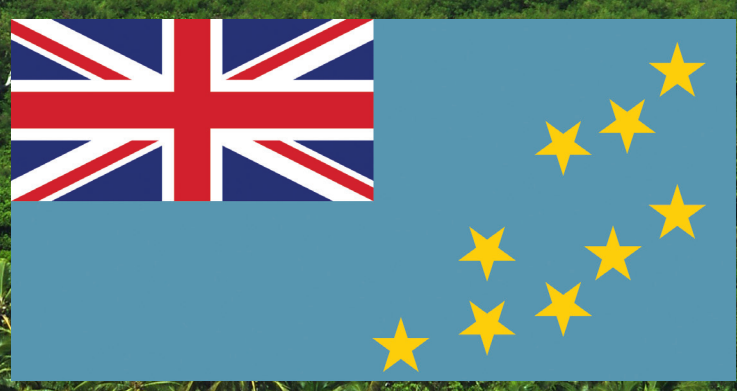


GEF PACIFIC
RIDGE TO REEF PROGRAMME

TUVALU



NATIONAL R2R PROGRAMME
DOCUMENT



GEF Pacific RIDGE TO REEF Programme

Pacific Islands Ridge-to-Reef National Priorities – Integrated Water, Land, Forest and Coastal Management to Preserve Biodiversity, Ecosystem Services, Store Carbon, Improve Climate Resilience and Sustain Livelihoods in Pacific Island Countries

FOREWORD

The Heads of States of 13 Pacific SIDS developed and in 1997 endorsed a GEF International Waters Strategic Action Programme (SAP) for Pacific Island Countries. That document identified priority areas for action in the international waters focal area as improved management of ocean and coastal fisheries, integrated watershed and coastal management, and water supply protection. On the basis of the Pacific SAP, the GEF International Waters focal area has subsequently invested in a series of regional initiatives. The first was the UNDP implemented project entitled “Implementation of the Strategic Action Program for the International Waters of the Pacific Small Island Developing States” initiated in 2000 and operated over almost 7 years to 2006.

In light of the critical water resource and sanitation issues facing Pacific SIDS, GEF support in the years following the conclusion of the IWP project has been targeted at improved coordination and planning of water resource and wastewater management to balance overuse and conflicting uses of scarce freshwater resources through the GEF Pacific IWRM Project. The latter was financed by the GEF, implemented by UNDP and UNEP, and executed regionally by the Geoscience Division of the Pacific Community (SPC) in partnership with 14 Pacific Island Countries.

The GEF Pacific IWRM Project built on achievements of previous investments via a focus on national IWRM demonstration projects aimed at providing an opportunity for participating countries to implement, and experiment with, new management models and methods. The practical on-the-ground solutions to water and sanitation issues demonstrated by the national IWRM projects acted to stimulate support at both community and national government levels for policy reform and the mainstreaming of integrated approaches as part of national sustainable development planning.

The experience and local capacity in integrated environmental and natural resource management generated through the GEF Pacific IWRM project has been recognized both regionally and within the 14 participating Pacific Island Countries as an appropriate entry point for the testing of innovative approaches and measures to integrate land, forest, water and coastal management, including climate change adaptation in Pacific SIDS. In this connection, the GEF multi-focal area, multi-GEF agency programme entitled “Pacific Islands Ridge-to-Reef National Priorities – Integrated Water, Land, Forest and Coastal Management to Preserve Biodiversity, Ecosystem Services, Store Carbon, Improve Climate Resilience and Sustain Livelihoods” (or the GEF Pacific R2R Programme) was developed to provide an opportunity for Pacific SIDS to develop and implement truly integrated approaches for the sustainable development of island economies and communities. Programme activities are organised under the following programme components:

National Multi-Focal Area Ridge-to-Reef Demonstrations in all Pacific Island Countries
Improved Governance for Integrated, Climate Resilient Land, Water, Forest and Coastal Management
Regional and National/Local Ridge-to-Reef Indicators, Monitoring and Evaluation and Knowledge Management
Regional Programme Coordination

This National Programme Document summarizes the development of integrated approaches to water resource and coastal management in Tuvalu to date, including examples of specific results and lessons learned achieved through integrated approaches to environmental and natural resource management. Importantly, this document presents information about the interlinked GEF R2R STAR and GEF International Waters R2R Projects, including programme support activities which focus on science-based planning, human capital development, policy and strategic planning, results-based management, and knowledge sharing.

Marc Wilson
Regional Programme Coordinator
Pacific Community
Suva, Fiji Islands

INTRODUCTION

Given the close inter-connections between land, water and coastal systems in Small Island Developing States (SIDS), the integration of freshwater watershed management with coastal area management is considered essential to foster effective cross-sectoral coordination in the planning and management of land, water and coastal uses. In Pacific SIDS, such integrated approaches to freshwater and coastal area management have been termed 'Ridge to Reef' to emphasise the inter-connections between the natural and social systems from the mountain 'ridges' of volcanic islands, through coastal watersheds and habitats, and across coastal lagoons to the fringing 'reef' environments associated with most Pacific SIDS. Inherent in the approach is the philosophy of cross-sectoral coordination in the planning and management of freshwater use, sanitation, wastewater treatment and pollution control, sustainable land use and forestry practices, balancing coastal livelihoods and biodiversity conservation, hazard risk reduction, and climate variability and change.

Similarly, the integration of communities, stakeholders, and national governments within such a cross-sectoral planning framework is described by Pacific SIDS as a 'Community to Cabinet' approach. The following sections summarize achievements to date in the development of 'Ridge to Reef' and 'Community to Cabinet' approaches to integrated natural resource and environmental management in Tuvalu . An overview of the purpose of the Ridge to Reef Programme, its GEF R2R STAR Projects and GEF International Waters Projects is also provided.



1. RIDGE TO REEF CONTEXT

This section provides a brief background of the geography and environmental threats in Tuvalu. This information has been used as the basis for the identification of priority activities for the testing of 'Ridge to Reef' approaches to integrated land, water, forest and coastal management in Tuvalu.



2. COMMUNITY TO CABINET APPROACH

Community to Cabinet is a multi-stakeholder approach adopted in the Pacific Small Island Developing States to foster strengthened coordination and stakeholder involvement in the planning of investments in integrated natural resource and environmental management. This section outlines existing mechanisms for 'Community to Cabinet' coordination in Tuvalu.



3. RIDGE TO REEF RESULTS

Pacific leaders have called for a strengthened emphasis in results-oriented sustainable development planning. This section benchmarks the main results of efforts to develop integrated management approaches in Tuvalu to date.



4. DOING IS SEEING THE NEED

The GEF Pacific Ridge to Reef programme embraces the 'Doing is Seeing the Need' philosophy adopted by the GEF Pacific R2R Programme. A story board of images is presented to provide examples of best practices in integrated natural resource and environmental management.



5. LESSONS FROM INTEGRATION

Human resources are central to the sustainable development of Pacific SIDS. This section presents experiences and lessons learned in integrated management by practitioners and stakeholders. The focus of these lessons is on the capacity built for integrated management and the related results.



6. GEF PACIFIC R2R PROGRAMME

An overview of the "Pacific Islands Ridge-to-Reef National Priorities – Integrated Water, Land, Forest and Coastal Management to Preserve Biodiversity, Ecosystem Services, Store Carbon, Improve Climate Resilience and Sustain Livelihoods" (or GEF Pacific R2R Programme) is provided in this section. Information about the interlinked GEF R2R STAR and GEF International Waters R2R Projects, and Programme Coordination Unit, is also presented.



7. TUVALU R2R STAR PROJECT

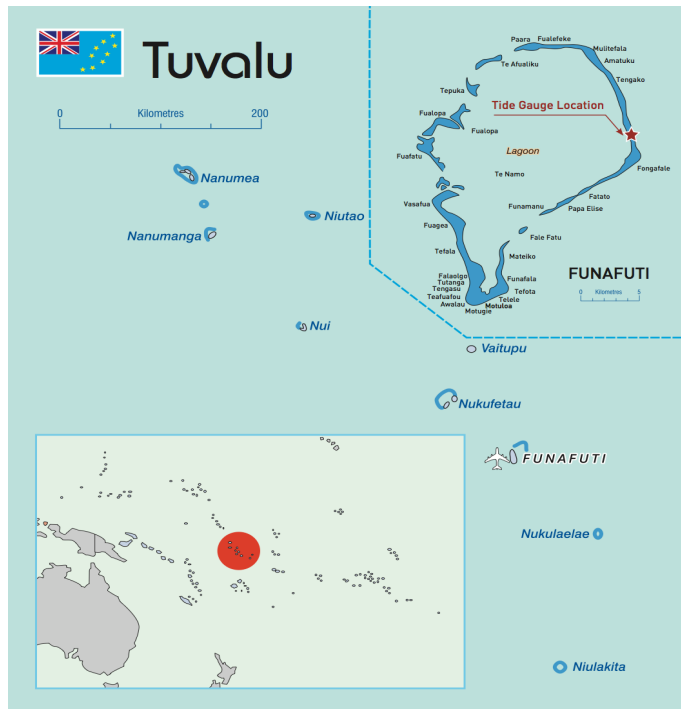
A summary of Tuvalu national project to be financed through the GEF System for Transparent Allocation of Resources (STAR) is provided in this section. The planned contribution of this STAR project to the achievement of the targets for the regional Ridge to Reef program is outlined. The management arrangements for this project are also provided.



8. INTERNATIONAL WATERS R2R PROJECT

Priority actions identified for testing the integration of water, land, forest and coastal management to preserve ecosystem services, store carbon, improve climate resilience and sustain livelihoods in Tuvalu are outlined. A brief strategy for Tuvalu IW R2R national pilot project is provided along with the logical framework matrix. Key assumptions and risks are summarized to guide planning during the project's inception period.

1. RIDGE TO REEF CONTEXT



that some families go without water for days. Government supplied freshwater is limited to 20L per household during drought conditions. The estimated demand for freshwater in Funafuti is close to the estimated sustainable freshwater yields indicating vulnerability to variations in climate.

Country:	Tuvalu
Size:	26km ²
Population:	9,860
Population growth:	0.4%
Density:	328/km ²
GDP:	USD 36 billion
Growth Rate:	1%
Gross National Income:	USD 3,713

The need to reduce demand and conserve water is not widely appreciated, and complex cultural and land tenure conditions limit the opportunity for intervention by government. Practical

training will not only raise awareness but will also provide households with the necessary skills to take action and responsibility.

When flush toilets are used, insufficient soil quality, depth to groundwater and area for irrigation in Tuvalu mean that septic tanks cannot function as they are designed.

Tuvalu sits north of Fiji and is made of eight small coral islands, with a population of almost 10,000. The capital island of Funafuti has about 40% of the inhabitants with over 4,000. Funafuti faces two main environmental challenges; water shortages and wastewater pollution, ultimately impacting on human health and the coral lagoon.

There is insufficient area for adequate effluent distribution and runoff is not correctly treated before seeping to groundwater. To further compound this issue, there are no septic tank pumps to de-sludge the septics, nor an operational sludge treatment plant on Funafuti.

Densely populated with poor soils, farming and fishing are the primary economic activities. There are less than 1000 tourists per year. Environmental concerns are pressing and include water supply shortage as there are no surface or potable groundwater, beachhead erosion, damage to coral reef, spreading algal blooms, contaminated land and the effects of climate change as rising sea levels.

As such, poorly treated wastewater is discharged to groundwater and excess sludge is simply removed to pits dug beside the septic tank.

All water used on Funafuti is harvested from rain. Most water on the outer islands is collected this way however there is more use of groundwater. Most of the outer islands have available groundwater though its quality is largely unknown, on Funafuti it is polluted and brackish beyond human use. Issues of water shortages are increasing annually with increasing populations, erratic weather and rainfall patterns.

This practice is a major human health and environmental hazard. This issue is compounded by the use of flush toilets that are estimated to use 30% of household harvested water. During dry periods some families chose not to use the flush toilet and open defecation is common. This has server health implication to the community.

The primary freshwater source is from stored household and communal rainwater systems, with all households being supplied by donor funded water tanks. Rainwater storage capacity in most islands of Tuvalu can accommodate up to 50 days without rain. Some households however still struggle with maintaining water harvesting equipment and lack water conservation skills and/or tools. Many suffer due to a large family residing under a small roof catchment.

Natural disasters that can contribute to the vulnerability of Tuvalu include cyclones and drought, both of which could be exacerbated by climate variability and change, and sea-level rise. Climate models are not yet able to state with any certainty what changes in variability and extremes may occur.

During dry periods, the desalination plant struggles to provide sufficient water for the population and long waiting lists ensure

The above issues have begun to be addressed through the cross-sectoral planning and management initiatives of the GEF Pacific IWRM Project. Needs still exist and have been identified within a Ridge to Reef context.

These include demonstrating innovative approaches to pig waste management; targeted scientific approaches to optimise on-site waste management systems and to identify causal links between land-based contaminants and the degradation of coastal waters and; building national and local capacity for waste management implementation.

2. COMMUNITY TO CABINET APPROACH

There is a growing recognition in the Pacific region of the need for partnerships, alignment of donor support with national priorities, and country ownership in the development of results-oriented programs and projects. The Pacific leaders recently emphasized these needs noting the well-known challenges Pacific Island communities face in fashioning sustainable futures. These include geographical isolation, high levels of dependence on natural resources for nutritional security and livelihoods, and a highly variable environment characterized by numerous coastal hazards.

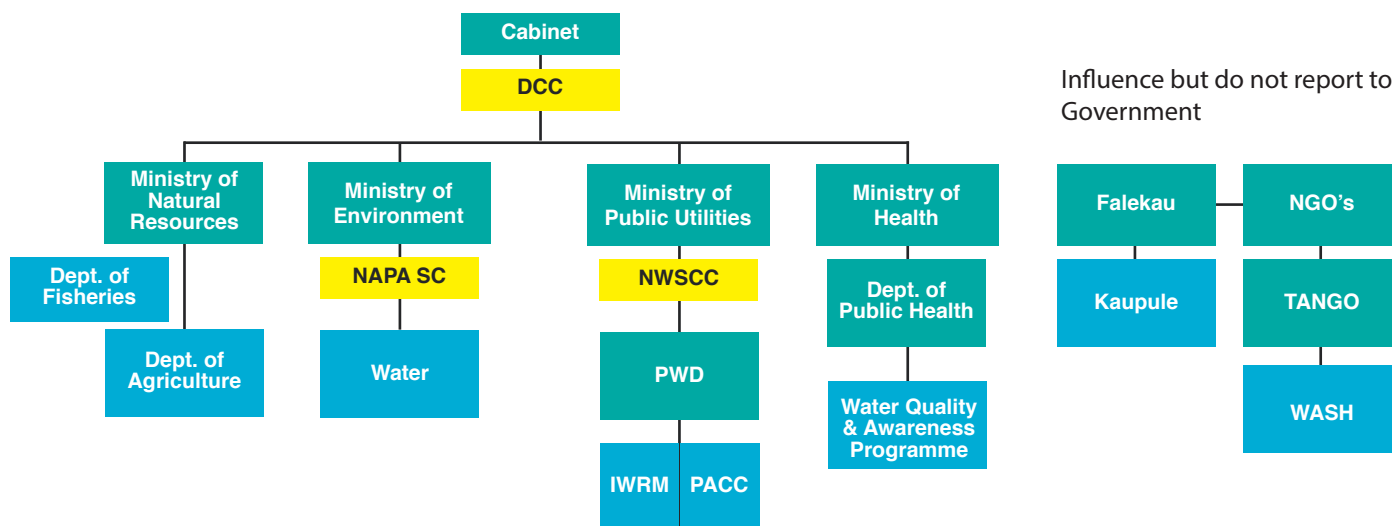
The above combined with considerable variation in island geomorphology, socio-economics and politics make locally-driven solutions to key issues influencing island sustainability and resilience a necessity. Of particular note are the complex land and marine tenure systems and institutional relationships between national and community-based governance structures. While the Pacific SIDS have largely adopted western-style constitutions and legal systems, such community-based governance and leadership arrangements remain highly influential at all levels. Accordingly, the participation of civil society organizations and community leaders in development planning is essential to increase the local relevance of management actions and their results in SIDS. The following outlines existing cross sectoral coordination arrangements and efforts to engage stakeholders in sustainable development planning.

Strengthening Cross-sectoral Coordination and Planning

Before the GEF Pacific IWRM Tuvalu project began, there was a National Water and Sanitation Steering Committee (NWSSC) which was founded by the International Waters Programme (IWP) project. The NWSSC was re-established in 2009 as the coordinating body for the IWRM Project, overseeing project development and ensuring delivery of activities. Most of the committee members actively participated in the running of the IWRM, particularly the key partners such as Ministry of Health, Department of Fisheries, Department of Agriculture, Department of Women and TANGO. These groups regularly attended meetings and were represented by high-level management.

There was fragmented reference to water within other national frameworks such as the Te Kakeega II, Te Kaniva and the NAPA. Through the GEF Pacific IWRM project it was targeted to have a discrete National Water Policy by mid-2012. During the 2011 drought the government requested assistance from the IWRM to develop a National Water Policy. The Policy was developed with input from a wide range of community, government and NGO stakeholders the process of which culminated in a Sustainable Water Forum in 2011.

The purpose of the Water and Sanitation Policy (WSP) is to ensure that the people of Tuvalu have continued access to safe, reliable, affordable and sustainable water and sanitation facilities. The policy supports Tuvalu's key planning document, Te Kakeega II (National Strategy for Sustainable Development) as well as key regional frameworks such as the Sustainable Development Goals, the Pacific Plan and the Pacific regional Action Plan on Sustainable Water Management. The WSP was endorsed by Cabinet in early 2013 and launched to the public in October 2013.



National governance arrangements are shown for the water sector.
National committees are highlighted in yellow.

Linking Local and National Coordination

The NWSSC was revived in 2009 and also became the steering committee of the PACC Tuvalu project. Some original committee members had moved on and the IWRM project saw fit to invite additional members, such as community and women group representatives – however the core group of the committee remained the same.

Some committee members were engaged through communication committees and were active in supporting community engagement activities such as World Water Day week. The NWSSC was involved further in introducing National Indicators and Regional Framework and in the development of the National Water Plan, Water Policy/Act and Water related area of the National Building Code.

Through the GEF Pacific IWRM Project the NWSSC was established as a firm institutional structure and is responsible for and supports the collection of Water and related projects in Tuvalu, ensuring coherence, partnerships and better organisation.

RIDGE TO REEF STAKEHOLDERS

- Ministry of Health
- Department of Waste
- Department of Environment
- Department of Agriculture
- MET Office
- Womens' Department
- TANGO
- Kaupule
- Womens' Groups
- Religious Organisations
- Community Leaders
- Compost Toilet Champions
- Schools
- Red Cross
- Department of Education
- Department of Finance
- Media

Stakeholder Engagement

Tuvalu's national pilot project of the regional R2R IW project will work to: generate local and national support for integrated R2R approaches; establish linkages, synergies and mechanisms for learning exchange, particularly between and among community leaders and project stakeholders of the national GEF System for Transparent Allocation of Resources (STAR) projects planned under the broader Ridge to Reef programme; develop local experience in linking IWRM to coastal area management; and stimulate cross-sectoral participation in the planning of coordinated investments in land, forest, water and coastal management in the participating countries.

Given the range of stakeholders identified above, the preparation phase of the regional R2R IW project in Tuvalu has been based on a consultative process involving national government agencies, community representatives, and civil society organizations. Stakeholder inputs elicited during the preparation phase have been incorporated in the results framework for the pilot project included in the final section of this document.

3. RIDGE TO REEF RESULTS

The need for results-based approaches to the management of development assistance programmes and projects has received recent high-level recognition. In adopting the Paris Declaration on Aid Effectiveness in 2005, national government Ministers responsible for development from both developed and developing countries joined with Heads of multilateral and bilateral development institutions in committing to “work together in a participatory approach to strengthen country capacities and demand for results-based management”.

This commitment was reaffirmed in the 2008 Accra Agenda for Action which called for accelerated progress on aid effectiveness by better demonstrating the results of development efforts and openly accounting for them. The Pacific Islands region and its development partners have responded accordingly. For example, in 2012 the Pacific Leaders considered a review of the effectiveness of development efforts in the Pacific and called for strengthened emphasis on results in planning and financing development.

The following benchmarks the main results of efforts to develop integrated management approaches in Tuvalu to date.

PROCESS

Multi-sectoral body established

The National Water and Sanitation Steering Committee was re-instituted in late 2009 and had a wide membership including government and non-government actors. Membership included many groups from the community including Kaupule, NGO's and Women's groups. The NWSSC was critical in the development of the National Water and Sanitation Policy (WSP) and was active in community campaigns. They met quarterly to review and design IWRM work plans and monitor progress. They were the main multi-sector committee for water resource and sanitation related issues in Tuvalu and were the mechanism for advancing legislation through Cabinet.

Development of a national strategy - the National Water and Sanitation Policy

During the 2011 drought the government requested assistance from the IWRM to develop a National Water Policy. The Policy was developed with input from a wide range of community, government and NGO stakeholders the process of which culminated in a Sustainable Water Forum in 2011. The purpose of the WSP is to ensure that the people of Tuvalu have continued access to safe, reliable, affordable and sustainable water and sanitation facilities.

The WSP was endorsed by Cabinet in early 2013 and launched to the public in October 2013.

Increased sectoral engagement in formal multilateral communication on water related issues

The NWSSC established the platform for increased engagement, with a particular emphasis on strengthening communication between national government and traditional community-based governance arrangements. With Ministerial support for this group provided through the IWRM, up to 20 different agencies from national and local government, representatives of NGOs, and community leaders met on a quarterly basis to discuss national water and sanitation policy and IWRM planning, review the status of various water related investment in Tuvalu, and to share information on the results of various stress reduction technologies being trialled as part of the IWRM demonstration project.

Best IWRM and Water Use Efficiency defined for Tuvalu

Reports on water and sanitation challenges had been written prior to the commencement of the IWRM Project, these identified water and sanitation challenges as they relate to IWRM and how the IWRM approach could be used to address these. Little was done to turn these reports into substantial change in the sector. The target of the IWRM project was to have the IWRM approach defined and endorsed by the National APEX Body. Through a nation wide consultation process these approaches were presented to and approved by the community and government institutions. These approaches have since been formalized in the National WSP and endorsed by Cabinet.

Increased proportion of community engaged in water related issues

From a position of virtually no community engagement in water related issues, the project has engaged more than 25% of Funafuti at the highest level of personal engagement, committing the household to a changed lifestyle through eco-sanitation.

By continually focusing on communication and engagement the project managed to actively engage a large proportion of Funafuti, through workshops, community and school events and Kaupule meetings. Key initiatives included the development of a national name for the compost toilet, which provided a sense of national ownership and the subsequent roadshow, engaging families through entertainment and providing access to information and an opportunity to talk through concerns. Community engagement in governance has increased through community leaders' membership on the project committee and the national APEX body.

National IWRM indicator framework embedded in formal national reporting

In a country prone to drought and with significant water and sanitation management related environmental and health challenges, the development of national indicators was supported from community to the Minister. The absence of a

monitoring and reporting mechanism meant that government, the community and other stakeholders had little knowledge of the status of water security until the next drought and no means of assessing the value of water management decisions.

The development of national IWRM indicators in early 2012 provided many stakeholders with their first opportunity to actively engage in national water management decisions. The process defined some of the management challenges for the first time (for example, the variance in livestock water use). The value of the framework was recognized immediately by the request for guidance on replicating the process in the agriculture and fisheries sectors.

National staff across institutions with IWRM knowledge and experience

In order to share the ecological concepts and technical construction of the eco-sanitation toilets a week-long workshop was conducted for the IWRM Project Team and all local contractors and builders. This workshop covered construction of composting toilets, how to use and maintain the system. It also covered the advantages and disadvantages of the system so that builders could explain the process to families who were interested or were having one installed.

From this training the IWRM Project Manager was then able to share the construction and ecological knowledge with the IWRM projects in RMI and Tonga. This has also resulted in the development of a Falevatie Construction Manual that was developed to help other projects and private builders with the construction of their own falevatie.

Lessons learned incorporated into other national regulations

In the space of three years, the Tuvalu GEF Pacific IWRM project has changed the sanitation landscape, with the Tuvaluan compost toilet being adopted and adapted in Nauru, RMI and Tonga, with Nauru having expanded the application from households to schools.

The lessons identified across stakeholder engagement, capacity building and communication have helped Nauru and RMI rapidly develop positive stakeholder interest and the knowledge continues to be spread through South-South twinning exchanges.

Within Tuvalu, development partners are strongly supporting the expansion of eco-sanitation both within Funafuti and to the Outer islands, with commitments already to treble the number of toilets and national and development partner plans to provide most households in the Outer Islands with access to a compost toilet.

STRESS REDUCTION

Reduction in use of freshwater for sanitation purposes

Toilets flushing into septic tanks typically use six to ten litres

per flush, and represent more than 30% of household water use. In Tuvalu, where over 70% of water storages are household rainwater tanks and there is only limited commercial and agricultural water use, toilet flushing represents about 30% of national water use. During the 2011 drought resulting in a State of Emergency, flushing toilets were a significant contributor to drawing down water reserves, and ultimately the need for flushing water meant that families were often left with a choice of sanitation or drinking and cooking water.

The Tuvalu GEF Pacific IWRM project installed 40 compost toilets, reducing household water use by over 30% in these houses (representing about 5% of Funafuti's population). The co-funded installation of toilets in partnership with this project will see these reductions in about 15% of Funafuti houses. Ultimately, the changes in building regulations being developed and implemented under this project, together with development partner commitments will see similar reductions over much of Funafuti and the Tuvalu Outer Islands.

Increased population with access to improved sanitation

The United Nations Special Rapporteur's acknowledgment of Tuvalu's serious challenge in meeting human rights in access to sanitation and drinking water highlighted the importance of this issue nationally. The provision of sustainable sanitation through the Tuvalu GEF Pacific IWRM project to 40 households directly increased the access to improved sanitation for about 280 people, over 5% of Funafuti's population.

Whilst the project exceeded the target for improving access to sanitation, the co-funded and catalytic outcomes will see a further 45 households with access to sanitation during the project period, a further 8% of Funafuti's population, exceeding the project target. A further 90 households will have access to improved sanitation on outer islands as a result of the projects replication initiatives.

Reduction in sewage pollution across Funafuti

Studies of Funafuti groundwater indicate that the groundwater and near shore coastal waters and sediments are heavily polluted from septic tanks, which are also a significant contributor to the eutrophication of Fongafale Lagoon and associated macro-algae blooms that clog the lagoon. This is further exacerbated by the open defecation practices in the lagoon, which increase during drought periods. Significant loss of near shore habitat and reductions in fish numbers are forcing fishermen further and further into the lagoon for similar catches.

The installation of the 40 compost toilets has removed the sewage pollution into groundwater and subsequently into coastal waters from these 40 houses. This represents about a 6% reduction in nitrogen pollution into the groundwater. Additionally, current government and development partner planning and community commitment suggest that much larger targets may be achievable.

4. DOING IS SEEING THE NEED

The GEF Pacific IWRM project acted as a valuable entry point for strengthening integrated approaches to natural resource management in Pacific SIDS. Existing national coordination mechanisms involving operation of inter-linked national APEX bodies for IWRM and local coordinating committees for IWRM demonstration projects have been effective in guiding stress reduction in the water and sanitation sector and driving reform of national IWRM policy and planning. That project also acted as a valuable entry point for capacity development, helping to foster application of inter-disciplinary skills and local knowledge and integrating this into monitoring and evaluation to ensure that causes of environmental stresses and the results of interventions are understood by stakeholders.

A need exists, however, to scale up the GEF Pacific IWRM approach to strengthen the integration of land, water and coastal management to better accommodate issues associated with biodiversity conservation, to build on synergies between investments in IWRM and sustainable forestry practices, and to strengthen the sustainable management of coastal 'blue forests' from the perspectives of hazard risk reduction, ICM application, and livelihoods. The Pacific Ridge to Reef programme embraces the 'doing is seeing the need' philosophy adopted by the IWRM project via the promotion of pilot activities aimed at generating local and national support for integrated Ridge to Reef and Community to Cabinet approaches and to establish linkages, synergies and mechanisms for learning exchange, particularly between and among community leaders and project stakeholders.

Pilot activities will also develop local experience in linking IWRM to coastal area management and will stimulate cross-sectoral participation in the planning of coordinated investments in land, forest, water and coastal management in the participating countries. The related and linked national STAR projects will deliver the targets of the overall programme relating to strategic objectives of the GEF biodiversity, climate change mitigation and adaptation, land degradation, and sustainable forestry management focal areas.



TOP RIGHT: Compost toilet construction training
Finished Falevatie

5. LESSONS FROM INTEGRATION

**Falevatie -
A toilet
which is good
for you and the
environment**

Finding creative solutions for introducing new sanitation technologies

By Pisi Selagniu, IWRM Project Manager

During preparatory meetings for key stakeholders in Tuvalu, strong interest was revealed for gender mainstreaming beyond just WASH practitioners and the IWRM Team. This was underlined as more women than men attended a large proportion of stakeholder engagement activities.

To address this the IWRM Team initiated a Gender Mainstreaming Workshop for community members in collaboration with Institute for Sustainable Futures. National Steering Committee members, women representatives from the 7 communities of Funafuti, government departments and youth groups were all invited to attend the workshop.

I have never been to a gender workshop before and know a bit about gender but have never learned why it is important. Through the workshop I have learned that we have to consider women, particularly as it comes to our traditional and conservative community, sometimes there is too much male dominance in Tuvalu, and for me it is good that they give this workshop to send the message out there that women are important members of society as well.

The biggest challenge in Tuvalu with gender mainstreaming is because of our traditions, men always think it is to do with the ladies, that it is ladies business. But it's not just about women it's about both sexes working together. So our challenge is to have men accept that. Some of the men at the workshop were open to this idea, there were optimistic people and skeptics.

There is disconnect between what they are learning and how they behave. So about 50/50 at the workshop were okay or indifferent.

Next time they have a workshop they should invite more men and more people in general. It is important however that they keep involving men in this discussion. It might also be a good idea to have separate men and women's workshops then bring them together for a day or two of combined workshop, That way people can feel comfortable to ask questions in the beginning without men or women to offend, then all together we can discuss what has been taught.

I found the workshop really helpful, it made me see there is more to gender mainstreaming than I thought. Sometimes even we women think that we can do better than men and the men think they can do it better than us. For women in the workforce we need to recognise that we can do everything the same, both men and women, and that we should have the space to be equal.

It really helped having Asita as a local representative presenting, who can explain in detail to us what is this, and what is that, because not everyone understands English that well.

The training was so good that I recommend they do it every year, with more participants. Even some of the men wanted more in-depth training after attending this workshop.

As a result of the gender mainstreaming training in Tuvalu the IWRM project conducted women's meetings to discuss the technical aspects of the eco-sanitation toilets and how these sanitation facilities affect women and what are their perspectives on them.

These womens group workshops gave the IWRM Project the insight that the eco-sanitation toilets would be better received if placed close to or inside the home. An aspect that has been incorporated in to the National Water and Sanitation Policy. Women also had objections to using the human compost and so further effort was made to resolve this through testing of the compost and sharing the findings with all stakeholders.

Due to cultural traditions women are usually not allowed to speak however this is starting to change and some women are now speaking at community events. Women who attended the event are now more confident to engage in workshops.

There has also been ongoing stakeholder engagement with women's groups from outer islands to introduce and gather support for the eco-sanitation facilities and to understand any issues that they may have.

6. THE GEF PACIFIC RIDGE TO REEF PROGRAMME

The GEF Pacific Ridge to Reef (R2R) Programme was developed to guide the strategic investment of GEF grant and national funding in actions aimed at achieving the sustainable development of Pacific SIDS within a truly integrated environmental and natural resource management framework.

A GEF Multi-Focal Area Approach

Initiatives of the R2R programme aim to deliver tangible and quantifiable global environmental benefits by focusing on a more cross-cutting approach to water, land and coastal management that captures the complementarities among the following GEF focal areas



A Multi-GEF Agency Approach

The GEF Pacific Ridge to Reef Programme is a multi-agency initiative involving the United Nations Development Programme (UNDP), the United Nations Food and Agriculture Organization (FAO), and the United Nations Environment Programme (UNEP) as GEF implementing agencies. Coordination support is provided by the Pacific Community (SPC), a regional intergovernmental organisation that works with Pacific Nations across a wide range of areas relevant to programme implementation, including water resource management, geoscience for development, public health, forestry, fisheries, disaster management, youth, gender and culture.

R2R Programme Goal and Components

The goal of the GEF R2R programme is “to maintain and enhance Pacific Island countries’ ecosystem goods and services (provisioning, regulating, supporting and cultural) through integrated approaches to land, water, forest, biodiversity and coastal management that contribute to poverty reduction, sustainable livelihoods and climate resilience”. Programme activities are organised under the following components:



GEF R2R STAR Projects

Significantly, the programme involves the execution of 13 GEF R2R STAR1 projects which address national priorities and development needs while delivering global environmental benefits in line with the abovementioned GEF focal area strategies.

These UNDP, UNEP and FAO implemented projects are executed nationally on a bilateral basis in partnership with local stakeholders. To ensure cohesion, complementarity and efficiency of GEF investments under the R2R programme, each GEF R2R STAR project has been provided US\$175,000 of International Waters (IW) funding in addition to their national STAR allocations.

The intent of this IW funding increment is to enable effective linkages with the GEF International Waters R2R project, the adoption of integrated approaches aimed at addressing critical water-related issues, and intra-regional capacity building and knowledge sharing.

GEF International Waters R2R Project

The operation of the R2R programme is supported in areas of science-based planning, human capital development, policy and strategic planning, results-based management, and knowledge sharing through the International Waters R2R project which is executed regionally by the Pacific Community. R2R pilot projects, to be implemented through the R2R IW project, are designed to strengthen R2R integration by establishing synergies among the work of the various sector agencies and the GEF R2R STAR Projects, between governments and communities, and civil society and the private sector.

Programme Coordinating Unit

The Programme Coordinating Unit (PCU), hosted by the Pacific Community's Geoscience Division in the Fiji Islands, is tasked with the provision of technical, operational, reporting and monitoring support as requested by the participating Pacific Island Countries.

The PCU also facilitates the consolidation and sharing of sectoral knowledge and expertise to support the uptake of best-practice management approaches in policy-making and planning. Led by the Regional Programme Coordinator, the PCU possesses multidisciplinary expertise, including administration and financial management officers, to support programme coordination.

1

The Global Environment Facility's System for the Transparent Allocation of Resources (STAR)

7. TUVALU'S NATIONAL R2R STAR PROJECT

Implementing a 'Ridge to Reef' approach to protect biodiversity and ecosystem functions in Tuvalu	
To preserve ecosystem services, sustain livelihoods and improve resilience in Tuvalu using a 'ridge-to-reef' approach.	
Component 1: Conservation of Island and Marine Biodiversity	
Outcome 1.1	Improved management effectiveness of system of conservation areas composed of existing and expanded Locally Managed Marine Areas (LMMAs)
Component 2: Integrated Land and Water Management	
Outcome 2.1	Integrated landscape management practices adopted by local communities
Outcome 2.2	Increase in contribution and support from tourism entrepreneurs reported by CCAs in and around CCAs for biodiversity conservation (tracked by their resource investment / contribution in relevant actions)
Component 3: Governance and Institutions	
Outcome 3.1	Integrated approaches mainstreamed in policy and regulatory frameworks
Outcome 3.2	Capacity on integrated approaches enhanced at the national and community levels
Component 4: Knowledge Management	
Outcome 4.1	Improved data and information systems on biodiversity, forests, land management adaptation best practice

INFORMATION BOX

GEF Agency: UNDP
 National Lead Agency: Department of Environment
 Funding Source: GEF Trust Fund
 GEF Focal Area: Multi-Focal Area
 Indicative Grant Amount: USD 3,762,844
 Indicative Co-financing: USD 10,225,000
 Approval Date: 2013



8. GEF PACIFIC INTERNATIONAL WATERS R2R PROJECT

This regional project will support 14 Pacific Island Countries in the development of “Ridge to Reef” and “Community to Cabinet” approaches designed to guide the integration of water, land, forest and coastal management required to fashion sustainable futures for island communities.

The project also aims to address the recent high-level recognition and calls for results-based approaches to the management of development assistance programmes and projects, and will provide support in areas of coordination, capacity building, technical assistance, and monitoring and evaluation for the operation of the GEF Pacific Ridge to Reef Programme. Components and outcomes of this programme are:

<p>Component 1: National Demonstrations to Support R2R ICM/IWRM Approaches for Island Resilience and Sustainability</p> <ul style="list-style-type: none"> • Successful pilot projects testing innovative solutions involving linking ICM, IWRM and climate change adaptation • National diagnostic analyses for ICM conducted for prioritizing and scaling-up key ICM/IWRM reforms and investments • Community leader roundtable networks established for strengthened ‘community to cabinet’ ICM/IWRM
<p>Component 2: Island-based Investments in Human Capital and Knowledge to Strengthen National and Local Capacities for R2R ICM/IWRM approaches</p> <ul style="list-style-type: none"> • National and local capacity for ICM and IWRM implementation built to enable best practice in integrated land, water, forest and coastal management and CC adaptation • PIC knowledge on climate variability, coastal area planning in DRM, integrating ‘blue forest’ and coastal livelihoods consolidated and shared to support evidence-based coastal and marine spatial planning • Incentive structures for retention of local ‘Ridge to Reef’ expertise and inter-governmental dialogue on human resource needs for ICM/IWRM initiated
<p>Component 3: Mainstreaming of R2R ICM/IWRM Approaches into National Development Planning</p> <ul style="list-style-type: none"> • National and regional strategic action frameworks for ICM/IWRM endorsed nationally and regionally • Coordinated approaches for R2R integrated land, water, forest and coastal management and CC adaptation achieved in 14 PICs • Physical, natural, human and social capital built to strengthen island resilience to current and emerging anthropogenic threats and climate extremes
<p>Component 4: Regional and National ‘Ridge to Reef’ Indicators for Reporting, Monitoring, Adaptive Management and Knowledge Management</p> <ul style="list-style-type: none"> • National and regional formulation and adoption of integrated and simplified results frameworks for integrated multi-focal area projects • National and regional platforms for managing information and sharing of best practices and lessons learned in R2R established
<p>Component 5 - Ridge-to-Reef Regional and National Coordination</p> <ul style="list-style-type: none"> • 5.1 Effective program coordination of national and regional R2R projects

R2R pilot projects, to be implemented through the R2R IW project, are designed to strengthen R2R integration by establishing synergies among the work of the various sector agencies, between governments and communities, and civil society and the private sector. The following pages present the results framework for Tuvalu’s IW pilot project.

INFORMATION BOX

GEF Agency: UNDP
 Regional Executing Agency: SPC
 National Lead Agency: MFATTEL
 Funding Source: GEF Trust Fund
 GEF Focal Area: International Waters

R2R IW RESULTS FRAMEWORK

Components	Outcomes	Indicator	Baseline	Targets End of Project	Source of Verification	Risks and Assumptions
1. Demonstration of innovative approaches to pig waste management on Funafuti Atoll, Tuvalu	1.1 Improved domestic pig pen operations catalysed via piloting of locally appropriate methods for on-site pig waste management	Status of conversion of the 10 percent targeted pig pens	All domestic pig pen on Funafuti atoll based on 'wash-down' waste management systems involving zero treatment of waste prior to its release into the receiving environment	Sustainable pig waste management approaches demonstrated through conversion of 10 percent of nearshore wash-down pig pens to dry-litter composting systems	Consultation meeting reports, including agreements on design, site selection and roles of stakeholders Report on assessment of the operational status [Yr 3]	Residents willing to adopt new pig waste management approaches On-going commitment to operation of converted pig pens
	1.2 Environmental and public health safeguarded via targeted reductions in nutrient and pathogen contamination of coastal areas	Volume reduction in untreated pig pen effluent discharged into receiving waters	All domestic pig pen effluent is discharged directly in to receiving environment and represents a key threat to environmental and public health	Nutrient and pathogen loads from pig pen effluent discharging directly into the receiving environment reduced by 10% through demonstration of dry-litter composting systems	Comparative studies on nutrient release and reductions of pig waste systems, documents of assessments and monitoring results Report on assessment of the operational status [Yr 3]	Design and operation of dry litter pig pens is effective in reducing untreated effluent entering the environment Adopted procedures for waste management and composting result in desired reductions of contaminants
	1.3 National uptake of sustainable pig waste management methods stimulated through community awareness and training	Percent increase in target population with applied understanding of sustainable pig waste management	Limited awareness of alternative sustainable pig waste management methods	Proportion of target community members with awareness of and technical skills to successfully implement sustainable pig-waste management methods increased to 30% through innovative participatory techniques	Consultation meeting and activity reports, training workshop outputs including details of trained builders and trainers, participatory interviews	Awareness and capacity building materials are sufficiently well designed to engage community members and resource users Continuity of participation of target audience in awareness raising events Costs and benefits of dry litter approaches appropriate to stimulate independent uptake

Components	Outcomes	Indicator	Baseline	Targets End of Project	Source of Verification	Risks and Assumptions
2. Targeted scientific approaches to optimise on-site waste management systems and to identify causal links between land-based contaminants and the degradation of coastal waters	2.1 Evidence based scaling up of eco-sanitation through optimal design and operation of systems to meet international standards for water safety and use of human compost in Tuvalu	Extent of uptake of the scientific recommendations for improving eco-sanitation system designs to optimise pathogen inactivation, nutrient reduction and compost suitability	Limited understanding of efficacy of eco-sanitation systems at reducing contaminants on Funafuti Atoll, including dominant mechanisms, contaminant reductions and associated operating conditions	Locally appropriate design and management of eco-sanitation systems developed through targeted scientific research into composting mechanisms, quantifying 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 pay
	2.2 Evidence based scaling up of dry-litter composting systems through optimal design and operation of systems to meet international standards for water safety and use of animal compost in Tuvalu	Extent of uptake of the scientific recommendations for improving dry-litter composting system designs to optimise pathogen inactivation, nutrient reduction and compost suitability	No dry-litter composting systems currently in use and efficacy at reducing contaminants is unknown in Tuvaluan setting	Locally appropriate design and management of dry-litter composting 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 dry-litter composting systems are able to be optimally improved in remote island setting Resources are sufficiently available for reliable analysis of dry-litter composting systems to produce robust scientific results
	2.3 Ecological health of coastal waters of Funafuti Atoll are characterised and land-based contamination processes established for key ICM planning and investment	Status of data collection for 3 priority site monitoring programmes Extent of the uptake of recommendations in ICM Planning	Lack of scientifically sound evidence for causal links between land-based contaminants and coastal water degradation	Ecosystem processes and coastal habitat monitoring programme at 3 priority sites on Funafuti to identify threats from land-based contaminants to coastal waters and causal links to algal blooms and ciguatera occurrences	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 coastal process to produce scientific results

Components	Outcomes	Indicator	Baseline	Targets End of Project	Source of Verification	Risks and Assumptions
3. National and local capacity for waste management implementation built to enable best practice in coastal waters, land and public health protection	3.1 Volunteer waste management networks are formally established towards forming an enhanced culture of environmental protection in Tuvalu	Status and effectiveness of the volunteer network Number of trained volunteers in the network	An informal group of eco-sanitation users exists to discuss issues among owners	Network of on-site waste management owners and users with wide sectoral membership is formally operating on Funafuti for coordination, information exchange, promotion and training on waste management issues	ToR, member lists, endorsement/registration of organisation, meeting minutes, attendance records, participatory interviews, activity outputs and reports Activity impact evaluation reports	Interest and capacity for organisation development exists Awareness and capacity building materials are sufficiently well designed to engage community members and resource users
	3.2 Increased householder uptake of and donor support for on-site sanitation systems	Status of 30% reduction in cost of eco-sanitation and dry-litter systems Number of sustainable financing options and agreement plans	High construction and transport costs are limiting wide-spread uptake of on-site waste management systems with limited funding options available	Construction and transport costs of eco-sanitation and dry-litter composting systems are reduced by 30% and financing option plans developed through community engagement processes	Cost benefit analysis, comparative studies, consultation meeting reports, refined materials and suppliers list, final analysis report Sustainable financing reports, agreements and plans	Materials are available to reduce cost of construction Opportunities to reduce transportation costs exist Reducing cost does not impair efficacy of optimal system operation
	3.3 Enhanced access to effective information relating to on-site waste management issues and linkages with environmental and public health to increase public awareness	Total reach of media product that is syndicated Volume of content accessed	Limited availability of effective information to stimulate understanding of waste management issues amongst target population	Innovative and locally appropriate educational, training and documentary materials about on-site waste management processes and associated environmental and public health issues, developed for public use and syndicated through school, library, CBO, public radio and online sources	Educational films and documentaries, construction training manuals, system operational guides, compost use guidelines, radio/audio talk shows Distribution partnership agreements	Resources available for awareness materials Awareness materials will be sufficiently well designed to improve community understanding



The GEF unites 182 countries in partnership with international institutions, non-governmental organizations (NGOs), and the private sector to address global environmental issues while supporting national sustainable development initiatives.

www.thegef.org



The Pacific Community is an international development organisation with 26 member countries and territories. It is the principal scientific and technical agency proudly supporting development in the Pacific region since 1947.

www.spc.int



UNDP is on the ground in 177 countries and territories and partners with people at all levels of society to help build nations that can withstand crisis, and drive and sustain the kind of growth that improves the quality of life for everyone.

www.undp.org



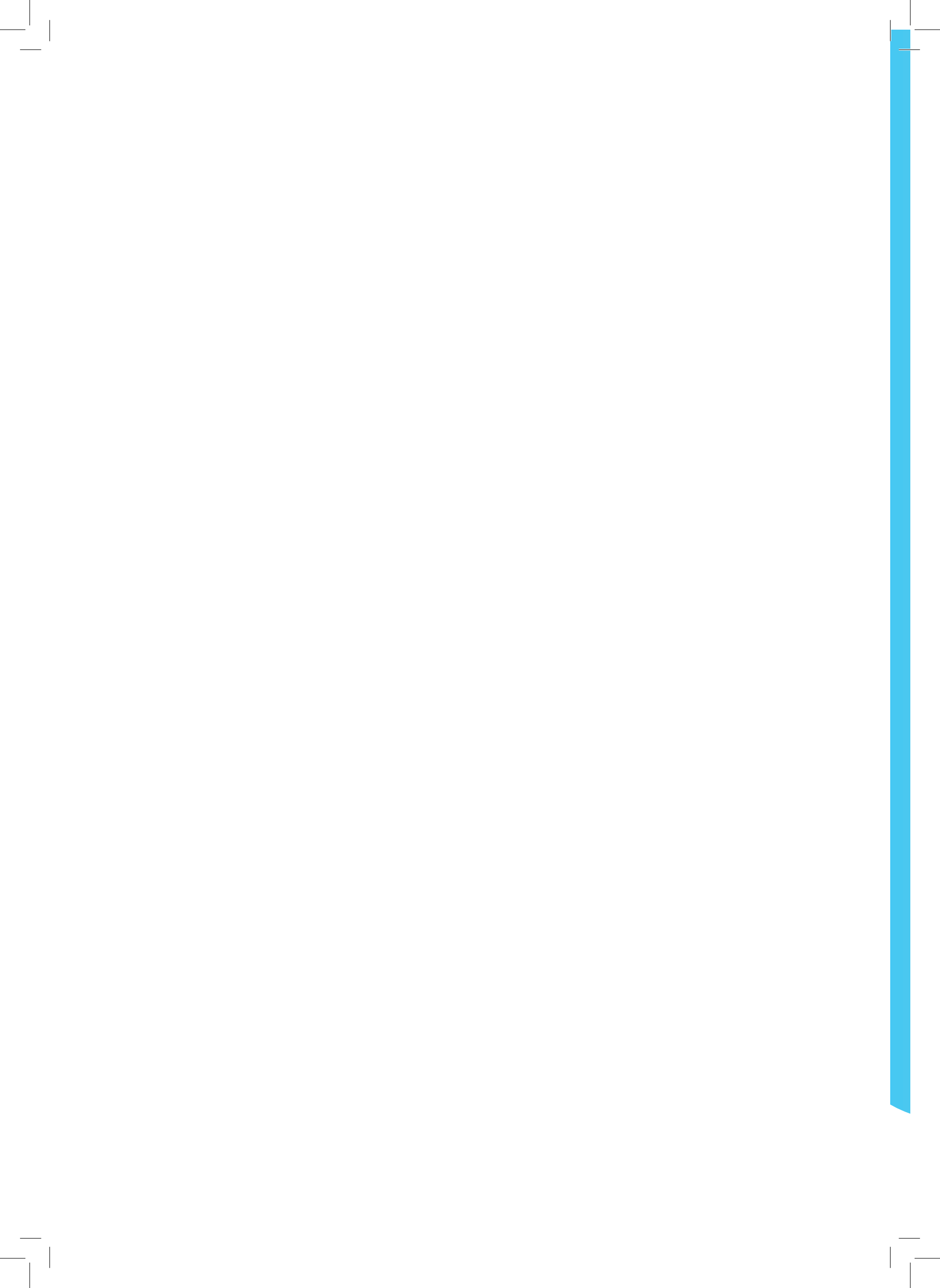
UNEP is the leading global environmental authority that sets the environmental agenda and promotes the coherent implementation of the environmental dimension of sustainable development within the United Nations system.

www.unep.org



FAO has 194 Member Nations working to achieve food security for all, to make sure people have a regular access to enough high-quality food to lead active and healthy lives.

www.fao.org





Pacific
Community
Communauté
du Pacifique

