIONAL POLICY AND LEGAL REFORMS FOR IWRM				
P.1	National Committee (named "*National Integrated Water Resource Management Task Force*") established and activities to revitalise at 1.2				
P.2	National Water Summit to inform stakeholders of: (a) National Integrated Water Resource Management Task Force Mandate and Responsibilities; and (b) proposed process for policy and legislative reform for IWRM and WUE	National Water Summit convened on World Water Day (22nd March) 2011 Stakeholders informed of proposed process for IWRM and WUE policy and legal reform. Comments received by 22nd April 2011	National Water Summit convened Policy paper outlining: membership; ToR/mandate; and responsibilities of National Integrated Water Resource Management Task Force; and agreed steps for undertaking policy and legislative reform for IWRM and WUE in RMI.	Sufficient high level political buy-in Sufficient interest amongst stakeholders to comment on proposed process	RMIEPA and IWRM Policy Officer
P.3	Review of existing policies and laws relating to water and sanitation, and identification of needs with respect to national policy and legislative reform	Policy Adviser recruited by February 2011 Policy report reviewed and endorsed by National Integrated Water Resource Management Task Force and circulated for public comment by June 2011 Final report published and commented by July 2011	Policy review report	Availability of specialist with expertise required to effectively reconcile scientific, technical, and political issues relating to IWRM and WUE in RMI	RMIEPA and IWRM Policy Officer
P.4	Draft national water policy and recommended legal reforms endorsed by National Water Committee for submission to Cabinet	Public hearing to present recommendations to stakeholders September 2011 Comment received and final	Public hearing records Draft policy document Final draft submitted to Cabinet	Adequate time to ensure sufficient buy-in from senior officials	RMIEPA and IWRM Policy Officer

Implementing Sustainable Water Resource and Wastewater Management in Pacific Island

GEF PACIFIC IWRM PROJECT RESULTS

http://www.pacific-iwrm.org/results RSC 5 2013

Integrated Water and Land Management for the Sustainable Use of the Laura Water Lens, Majuro Atoll

Top 3 Project Results

1. Establishment and Operation of the National IWRM Task Force as RMI's APEX Body for Coordination and Planning of Water and Sanitation Investments and Actions

2. Strengthened Community Engagement with National Government on Water and Sanitation Issues via Establishment and Operation of the Laura Lens Committee

3. Reduced stress on the Laura Water Lens by development and operation of septic remediation programme, pilot ECOSAN, and conversion of piggeries from wash down waste disposal systems to dry litter systems

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RMI Environmental Protection Authority

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1. PROJECT OBJECTIVE

The objective of the "*Integrated Water and Land Management for the Sustainable Use of the Laura Water Lens*" Project (Laura Lens Project) is to strengthen national and local coordination for water resource management with a focus on reducing stress on the Laura Water Lens and planning the longer-term sustainable use of the Laura Water Lens.

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2. RESULTS: PROCESS

A start-up committee for the IWRM Demonstration Project was first established in 2009 with members limited to traditional leaders, major landowners, and Council officials from the Local Government. Following establishment of the Project Management Unit In 2010, effort was made to revitalise and expand the membership of this group. Initially, traditional leaders and Laura residents were invited to consultations to re-introduce project goals, objectives, and to ensure all key traditional leaders were adequately represented in these discussions. Establishment of this locally based committee has been effective in: (a) building relationships of government with traditional landowners and leaders and (b) has also been catalytic in terms of influencing decision makers at the national level to provide support for the revitalisation of the "*National IWRM Task Force*" to lead national IWRM policy and planning. The National IWRM Task Force then proceeded to organize a national consultative process, including a large National Water and Sanitation Summit convened in March 2011 involving ~300 participants, to agree targets and priorities for the development of national policy and an IWRM Plan. This has facilitated the development of a National Water and Sanitation Policy and draft IWRM Plan for endorsement 2013.

2(a) INDICATOR#1: BEST IWRM AND WUE APPROACHES DEFINED

Prior to project inception a consultant had been engaged to identify IWRM and WUE needs for the Marshall Islands. Although these had not been considered by communities or relevant agencies of government. The target was to have the approach defined and endorsed by national APEX body. Via the operation of a national consultation process, involving communities and women's groups, priorities for and steps towards institutionalizing IWRM approaches in the RMI have been developed and endorsed by the National IWRM Task Force.

Figure 1: Influential female members of the community, including the First Lady, Government Officials, and WUTMI members attend the 2011 Water Summit to lend their support to IWRM initiatives in RMI

Figure 2: Members of the National IWRM Task Force working to incorporate agreed approaches for IWRM into the National Water and Sanitation Policy

2(b) INDICATOR#2: INCREASE IN COMMUNITY ENGAGEMENT WITH NATIONAL GOVERNMENT ON WATER ISSUES

At the time of project inception, the relationship with the Laura community and national government was tenuous due to a history of dispute over water resource access and allocation. Prior to project commencement, only 2 community group representatives occasionally took part in government workshops. Regular engagement of traditional leaders, landowners, and Laura residents with government through the operation of the community-based Laura Lens Committee has assisted with developing a common understanding and trust between the community, with on average 12 community leaders meeting on a quarterly basis with government.

Figure 3: Community representatives participating in a National Water Summit in 2011

2(c) INDICATOR#3: MULTI-SECTORAL APEX BODY IN PLACE

At the time of project inception, there was no APEX body for water in the RMI. The target of the project was to have such a body established and operational by July 2010. RMI's National IWRM Task Force was established by Executive Order and includes membership off all relevant community

and traditional leaders, national government departments, local governments, private sector and NGOs. The Task Force is actively leading coordination, policy development, and planning.

Figure 4: National IWRM Task Force making a presentation to RMI Parliament on IWRM Policy

2(d) INDICATOR#4: SECTORAL ENGAGEMENT IN FORMAL MULTILATERAL COMMUNICATION ON WATER ISSUES

Prior to commencement of IWRM there was limited cross sectoral engagement or communication on water issues. The project aimed to increase engagement, with a particular emphasis on strengthening communication between national government and traditional community-based governance arrangements. The National IWRM Task Force established the forum for this and, with Secretariat support for this group provided through the IWRM, up to 30 different agencies from national and local government, representatives of NGOs, and community leaders have met on a quarterly basis to discuss national water and sanitation policy and IWRM planning, review the status of various water related investment in the Marshall Islands, and to share information on the results of various stress reduction technologies being trialed as part of the IWRM demonstration project. Minutes of the meetings of National IWRM Task Force indicate a high level of continuity of participation by senior representatives of the participating agencies in these meetings.

Figure 5: The President of the Republic of the Marshall Islands facilitating the National Water Summit in 2011

2(e) INDICATOR#5: LAURA LENS INTEGRATED WATER AND LAND MANAGEMENT ADVISORY COMMITTEE

At project inception there existed no mechanism for local community stakeholders, including landowners and traditional leaders to contribute to planning and management of water resource use and sanitation in the area of the Laura groundwater lens. The target of the project was to establish a local coordinating committee to enable community input to planning at both local and national levels and to establish a formal linkage between local stakeholders and the National IWRM Task Force. Terms of Reference and membership for a Laura Lens Integrated Water and Land Management Advisory Committee (or Laura Lens Committee) were developed, considered by the 2011 National Water and Sanitation Summit, and subsequently endorsed by the Chair of the National IWRM Task Force. The Committee has been in operation since 2011 and acts to guide planning of local stress reduction initiatives and provides inputs to national policy and planning.

Figure 6: Members of the Laura Lens Committee meeting with a regional expert on pig waste management to discuss and plan the installation and maintenance of dry litter pig pens in the Laura Community

2(f) INDICATOR#6: PROPORTION OF COMMUNITY ENGAGED IN WATER RELATED ISSUES

Community engagement in awareness activities and on-the-ground work for environment and natural resource management was largely limited to solid waste management prior to the commencement of the IWRM demonstration project. This project aimed to achieve a 30 percent increase in community participation in both water and sanitation related awareness and engagement activities. This has been achieved by development and operation of a targeted water resource protection awareness program which has been mainstreamed into the routine operations of RMI EPA. Supporting initiatives include the active participation of 33 households in testing dry litter pig pens and ecosanitation toilets in the Laura community.

Figure 7: Community awareness workshop on IWRM and safeguarding the Laura lens convened as part of the IWRM demonstration project's outreach programme

2(g) INDICATOR#7: BEST APPROACHES TO IWRM AND WUE MAINSTREAMED INTO NATIONAL AND REGIONAL PLANNING FRAMEWORKS

Prior to project commencement the RMI had no strategy or agreed approaches to water and sanitation policy. The project aimed to define targets and priority actions for IWRM aimed at strengthening national coordination and reducing stress on vulnerable water resources for mainstreaming into national and regional planning frameworks. An intensive consultative process, involving broad cross-sectoral and community participation, enabled the definition of best approaches for water and sanitation management which were subsequently incorporated in the draft National Water and Sanitation Policy and IWRM Plan. National priorities have also been used in broader regional efforts during 2012-2013 to revise the Regional Action Plan for Water and Sanitation.

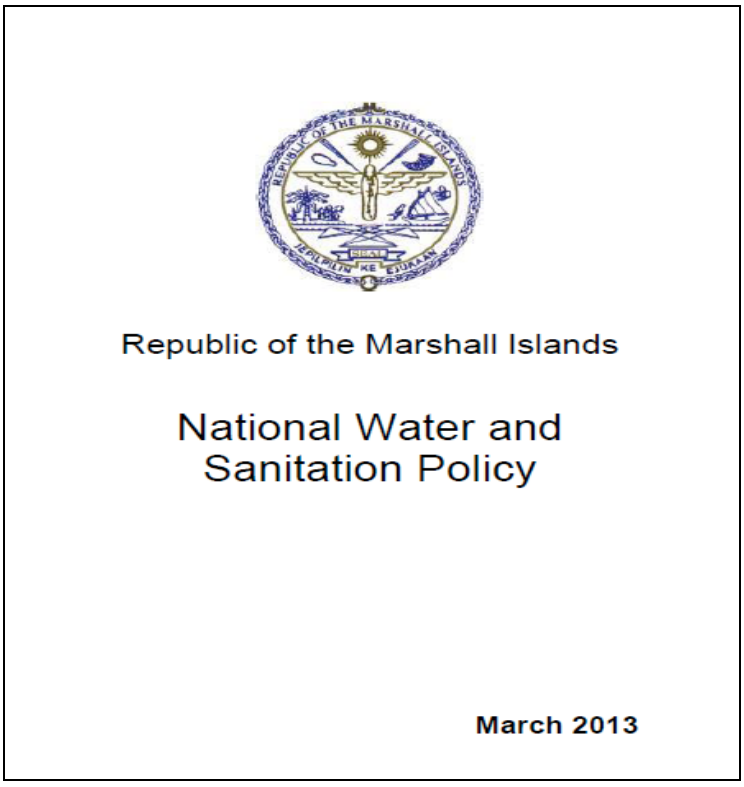

Figure 8: The Republic of the Marshall Islands' national policy and planning framework for the water and sanitation sector

2(h) INDICATOR#8: LESSONS LEARNED INCORPORATED INTO OTHER PROJECT(S) AND/OR REGULATIONS

The Majuro Atoll Local Government (MALGOV) ordinances human and pig waste management and the RMIEPA regulations for household toilets require the use of septic systems at each household in the Laura community. Limited resources for septic pump-out and disposal had led to overloaded septic systems contaminating the Laura water lens. The project demonstrated alternative, locally appropriate technologies for the management of pig-waste (dry-litter pig pens) and human waste (ecosanitation composting toilets) in the Laura community. The Laura lens committee for the project has initiated efforts with MALGOV and RMIEPA to amend local government ordinances and national regulations to encourage the use of dry litter pig pens and ecosanitation toilets in place of septic systems.

Figure 9: Council members discussing issues relating to use of septic systems in areas of the vulnerable Laura groundwater lens

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3. RESULTS: STRESS REDUCTION

The Laura Lens Project aims to reduce stress on the Laura Water Lens via targeted actions addressing pollution from septic systems, piggeries, and domestic solid waste. These will be supported via introduction of a zoning scheme based on an assessment of Laura water lens vulnerability to land and water uses. Key achievements to date include conduct of a survey of solid and septic waste management practices and needs for all Laura households, and development of septic monitoring and pump-out programme; community led design and conduct of household water use and sanitation audit; construction of 3 pilot ECOSAN systems at prominent locations in Laura community; preliminary works to remediate a large broken pig waste septic at a commercial piggery and conversion of its operation to a dry litter system; and conversion of 30 household pig pens to dry litter system from typical water intensive wash down pens.

3(a) INDICATOR#1: REDUCTION IN SEWAGE POLLUTION IN LAURA COMMUNITY

At the time of project inception, there was no system in place for reducing sewage pollution in Laura. Many household septic systems were overloaded and broken. The target of the project was to have 35 percent reduction in sewage pollution of the lens from households. The survey of septic waste identified 117 broken and overloaded septics requiring immediate pump-out. To date around 40% of these septics have been remediated.

Figure 10: Example of an overloaded septic immediately above the Laura Water Lens

3(b) INDICATOR#2: REDUCTION IN POLLUTION SOURCES DISCHARGING INTO LAURA GROUNDWATER

At the time of project inception, there was no action underway for reducing pollution discharges into Laura groundwater. The target of the project is to achieve 30% reduction in sources discharging into Laura groundwater. To date the number of households and pollutant sources have been identified and characterized. Pollution from pig waste has been identified as a major source. Preliminary work has been done to remediate a large broken pig waste septic at a commercial piggery and conversion of its operation to a dry litter system, and conversion of 30 household pig pens to dry litter system from typical water intensive wash down pens. An ECOSAN pilot activity is also underway in the Laura community, with 3 pilot systems constructed at prominent locations in Laura community. The national IWRM Plan for RMI is being developed and contains targeted costed actions for pig waste management and ECOSAN replication and scaling-up.

Figure 11: Commercial piggery situation above the Laura Water Lens with effluent discharge into cesspit immediately in the lens. High levels of *e coli* have been recorded at wells in the vicinity.

Figure 12: Waterless dry litter pig waste management being promoted in the Laura community at commercial pig farms and for household pig pens (change photos above to include Bokmej and household pens

Figure 13 Current toilets being utilized at Laura providing poor sanitation and septic systems

Figure 14: Recently constructed eco-san toilets as part stress reduction methods and ideal replacement for current toilets being used on Laura

3(c) INDICATOR#3: POPULATION WITH ACCESS TO IMPROVED SANITATION

Prior to inception of the IWRM demonstration project there was no monitoring of the status of sanitation systems in the Laura community. Routine monitoring of well water quality and resultant e-coli data had indicated significant risk of waterborne disease. Priority targets of the project were to conduct an assessment of the state of sanitation at the project site and to initiate a monitoring programme to identify septic system remediation and sludge disposal needs. Based on the results of this assessment, the project initiated a partnership with the Majuro Water and Sewer Company for the the routine pump-out of septic systems. To date this has resulted in almost 40 percent of overloaded septic systems having been remediated. Recent surveys of well water quality indicate significant reduction of e-coli in the Laura lens groundwater. This has been augmented with efforts to promote ecosanitation approaches within the community.

Figure 15: The Majuro Water and Sewer Company septic pump-out operations

3(d) INDICATOR#4: REDUCTION IN USE OF FRESHWATER FOR SANITATION PURPOSES DUE TO COMPOSTING TOILET INSTALLATION

Prior to project commencement there was limited understanding of the volumes of water used for sanitation at the household level. The project aimed to provide practical demonstrations to

householders in the Laura community of how to reduce household water use by 30 percent through the use of ecosanitation composting toilets. Technical exchange with the Tuvalu IWRM project enabled the construction of 3 demonstration toilets at key locations within the Laura community. It has been estimated that these households have reduced water use by 40 percent through the use of composting toilets instead of flush systems. These reductions in water use have been augmented by the conversion of wash-down pig pens to waterless dry litter pig waste management systems at 30 households in the community.


Figure 16 Comparison of the commonly used flush toilet in Laura with the waterless composting toilet demonstrated in the Laura community

4. RESULTS: WATER RESOURCE AND ENVIRONMENTAL STATUS

IWRM in the Marshall Islands aims to contribute to improved water resource status by increasing population with access to safe drinking water supply and with access to sanitation. Drinking water safety has been addressed via the development of a drinking water safety planning and IWRM planning underway for RMI incorporates the replication of this work on Ebeye.

4(a) INDICATOR#1: POPULATION WITH ACCESS TO SAFE WATER

At the time of project implementation, there had been no water safety planning conducted for Majuro Atoll. The target of the project is to have the Majuro Water Safety Plan implemented. To date water safety issues have been investigated and discussed with key water providers and businesses. A Water Safety Plan has been drafted and reviewed by the IWRM Task Force and is awaiting formal adoption.

Annex 6: Awareness Materials Developed and Media Coverage

Annex 7: Participatory Monitoring and Evaluation Plan

Participatory Planning, Monitoring, and Reporting Plan for the GEF Pacific IWRM Demonstration Project in the RMI

1. INTRODUCTION

There are multiple and varied planning, monitoring and reporting requirements as part of the GEF Pacific IWRM Project. These were discussed and agreed during the project's Inception Workshop in September 2009 and were adopted as part of the operation of the Republic of the Marshall Island's national IWRM demonstration project entitled: "***Laura Demonstration Project***".

Participation and engagement of key project stakeholders including community groups and Non-Governmental Organisations. The project coordinating committee Laura Water and Land Management Advisory Group, The Environmental Protection Authority, Cabinet, national development partners, and global donors in project planning, monitoring, and reporting was considered important in guiding the successful implementation of the project in Marshall Islands.

2. GUIDING PRINCIPLES

The key principles used in developing the project planning, monitoring, and reporting approach were that it should:

- primarily act to better inform an "*IWRM continuum of transition*" in the relevance, effectiveness, efficiency, results, and sustainability of investment in IWRM;
- facilitate good governance of demonstration project activities, including areas of project finances, coordination, planning, capture of lessons learned, and technical quality assurance;
- ensure efficient and cost-effective compliance of reporting requirements of the National Government of Marshall Islands SPC/SOPAC, UNDP, UNEP, and the GEF;
- ensure relevance of the information and data collected, and that data on project results can be rolled up and down, from "*Community to Cabinet*" and from "*Country to Global Donor*"; and
- Draw on participatory Most Significant Change (MSC) techniques which act to monitoring and validate reported project impacts on behaviour.

3. PLANNING, MONITORING, AND REPORTING FRAMEWORK

The general planning, monitoring, and reporting framework developed for operation through the Marshall Islands national IWRM demonstration project is summarised in Table 1. The timetable of activities is summarised in Table 1.

Project Planning

Laura Integrated Water and Land Management Advisory Committee

The Laura Integrated Water and Land Management Advisory Committee's main role is to provide direction and strategic guidance to the PMU and the Environment Protection Authority as the Lead Agency regarding the design and implementation of the national demonstration project including amongst other things:

- Receive, review and approve reports from the Project Management Unit regarding the outputs and outcomes of project activities
- Review stakeholder involvement in project activities and take action where necessary to ensure appropriate levels of government, NGO, community, and private sector engagement
- Review and evaluate, at the national level, progress in implementation of the project, and provide guidance for improvement to the PMU and Lead Agency (EPA) when necessary
- To establish a Working Committee of the Laura Lens (Groundwater) Protection Plan
- Periodically consult/inform the community of the status/condition of the lens.
- Identify potential sources of pollutants/contaminants to the Laura lens.

- Produce awareness and educational materials for the community-schools, residences, and churches.
- Involve participation of Laura communities to assist in the campaign of the groundwater protection plan.

In 2010 the Project Management Unit reviewed the status of the Laura Lens Protection Committee with a view to further elaborating the role of the Committee in both the Demonstration Site as well as in national planning processes relating to water and sanitation issues. Consultations were undertaken at the end of 2009 and early 2010 with members of the Committee to identify ways to improve participation at the community level. As a result of the consultations the following suggested actions were undertaken:

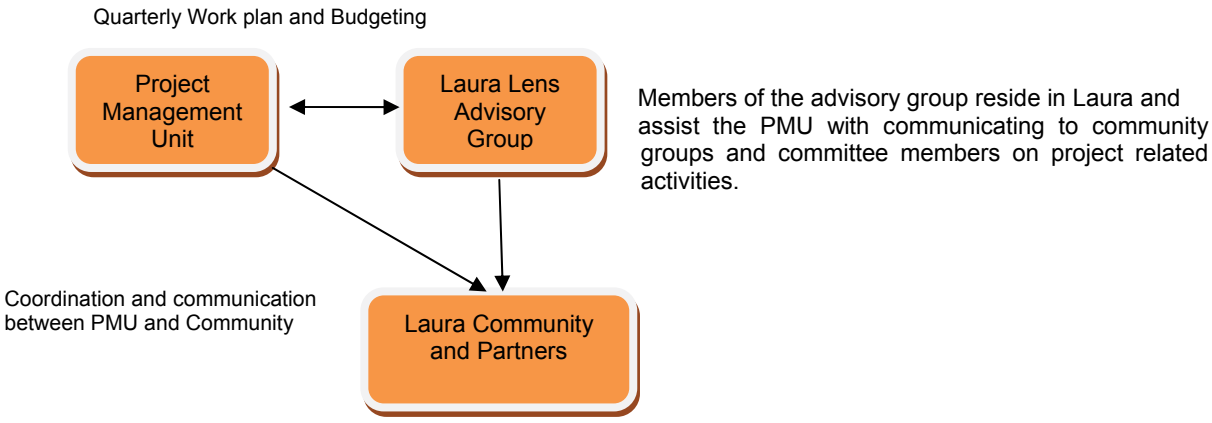
- Representation of traditional leaders, landowners, church groups, women's groups, and residents of demonstration site expanded to include leaders not in original membership list
- TOR elaborated
- Advisory Group established to act as working group of the committee PMU meets quarterly with the main committee (Laura Lens Protection Committee) to provide updates on overall project progress.

The PMU meets quarterly with the Laura Lens Protection Committee to provide updates on overall project progress, review any revisions to the Project Logframe.

Project Monitoring

Advisory Group Meetings

The Advisory Group meets more frequently than the Committee and acts as a small working group of the Committee to monitor progress of planned activities, work closely with the PMU and facilitate communications between the PMU and the Community in Laura, review and approve quarterly work plans and budgets. Copies of Quarterly Work plans and Budgets are provided to the Advisory Group to inform members on upcoming project activities and get feedback and approval of quarterly plans. Regularly scheduled meetings of the Advisory Group also allow discussion on lessons learned from the perspective of the community and other stakeholders. Members were selected by the main committee to allow more frequent input into planning, decision making and implementation. The group is tasked to review quarterly activities, work plans. During these consultations, PMU presents the work plans for review and endorsement. The PMU also go over previous quarter's work plan to check off on activities that were successfully implemented as well as activities that were delayed or not undertaken. Lessons learnt are then shared with the group and feedback and suggestions for alternative approaches are agreed on.



The Advisory Group has provided an opportunity for the PMU to coordinate more closely with the Laura community and other stakeholder groups when organizing and implementing demo project activities and information sharing and feedback on quarterly work plans and budgets.

Project Reporting

Community Meetings
Use of power point presentations for community meetings have become a popular means of informing communities about a range of issues. However PMU have started to use approaches that are more aligned towards traditional practice of having "conversation" in an informal setting in the community seems to encourage more dialogue with community members.

Laura Advisory Committee
When the demonstration Logframe was revised in 2010 it was provided to the committee members for feedback. Members requested that the logframe be translated into the local language, and has been done and distributed to committee members for approval.

Advisory Group Meetings
Copies of Quarterly Workplans and Budgets are provided to the Advisory Group to inform members on upcoming project activities and get feedback and approval of quarterly plans. Regularly scheduled meetings of the Advisory Group also allow discussion on lessons learned not just from the perspective of the PMU but from the perspective of the community and other stakeholders as well.

Newspaper articles
Newspaper article submissions are used to highlight project activities. Once outputs, such as baseline studies or survey reports are finalized news articles on results of these outputs will be submitted to local newspapers.

High Level Briefing
In September the PMU in coordination with other partners organized a Luncheon for Parliament members to brief members on Climate Change Policy Framework and overview of recommendations of the National Water and Sanitation Summit held in March 2011 and the status and timeline for the development of the National Water and Sanitation Policy as well as Demo Project activities. The briefing allowed an opportunity to have an open dialogue with Parliament Members, which is not always easy to schedule with all members of parliament.

Interviews with Laura Integrated Water and Land Management Advisory Committee members
The PMU conducted and recorded interviews with members from both the Laura Lens Protection Committee and the National Water Task Force. Their responses and pictures were published in the local newspaper. This is one of the approaches the PMU will use for monitoring and evaluation of the demonstration project through feedback on certain issues from committee members as well as other community groups and individuals.

Annual National Project Implementation Review

Each year the PMU is responsible for completing a National Project Implementation Review (PIR). The PIR is meant to incorporate a range of input from various stakeholders to determine rate of progress against agreed outputs per the project logframe. It is a useful exercise to go through internally and can highlight areas that require more stakeholder engagement. This PIR ideally should be vetted through the Demonstration Project Committees as well as the National IWRM Task Force for feedback. This year the PIR ending June 2011 was completed based on community and task force members responses to interview questions. The PMU is looking into developing a simple way of getting feedback for the PIR. Often times such documents are seen as cumbersome and not always well received, particularly at the community level.

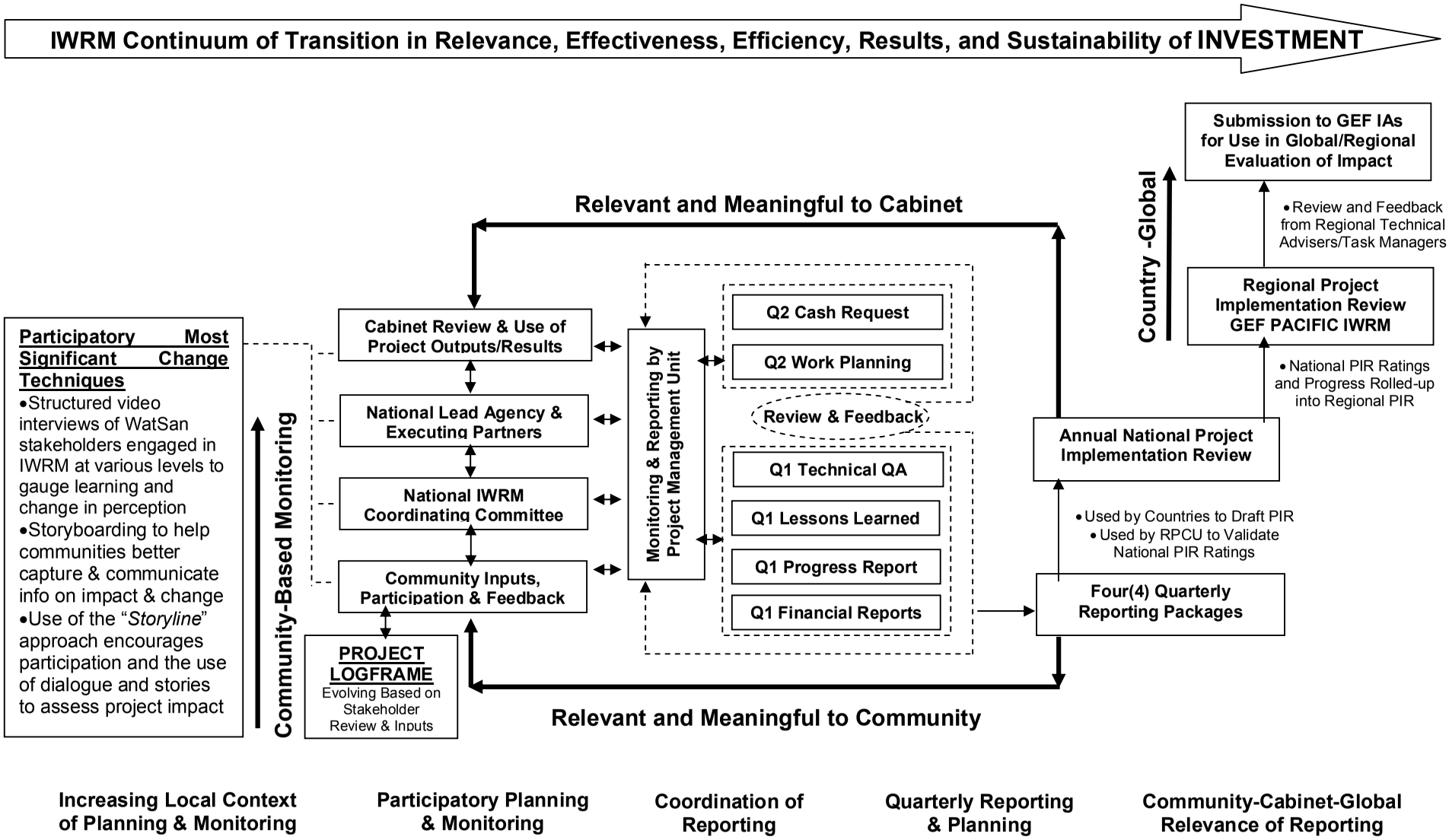


Figure 1 Schematic of the Planning, Monitoring, and Reporting Approach Adopted for the RMI National IWRM Demonstration Project

Table 1 Draft Participatory Project Planning, Monitoring, and Reporting Plan

Year	2010				2011				2012				2013			
Quarter	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Community Groups (Laura Farmers Association, Womens Groups)																
Participation in regular review of project outputs	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Inputs to preparation of quarterly work plans and budget	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Reflective review of project outcomes – workshops			X				X				X				X	
Annual review and inputs to lessons learned							X				X				X	
Annual review and planning of use of traditional knowledge/governance in project planning							X				X				X	
Storyboarding and structured video interview approach to identify Most Significant Change at community level					WWD 22/3		X		WWD 22/3		X		WWD 22/3		X	
National Coordinating Committee (Laura Water and Land Management Advisory Group, Laura Advisory Sub-Group)																
Quarterly inputs to progress, financial, and lessons learned reports prepared by PMU/community groups	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Quarterly review/endorsement of work plans and budget	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Identification of quarterly needs for technical supports and preparation of recommendations based on known benefits and costs of options	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Annual review of replication and scaling-up plans							X				X				X	
Annual review of quarterly reports and preparation of advice/guidance for community groups			X				X				X				X	
Annual endorsement of Project Implementation Review and preparation of advice for Cabinet/Congress		X				X				X				X		
Lead Agency (Environmental Protection Authority)																
Ongoing Oversight of Project Management Unit Staff																
Ongoing review of procurement and reporting to ensure compliance with fiduciary standards of MoA parties																
Quarterly review and signature of progress and financial reports for submission to SPC/SOPAC RCU	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Submission of annual PIR and annual summary of community workshop(s) to Cabinet			X				X				X				X	
Development Partners (UNDP and UNEP)																
Review and feedback on annual PIR reports			X				X				X				X	
Submission of annual project results to global database			X				X				X				X	
Preparation of materials for global sharing of results							X				X				X	
Support to production of project experience notes and reports on results in global water for a (e.g. IWC6&7)								X IWC6								X IWC7

Annex 8: Replication and Scaling-up Plan

Components	Outcomes	Indicator	Baseline	Targets End of Project	Source of Verification	Risks and Assumptions
1. Sustained community adoption of appropriate on-site waste management systems to reduce contaminant impacts on environmental and public health at Laura Village	1.1 Evidence based application of on-site waste management systems through optimal design and operation of systems to meet international standards for water safety and use of human compost in Laura Village	Extent of application of scientific recommendations to improve system designs	Limited understanding of processes of on-site waste management systems and efficacy at reducing contaminant loads to the Laura Lens	Locally appropriate design and management of on-site waste management systems developed through targeted scientific research into composting mechanisms, contaminant reductions and optimal operating conditions to enhance system efficacy	Documents of assessments and monitoring results, analysis and research reports, comparative studies and consultation meeting reports Improved design and construction plans Published scientific paper [Yr 3}	Design and operation of eco-sanitation systems are able to be optimally improved in remote island setting Resources are sufficiently available for reliable analysis of eco-sanitation systems to produce robust scientific results Cost of refined design does not exceed ability to resource
	1.2 Improved community understanding of waste management issues and solutions through enhanced access to effective and appropriate information	Volume of new and additional information available and accessed through the Laura Lens Learning Centre	Limited information materials available through the Laura Lens Learning Centre	The Laura Lens Learning Centre populated with effective and appropriate educational resources	Educational films and documentaries, construction training manuals, system operational guides, compost use guidelines, radio/audio talk shows, toilet owner interviews and advice	Effectiveness of education materials to increase community understanding of waste management issues Resources available to develop education materials
	1.3 Improved donor support for increased householder uptake of on-site sanitation systems	Number of GEF Small Grants Programme, USAID and AusAID projects implemented to support householder uptake of on-site sanitation systems	Low level of community access to donor funds for implementing domestic on-site waste management systems	Partnerships with GEF Small Grants Programme, USAID and AusAID to strengthen householder ability to implement domestic on-site waste management systems	GEF Small Grants Programme, USAID and AusAID project proposals and implementation reports	Suitable community based organisations to assist communities with donor project requirements

Components	Outcomes	Indicator	Baseline	Targets End of Project	Source of Verification	Risks and Assumptions
2. Integrating targeted scientific investigation on coastal and land ecosystem processes, local knowledge and strategic partnerships to strengthen knowledge base for key evidence-based ICM planning and investment	2.1 Enhanced knowledge of linkage between land-use and coastal health and status of coastal habitats in Laura area	Status of data collection programmes for 3 priority sites Uptake of scientific recommendations in ICM planning	Little data available on coastal habitats, links between land-based contaminants and coastal water degradation and coastal habitat status	Ecosystem processes and coastal habitat data collection programmes operational to identify nutrient dynamics and threats from land-based contaminants to coastal waters, causal links to coastal ecosystem degradation and habitat status at 3 priority sites in the Laura area	Monitoring results, analysis and research reports, comparative studies and final evaluation report [Yr 3] Coastal Health Summary for Policy & Planning [Yr 3] Published scientific paper [Yr 3]	Untreated effluent disposal is negatively affecting coastal water quality Resources are sufficiently available for reliable analysis and evaluation of contaminant dynamics to produce scientific results
	2.2 Improved synthesis of information relating to fisheries and water quality status and trends in the Laura area	Volume of information compiled and shared on habitat area and quality; trends in catch size and quality; and trends in coastal and groundwater quality	Limited sharing and linking of data regarding status of fisheries and water quality in Laura area	Partnerships between RMIEPA and Dept. of Fisheries established to share and link data relating to fisheries use and coastal and groundwater water quality	Database of shared and linked information, comparative assessment report	Collaborative agreements between departments can be established Suitable repository can be established and maintained for shared data
	2.3 Strengthened integration of traditional knowledge with scientific investigations	Status of repository and amount of knowledge records collected	Lack of recorded traditional environmental knowledge	Establishment and population of local repository for traditional knowledge on ecosystem processes, historical environmental trends, coastal habitats and fisheries	Online and hardcopy database of knowledge records, participatory interviews, community consultation reports	Adequate internet service to allow staff to update an online database Sufficient traditional knowledge available to populate database
	2.2 Enhanced access to information regarding land use, and status of coastal habitats and fisheries in Laura Village area	Status of the GIS and number of sites described	Lack of relevant GIS data for the Laura area	Targeted GIS on land use and coastal health featuring information on land use, land and coastal sites of waste disposal, status and location of critical marine habitats and fisheries, water quality data and areas of public health concern	Report including maps of land use, pollutant sources, riparian zones, fisheries, coastal habitats, groundwater wells, and water quality of the Laura Water Lens	Adequate internet service to allow staff to update an online database Resources available to undertake and complete GIS mapping

Components	Outcomes	Indicator	Baseline	Targets End of Project	Source of Verification	Risks and Assumptions
3. National and local management planning for integrated land, water and coastal management for sustainable livelihoods at Laura	3.1 Management strategies developed to sustain coastal livelihoods at Laura through inter-agency cooperation	Establishment of a roundtable network of relevant agencies Status of priority issues identification and management interventions agreed upon and committed to	Little inter-agency cooperation of coastal management at Laura area	Consensus amongst relevant agencies and funding bodies (e.g Fisheries, Health, NGO's) regarding pressing coastal issues, their impact on sustainable livelihoods and required management interventions at Laura, including benchmarking of current and planned projects and financing levels	Round-table meeting reports including list of participants, joint management decisions and participation lists Published management plans and implementation reports [Yr 3]	Existing tensions between agencies may limit participation in a round-table network Unwillingness of participants to openly discuss causes of environmental degradation
	3.2 Causal links between land use and coastal health, and sustainable livelihoods and public health established and understood through integrating current and historical data	Database established and populated with integrated datasets from cooperating agencies	Poor integration of data regarding different aspects of environmental and public health for Laura area	Data gathered through sub-contract agreements with relevant agencies (e.g. Fisheries, Health) to connect aspects of land use and coastal health to livelihoods and public health featuring information on connection to traditional lifestyles and NCD's	Online database of environmental and public health information	Unwillingness of agencies to participate in sharing of information


PACIFIC
IWRM


SPC
Secretariat
of the Pacific
Community


gef


UNDP


UNEP