



# A FRAMEWORK FOR MAINSTREAMING RIDGE TO REEF APPROACH IN THE PACIFIC REGION, TECHNICAL REPORT





# **A FRAMEWORK FOR MAINSTREAMING RIDGE TO REEF APPROACH IN THE PACIFIC REGION, TECHNICAL REPORT**

Produced and reviewed by GEF Pacific International Waters  
Ridge to Reef Regional Project,  
Pacific Community (SPC), Suva, Fiji



Suva, Fiji, 2021

© Pacific Community (SPC) 2021

All rights for commercial/for profit reproduction or translation, in any form, reserved. SPC authorises the partial reproduction or translation of this material for scientific, educational or research purposes, provided that SPC and the source document are properly acknowledged. Permission to reproduce the document and/or translate in whole, in any form, whether for commercial/for profit or non-profit purposes, must be requested in writing. Original SPC artwork may not be altered or separately published without permission.

Original text: English

Citation: Guiang E.S, Lucero S.J., Isorena T.G. and Astrera L.S. 2021. A framework for mainstreaming ridge to reef approach in the pacific region, technical report. The Pacific Community (SPC), Suva, Fiji. 67 pp

Reviewed by: Jose Antonio, Aliti Vunisea, Samasoni Sauni, Fononga Vainga Mangisi-Mafileo, John A. Carreon and George Naboutuiloma.

Edited by: Seema Deo (Footprints in the Sand Consulting)

Layout and Design by Navneet Lal/Pacific Community (SPC)

Produced by GEF Pacific International Waters Ridge to Reef Regional Project, Pacific Community (SPC), Suva, Fiji.

Prepared for publication at SPC's Suva Regional Office, Private Mail Bag, Suva, Fiji, 2021  
[www.spc.int](http://www.spc.int) | [spc@spc.int](mailto:spc@spc.int)

Printed by Quality Print, Suva, Fiji, 2021



# CONTENTS

Abbreviations .....	iv
List of Tables.....	v
List of Figures .....	v
Foreword .....	vi
Acknowledgement .....	vii
Disclaimer .....	viii
Executive Summary.....	5
I. Introduction.....	7
Objectives.....	8
Expected Outputs .....	8
Methodological Approach and Duration .....	14
II. Highlights of the Review.....	19
A Treatise of Some R2R-Related Frameworks.....	19
Key Bio-Geophysical and Climatic Features of the Six Country Case Studies.....	21
Highlights of the Review of the R2R-Related National Sector Policies.....	27
Planning and Governance Processes, Lessons Learned and Challenges.....	29
Lessons Learned and Best Practices in Each Case Study.....	39
Summary of Lessons Learned and Promising R2R-Related Practices .....	43
Emerging Effective R2R Interventions or Measures in the Demonstration Sites that Offer Opportunities to Reduce Ecosystems and EGS Stresses .....	45
III. Suggested R2R Mainstreaming in PICs .....	46
Stage 1: Communication, advocacy, and social marketing campaigns .....	47
Stage 2: Replicating participatory integrated R2R site planning with envisioned R2R benefit flows.....	51
Stage 3: Replicating R2R implementation of approved integrated R2R site plans to realise R2R benefit flows ...	54
References.....	56
Annexes.....	67

## ABBREVIATIONS

EGS	Ecosystems Goods and Services
ENR	Environment and Natural Resources
ENRM	Environmental and Natural Resource Management
EPCU	Palau Environmental Planning and Coordination Unit
FGD	Focus Group Discussion
FSM	Federated States of Micronesia
GDP	Gross Domestic Product
GEF	Global Environment Facility
ICM	Integrated Coastal Management
IEC	Information, education, communication
IMC	Inter-Ministry Committee
IW	International Waters
IW R2R	International Waters Ridge to Reef Project
IWLCM	Integrated Watershed and Coastal Area Management
IWRM	Integrated Water Resources Management
KII	Key Informant Interview
M&E	Monitoring and Evaluation
MIA	Vanuatu Ministry of Internal Affairs
MIPU	Vanuatu Ministry of Infrastructure and Public Utilities
MLNR	Vanuatu Ministry of Land and Natural Resources
MNRET	Palau Ministry of Natural Resources, Environment and Tourism
MTE	Mid-Term Evaluation
MYCWP	Multi-Year Costed Work Plan
NEPC	National Environmental Protection Council
NGO	Non-governmental organisation
PCS	Palau Conservation Society
PES	Payments for Ecosystem Services
PIC	Pacific Island Country
R2R	Ridge to Reef
RapCA	Rapid Coastal Assessment
RPCU	Regional Programme Coordinating Unit
RSC	Regional Steering Committee
RSTC	Regional Scientific and Technical Committee
SPC	Pacific Community
SPREP	Secretariat of Pacific Regional Environment Programme
STAR	System for Transparent Allocation of Resources
SWM	Stormwater Management
TRCA	Tagabe River Catchment Area
TRMC	Tagabe River Management Committee
TRMP	Tagabe River Management Plan
UNDP	United Nations Development Programme
UNELCO	Union Electrique Du Vanuatu Limited
WQM	Water Quality Monitoring
WSB	Wan Smol Bag

## LIST OF TABLES

Table 1. PICs, Pilot or Demonstration Sites, and Key R2R Components.....	9
Table 2. Major types of land-sea forms and climatic features .....	21
Table 3. Main ecosystems, ecosystems goods and services (EGS) and threats to ecosystems and EGS.....	22
Table 4. R2R-Related Policies and Frameworks at the National, Sub-National Levels .....	27
Table 5. R2R-Related Governance and Planning Processes, Lessons Learned, and Challenges in the PICs six country case studies .....	30

## LIST OF FIGURES

Figure 1 .Emerging Framework for Supply- and Demand-Driven R2 Mainstreaming.....	16
Figure 2. Sample Map Overlay of a Site’s Biophysical and Climatic Features, and Policies and Governance Systems, Threats and Enabling Conditions.....	25
Figure 3. Optimising the Benefits of R2R Mainstreaming – From Natural Capital to Overall Resiliency, Economic and Financial Assets .....	49
Figure 4. Planning for R2R Mainstreaming – local, sub-national, national, sub-regional .....	54
Figure 5. Implementing R2R Mainstreaming Plans – local, sub-national, national, sub-regional ..	55

## FOREWORD

This is the first Technical Report of the Consultancy Team commissioned by the Pacific Community GEM Division through the Regional Program Coordination Unit of the Regional International Waters Ridge to Reef (IW R2R) project.

It presents the results of the documentation of various national sustainable development planning processes and strategic frameworks relevant to the Ridge-to-Reef Approach. The findings here are the triangulated results of secondary research, review of relevant documents, reports, studies, and knowledge products of the IW R2R and STAR Projects, and feedback from relevant stakeholders through (virtual) Key Informant Interviews and Focus Group Discussions.

This Report is intended to inform the formulation of a simple guide that will assist in effectively mainstreaming R2R for sustainable development in the Pacific Region.

## ACKNOWLEDGEMENTS

The Consultancy Team is thankful for the cooperation and support of the GEF IW R2R and STAR Project Managers and key officials, especially for making themselves available during the virtual key informant's interview/focus group discussions despite their hectic schedules and the holiday season (in December 2020 and early January 2021). We also appreciate the relevant documents they shared with the Consultancy Team for this review and analysis.

Likewise, we express our gratitude to the IW R2R RPCU leadership and staff for their suggestions on how the team could move forward with the Terms of Reference using the initial set of RPCU documents, providing links to relevant websites, facilitating invitations and participation of the key members of the RSC and RSTC in the focus group discussions, and endorsing and following up FGD meetings with IW R2R and STAR national managers and government counterparts.

The Consultancy Team

## **DISCLAIMER**

The authors do not accept any liability if this report is used for an alternative purpose for which it is not intended. Request for copies may be sent to the Pacific Community (SPC) in Suva, Fiji.

## EXECUTIVE SUMMARY

This Report presents the results of a review and analysis of available documents, experiences and lessons learned related to the “testing of R2R mainstreaming in six Pacific Island countries (PICs) under the GEF IW R2R Project. The analyses focused on relevant policies, frameworks, planning and governance processes, and lessons, before and during the project implementation, in the context of the dominant bio-geophysical, climatic features and land-sea forms in the PICs. The review also considered the envisioned future of the Pacific island countries with respect to the sustainability and resiliency of their ecosystems and the increasing demand for their ecosystems goods and services (EGS), amid human-induced activities and disasters from erratic weather conditions due to climate change.

The testing of R2R mainstreaming requires multi- and cross-sector coordination, collaboration, and complementation among key sectors. The R2R integrated approach presents a challenge on how national sector policies, institutions, frameworks and plans, and governance mechanisms could be collectively mobilised in support of site level integrated R2R planning and implementation, while still maintaining accountability to individual sector goals, especially with respect to their targets and objectives on biodiversity conservation, climate change adaptation, climate change mitigation, land degradation, sustainable forest management, and secured international waters. Lessons from the planning and implementation activities of the IW R2R and STAR projects provided observation points by which to frame possible R2R mainstreaming options and strategies in the PICs. The findings from the Mid-Term Evaluation, written lessons learned, technical reports (assessments, research, modelling, guides, spatial analysis, among others), and feedback from focus group discussions (FGD) served as the “triangulation points” for the results and recommendations.

In the PICs, especially in the six country case study sites, the challenges remain to be: (a) how sector-based policies, frameworks, programmes and governance processes could be mobilised to support multi- and cross-sector coordinated implementation in R2R sites, (b) how sub-national governments can take increasing roles and responsibilities in planning and implementation including the enactment of more spatial- and science-driven R2R-related policies, and (c) how local stakeholders especially the EGS users and consumers, resource managers such as the traditional/customary/native land and sea owners, private sector and civil society can take self-interested actions to ensure the sustainability and resiliency of the ecosystems and EGS for their own benefits. In addition, there remains the challenge of implementing gender mainstreaming to meet the specific needs of men and women and marginalised groups and ensuring their contributions are valued in development planning.

Overall, the “testing of R2R mainstreaming” in the PICs yielded experiences, lessons and an array of possible practices and measures for improving spatial- and science-based strategies on communication, advocacy, and social marketing; on setting up and strengthening governance processes; and on R2R planning and implementation. These could pave the way towards R2R mainstreaming either through a combination of replication and scaling-up modes at the geographical and institutional levels (e.g., sub-national and national). The following are highlights of the analysis of experiences from the “testing R2R mainstreaming” phase, which constitute considerations and building blocks of possible follow-through R2R programming and implementation in the PICs.

- a. The bio-geophysical and climatic features of the PICs remain fragile, highly susceptible, and increasingly vulnerable to the negative impacts of climate change and human-induced socio-economic and development-related activities. Key volcanic nature land-sea forms such as watersheds, catchments, islands, and atolls and the key ecosystems that supply major ecosystems and goods and services (EGS) supporting agriculture, fisheries,

tourism, and natural resources are emerging to be the main comparative advantages, both for export and sustaining the local economies, for PICs. These sectors will continue to be the PICs key economic drivers to sustain and move forward their sustainable development towards the UN Sustainable Development Goals. Thus, it is a must that the PICs adopt a more coordinated, complementary, and collaborative R2R approach to maintain and enhance their comparative advantages. Sector-focused policies with their well-intentioned programmes and strategies may not be able to fully respond to the increasing challenges of sustaining and improving the resiliency of ecosystems and the EGS they provide.

- b. The six country case studies have adequate R2R-relevant national sector policies (statutory and customary) to deal with the challenges in conserving biodiversity, climate change adaptation, climate change mitigation, land degradation, sustainable forest management and securing international waters. There is limited available data, however, to review and analyse as to how the R2R-relevant national sector policies are translated, adopted, or embedded into the sub-national governments' strategic policies, frameworks, and programmes in support of site level R2R planning and implementation. This is a critical factor in developing R2R mainstreaming frameworks and strategies. National governments need to support and incentivise local buy-ins to setting up sustainable R2R governance systems that are linked with EGS users and consumers and with stable and diversified financing arrangements to serve as catalysts in mainstreaming replication and scaling up of R2R planning and implementation at the geographical, thematic, and institutional levels. Social and gender interventions are important considerations to allow for community buy-in to projects and to ensure a holistic approach. For instance, stakeholder engagement and analyses should be conducted in an inclusive and gender-responsive manner. This way, the rights of women and men and the different knowledge, needs, roles are recognised and addressed.
- c. The PICs' experiences and lessons from the planning and implementation of IWRM, IW R2R and STAR projects with national, sub-national, and local stakeholders provide starting points for refining, improving and mainstreaming R2R replication and scaling up initiatives. Key lessons and promising practices and processes reveal that in the six countries:
  - The communication and information campaigns have contributed to raising awareness on the R2R approach in the demonstration sites, albeit not holistically in some areas. Experiences from these activities could be levelled up towards reaching "upstream and downstream" stakeholders (policy and decision makers and communities, respectively), rather than being focused on specific interventions, if more strategic, wholistic and coherent advocacy and social marketing campaigns become part of the communication strategy;
  - National inter-ministerial coordinating bodies and project steering committees at the local level have been organised with the intention of coordinating and directing collaboration, complementation and partnerships among national agencies, sub-national governments, private sector, and communities. Improvements, however, are needed to enhance inclusivity and in bringing most of these cooperation structures beyond providing guidance and direction mainly on project matters towards strategically targeting desired convergent outcomes and benefits from an R2R approach.
  - R2R site level assessment and planning show that there are opportunities for enhancing the processes and measures through better links to results of spatial



analysis, research, site assessments, consultations with communities and regulatory governance.

- The science to policy modelling and simulation initiatives can be relevant tools before and during the planning and implementation processes as they could inform the protection, restoration, development and enforcement of policies and strategies, and enlighten or refine work plans and actions in re-configuring project interventions after periodic monitoring and evaluation (M&E) activities. There is a need, however, to make these available as audience-appropriate information, education, and communication (IEC) materials to facilitate the buy-in, support and engagement, especially of the local EGS users.
- Setting up and mobilising well qualified and committed project management teams with access to national and international expertise, mentoring and technical support is key to the managers carrying out their tasks of site level mobilisation, coordination, resource mobilisation, providing on-site assistance, monitoring, and analysing implementation progress, and establishing working relationships with communities and other partners.
- Updated spatial- and science- driven site level R2R information and M&E systems are needed to prioritise and plan scale-effective and efficient R2R interventions (including adjustments as necessary), and facilitate the aggregation of R2R outputs at the sub-national and national levels especially in regard to improvements in conserving biodiversity, reducing threats to ecosystems and EGS, enhancing livelihoods, stabilising or improving quality in the supply of EGS to enterprises and consumers, improvements in policies and governance systems, and mitigation and adaptation capacities.
- Adaptive management in pursuit of innovations and to address changing socio-economic and political environments has been realised to be an important feature of country driven R2R programming.
- A mix of capacity building strategies involving more in-depth training combined with on-site coaching and assistance, especially before and during the integrated planning and implementation activities, is a valuable investment in improving local and national capacities, increasing the local supply of R2R specialists and practitioners and institutional providers. The experiences show capacity building involving collaborative work among international experts and institutions and the local counterparts in specific and concrete areas of the latter's work, is useful. The integration of gender considerations in the design, implementation, monitoring, and evaluation of projects ensures that the voices of women, youth, and all other segments of the community are included planning to decision-making processes. Gender inclusion means the inclusion of unique skills, knowledge, and experiences of women, including their roles as primary users and stewards of many natural resources. This supports our understanding of women's involvement in governance in the public and private spheres, to consider how this can change the causal chain and improve environmental degradation.

Based on the bio-geophysical and climatic features, governance systems, and experiences and lessons from testing, the sub-national governments are the emerging possible subsidiary locus in planning and carrying out R2R mainstreaming strategies that will support national policy initiatives and respond to the needs and opportunities at the site level with local stakeholders (tribes and villages, EGS users and urban consumers, customary land and coastal/marine area owners including women, youth and other vulnerable members of communities). Ministries and their field units are

probably much more effective in providing policy and technical advice, capacity building support, facilitating sector policies to be more supportive of site level R2R initiatives, M&E and aligning resources to complement other sectors.

With the sector policies and frameworks, lessons on governance processes, and site level learnings, the PICs are in a better position now to mainstream R2R replication and scaling up. There are opportunities to start again with refinements in the existing R2R demonstration sites, replicative R2R expansion in other land-sea forms in a sub-national unit, and even in other sub-national units.

To move forward, however, national, sub-national and local stakeholders need to have a collective and more strategic understanding of R2R mainstreaming – what it is, its purpose, required scale for effectiveness and efficiency, and benefits. It is also recognised that there is a need for inclusive and gender-responsive stakeholder engagement and participation in decision-making processes that consider the rights of women and men.

This report suggests that a three-stage R2R Mainstreaming with a unifying message be communicated, disseminated and discussed in the PICs. The message is: *“Optimising benefits of R2R mainstreaming by ensuring that natural capital (ecosystems and the EGS they provide) are sustainably transformed into environmental, economic and financial assets based on governance-oriented, holistic, gender and socially inclusive, sustainable and resiliency-focused processes”*.

Furthermore, this report initially recommends that the PICs adopt this three-stage R2R mainstreaming as outlined below. The different stages of the RTR mainstreaming will be gender and socially inclusive.

- a. Scaling up communication, advocacy, and social marketing campaigns based on spatial, bio-geological, climatic, policy, governance and stakeholders’ integrated analysis and unifying message of optimising R2R benefit flows in PICs’ land-sea areas;
- b. Replicating participatory integrated R2R site planning with envisioned R2R benefit flows at the local, sub-national, and national levels; and
- c. Replicating R2R implementation of approved integrated R2R site plans to realise R2R benefit flows at the local, sub-national and national levels.

## I. INTRODUCTION

Over the years, the 14 Pacific Island countries (PICs) have continued to experience increasing threats to the inherent capacities of their environment and natural resources to maintain healthy and resilient ecosystems that ensure sustainable supply of beneficial ecosystems goods and services (EGS).

The PICs originated from past volcanic geological events that resulted into combinations of land-sea forms in high uplifted limestone, low-lying coral island, and atolls. Over the years, communities have developed close links and relations with their environment and natural resources, climatic conditions, key ecosystems and the various EGS that they provide. In the process, men and women have accumulated generations of knowledge and social practices that guide the use and management of natural resources. The geological volcanic origins also led to the gradual emergence of high biodiversity in both flora and fauna. This could be largely attributed to the dynamic interplay of ecosystems functions, processes, edaphic and climatic factors in closely inter-connected and inter-dependent terrestrial, freshwater, and coastal and marine areas ecosystems. Based on project documents, valuations point to forest, coastal and marine, and freshwater ecosystems, as well as agricultural systems as contributing the most benefits. Thus, in the PICs, although there are variations, the main beneficial EGS are water, soil for agriculture, minerals (metallic and non-metallic), fisheries, unique attractions for recreation, forest products (timber and non-timber), wildlife, medicines, and indirect regulating and supporting services such as pollination, water and climate regulation, buffering, maintaining ecological balance and social and cultural values and the like.

Encroachments in conservation areas, growing urbanisation, degradation and loss of habitats, declining soil productivity, overexploitation, pollution and contamination of freshwater and marine waters, and the disastrous impacts of erratic weather conditions are gradually endangering the resiliency and ecological stability of the ecosystems to withstand negative externalities and restore their capacities to function properly. This is critical especially for isolated small islands with volcanic geological origins, limited absorptive and carrying capacities, and high susceptibility/vulnerability to the impacts of climate change. Delicate consideration and balance in allowing/disallowing land and resource uses of EGS and in instituting regulatory governance and resource management in each type of land-sea form could make or break local, sub-national and national economies.

Pacific countries notably Australia and New Zealand, the 14 PICs, UN, international organisations, and developed countries, recognise the fragility and importance of small islands, their vulnerability to natural and human-induced disasters including those that result from improper land and resource uses, urbanisation, pollution, overexploitation, and their limited absorptive and institutional capacity to carry out regulatory governance and resource management. The PICs are indispensably significant from the perspective of their unique locations, navigation, peace and security, climate change, biodiversity, and international waters. Each PIC offers opportunities to put in place systems where ethnic communities, strongly bound by their culture and traditions and culturally rooted relations with the environment, develop resiliency against the hazards of erratic weather conditions, amid changing local and national economies, and growing political and economic interests of developed countries. Developing resilience of PICs will require a holistic approach, considering modernisation and changes to culture and traditional uses and management of resources and the need to ensure a more gender and social inclusive approach that considers current governance systems and the changing roles and responsibilities of men and women.

Considering the above, the Pacific Community (SPC) and the United Nations Development Programme (UNDP) put in place integrated resource management in various land-sea forms with the support of the GEF Pacific R2R programme<sup>1</sup>. The programme covers the focal areas of biodiversity, climate change adaptation, climate change mitigation, land degradation, sustainable forest management, and international waters. The initiative builds from the earlier lessons and experiences of the GEF Pacific Integrated Water Resources Management (IWRM) Project.

The GEF Pacific R2R programme “*aims to maintain and enhance PICs ecosystem goods and services through integrated approaches to land, water, forest, biodiversity and coastal resource management that contribute to poverty reduction, sustainable livelihoods and climate resilience*”. It “*embraces the interconnections between the natural and social systems in a whole of island approach from the ‘ridges’, through coastal watersheds and habitats, and across coastal lagoons to the fringing ‘reef’ environments*”<sup>2</sup>. The approach emphasises the collaboration and participation of key stakeholders (on- and off-site communities, sub-national and national governments, sectoral agencies, private sector groups whose operations depend on ecosystems goods and services) to jointly develop national, sub-national, and site level R2R “integrated multi-sectoral” frameworks and/or plans that would serve as a road map for managing institutional and financial resources to achieve R2R goals and objectives. This is described by the 14 Pacific island countries as the ‘community to cabinet’ approach. It is also recognised that for projects to meaningfully contribute to poverty reduction, sustainable livelihoods and climate resilience, there is need for gender and socially inclusive discussions with stakeholders at the community level.

The programme, recognising the PICs geology, climate, biodiversity assets, major EGS and the opportunities they offer as well as their threats, on- and off-site stakeholders including the customary or traditional laws and practices of communities that affect the EGS, has initiated pilots to reduce environmental stresses and sustainably manage ecosystems and their EGS, through mainstreaming of R2R strategies and correspondingly, implementation of various conservation-link techno-socio-economic packages and activities. It has supported selected national, sectoral, sub-national and site-specific R2R strategies. These strategies are gender and socially inclusive with gender mainstreaming a necessary component of project implementation in pilot sites. Learnings (emerging practices, lessons learned) from GEF Pacific R2R programme were expected to facilitate possible R2R replications and scaling up in other land-sea forms such as watersheds in large islands from uplifted limestone origins, catchments, islands and atolls, inland waters (such as lakes), and coastal and marine areas. The learnings may be also useful to biophysically- or legally defined protected sites and their surrounding area, defined political units, or large customary-owned land-sea forms.

---

<sup>1</sup> UNDP/GEF SPC/CPS. (2015). Ridge to Reef - Testing the Integration of Water, Land, Forest & Coastal Management to Preserve Ecosystem Services, Store Carbon, Improve Climate Resilience and Sustain Livelihoods in Pacific Island Countries (Project Document); Approved MYCWP/Updated Logframe of IW R2R Projects. The Document states that: “The purpose of the project is to test the mainstreaming of ‘ridge-to-reef’ (R2R), climate resilient approaches to integrated land, water, forest and coastal management in the PICs through strategic planning, capacity building and piloted local actions to sustain livelihoods and preserve ecosystem services. This regional project provides the primary coordination vehicle for the national R2R STAR Projects that are part of the Pacific R2R Program, by building on nascent national processes from the previous GEF IWRM project to foster sustainability and resilience for each island through: reforms in policy, institutions, and coordination; building capacity of local institutions to integrate land, water and coastal management through on-site demonstrations; establishing evidence-based approaches to ICM planning; improved consolidation of results monitoring and information and data required to inform cross- sector R2R planning approaches. This project will also focus attention on harnessing support of traditional community leadership and governance structures to improve the relevance of investment in ICM, including marine protected areas, from ‘community to cabinet’.

<sup>2</sup> Project documents and Regional Communications Strategy for the GEF Pacific Ridge to Reef Programme (2016).

The Pacific Community (SPC) recognises the complexity of the R2R approach especially its “*wide-ranging environment management and governance architecture*”. The GEF Pacific R2R programme considers the major challenge to be the translation of national and sectoral policies into doable, coordinated, collaborative, complementary and directed integrated plans, implementation arrangements, and local policy development. It also recognises the need for these policies to be aligned to local customary and traditional systems and mechanisms, which guide resource use at the community level, thus the importance of a good understanding of the cultural diversity in PICs. This is particularly relevant in how gender considerations are incorporated into or will be impacted by ICM plans and implementation arrangements. Ideally, the localised R2R plans would integrate strategies, processes and interventions that would ensure science-based and community-supported land and resource uses in each pilot island/atoll, and other land-sea forms to improve or strengthen the resiliency and inherent capacities of biodiversity assets to provide EGS to immediate communities and the increasing population in urban centres. But there have been limited experiences in translating sectoral environmental and natural resource policies in collaboration with other related sectors in defined units of land-sea forms.

The Pacific islands region remains a ‘special case’ with its own unique characteristics and vulnerabilities. With a range of domestic sector priorities, R2R integrated approaches can play significant roles in ensuring national and economic security, and even the survival of local populations impacted by extreme natural disasters including climate change. Inclusive and gender sensitive engagement of local communities in the R2R approach is imperative to ensure that projects do not exacerbate existing gender-based inequalities. In community consultations, there should be consideration of consulting with male and female beneficiaries/stakeholders both separately and in mixed groups. In some cultures, men will not speak about certain issues in front of women and vice versa.

The major comparative advantages of PICs in relation to export to other countries are largely based on their potential to increase productivity of agriculture, improve tourism-related goods and services, and sustainable use of natural resources.<sup>3</sup>

The PICs agree with the fundamental benefits of holistic and integrated approaches, but a few are choosing options with short term gains through indiscriminate exploitative means especially in the mining, forestry, and fisheries sectors. Therefore, it is plausible that under dire circumstances, sector approaches may offer quick ‘fixes and solutions especially in situations where exploitation is deemed to be the top contributor to the GDP of those PICs with weak and vulnerable economies. In the end, however, the economy will gradually suffer if indiscriminate and unsustainable exploitation continues into perpetuity as the inherent capacities of the environment and natural resources are compromised especially in small island countries.

As a follow up to the IWRM project, the GEF IW R2R project was launched as a “testing R2R mainstreaming” initiative. This review is intended to filter out lessons learned from the experiences from the planning and implementation of several sub-components and activities in six (6) case study sites during this testing phase. Analysis is expected to reveal key lessons from reflections of what worked, what did not work, what partly worked, how and why. In this review, shortcomings, gaps, inadequacies and even failures are treated as possible “building blocks” of innovative and adaptive R2R mainstreaming<sup>4</sup>.

Results from this testing phase are considered neutral with respect to whether the tested R2R approach has been appropriate or effective. The lessons – pitfalls and emerging successes – could not have been learned if not through the process of testing measures and interventions with

---

<sup>3</sup> Chen H, L Rauqueqe, S Raj Singh, Y Wu, and Y Yang. (2014). ‘Comparative Advantage of PICs (in Exports): Pacific Island Countries: In Search of a Trade Strategy’. IMF Working Paper (WP/14/158/ Washington DC: International Monetary Fund.

<sup>4</sup> Drucker P. (1985). Innovation and Entrepreneurship: Practice and Principles. Collins Business. 277 p.

participating countries over the years. The lessons from the testing phase and those from completed and ongoing initiatives in other countries are thus considered “launching pads” for possible R2R mainstreaming geographically, thematically and/or institutionally in PICs. The outputs and outcomes from the IW R2R testing phase are also useful as baselines, by which succeeding initiatives may be improved, refined, re-designed either for replication or scaling up. Key features from R2R state of the art practices and lessons from the IW R2R and STAR R2R experiences are used as “lens” in looking at key R2R mainstreaming variables such as strategy, steering, cooperation, processes, and innovation, and include consideration of social and gender inclusion factors. Lessons from the testing phase constitute significant guideposts for any R2R mainstreaming in PICs.

This report is a summary of highlights of bio-geophysical, climate, ecosystems and EGS and the major threats in PICs; key policies and governance processes; and lessons from the testing phase of R2R mainstreaming. The implications of the highlights and lessons were viewed in the light of emerging key features of R2R frameworks. In the end, the implications of the review revealed possible pathways for R2R mainstreaming in PICs. They are briefly discussed as part of the implications section with respect to an emerging R2R mainstreaming framework in PICs.

There are limitations to the findings and conclusions from this report, which heavily relied on available documents and reports including key information from IW R2R mid-term evaluation narratives. The desk review also acknowledges the travel constraints brought about by the COVID-19 pandemic. Visits and consultations with key stakeholders in the six countries would have strengthened the reflection and validation process in filtering out the lessons, processes and R2R measures that were carried out. Nevertheless, this report provides a summary of lessons that substantiate the emerging R2R mainstreaming framework, details of which will be discussed in Report No 2.

## Objectives

1. Document various national and regional (Pacific islands region) sustainable development planning processes, strategic frameworks, and related activities, and carry out critical analyses providing best avenues for mainstreaming R2R in PICs.
2. Develop a simple guide for mainstreaming R2R in the Pacific islands region to be presented at the Regional Investment Planning Forum.

## Expected Outputs

The Terms of Reference stresses that the consultancy team will submit four outputs for the review and acceptance of SPC/RPCU.

1. Output 1 – Completed documentation of various national (and regional) sustainable development planning processes, and strategic frameworks;
2. Output 2 – Guide for mainstreaming R2R;
3. Output 3 – Completion of presentation on the documentation and guide (i.e., consolidated report and corresponding annexes); and
4. Output 4 – Brief report and power point presentation on the participation in the pre-regional investment forum or Regional Investment forum or Regional Steering Committee meeting.



Table 1. PICs, Pilot or Demonstration Sites, and Key R2R Components<sup>5</sup>

Country/Lead Agency	Key R2R IW Pilot Components
<p><b>Federated States of Micronesia (FSM)<sup>6</sup></b></p> <p>Kosrae Conservation and Safety Organization</p> <p>Micronesia Sub-Region</p>	<p>Demonstration of innovative approaches to <b>Integrated Ridge to Reef Catchment Management in Kosrae</b>, Federated States of Micronesia</p> <p>Kosrae State: Tofol Catchment Freshwater Resources Management Plan established following the R2R approach</p> <p>Kosrae State and local capacity for improved Integrated Ridge to Reef Catchment Management built to enable best practice in coastal waters, land, and public health protection</p>



R2R Mainstreaming consultation with Ridge to Reef Federated States of Micronesia team

<sup>5</sup> UNDP/GEP SPC/CPS. (2015); Approved MYCWP/Updated Logframe of IW R2R Projects.

<sup>6</sup> FSM IW R2R Project Pilot Activities. Project Progress Report as of June 2018. Retrieved from [https://www.pacific-r2r.org/sites/default/files/2020-03/Project\\_Progress\\_Federated%20States%20of%20Micronesia.pdf](https://www.pacific-r2r.org/sites/default/files/2020-03/Project_Progress_Federated%20States%20of%20Micronesia.pdf).

Country/Lead Agency	Key R2R IW Pilot Components
<p><b>Palau<sup>7</sup></b></p> <p>Ministry of Natural Resources, Environment &amp; Tourism</p> <p>Micronesia Sub-Region</p>	<p>Strengthening coordination in support of the implementation and national replication of the <b>5-Year Airai State Watershed Management Plan</b></p> <p>Strengthening the capacity for <i>participatory monitoring and evaluation</i> of the 5- Year Airai State Watershed Management Plan to strengthen the enabling environment for catchment management in Palau</p> <p>Establishing <b>public-private partnerships</b> for tourism sector investment in IWLCM in Palau</p>



R2R Mainstreaming consultation with Ridge to Reef Palau team

<sup>7</sup> Sayer. (2013). Ten lessons learned in landscape; Cernea MM. (1985). Putting People First: Sociological Variables in Rural Development. World Bank Publication; and Guiang ES. (2012). A Suggested Road Map for DENR’s Replication and Scaling Up of Governance-Oriented Integrated Ecosystems Management. DENR-World Bank-GEF Environment and Natural Resources Management Program, FASPO/DENR, Quezon City, Philippines.



Country/Lead Agency	Key R2R IW Pilot Components
<p><b>Fiji Islands<sup>8</sup></b></p> <p>Ministry of Waterways and Environment</p> <p>Melanesia Sub-Region</p>	<p>Strengthening capacity for watershed assessment, mapping, and planning in <b>Waimanu Catchment</b></p> <p>Reducing stress on vulnerable freshwater resources by the development and implementation of the Waimanu Catchment integrated management plan following the R2R approach</p> <p>Developing the enabling environment for the replication and scaling-up of best practices in watershed management</p>



R2R Mainstreaming consultation with Ridge to Reef Fiji IW team

<sup>8</sup> Amended Fiji IW R2R Project Logical Framework, dated 13th of Aug 2019. Sourced from IW R2R RPCU.

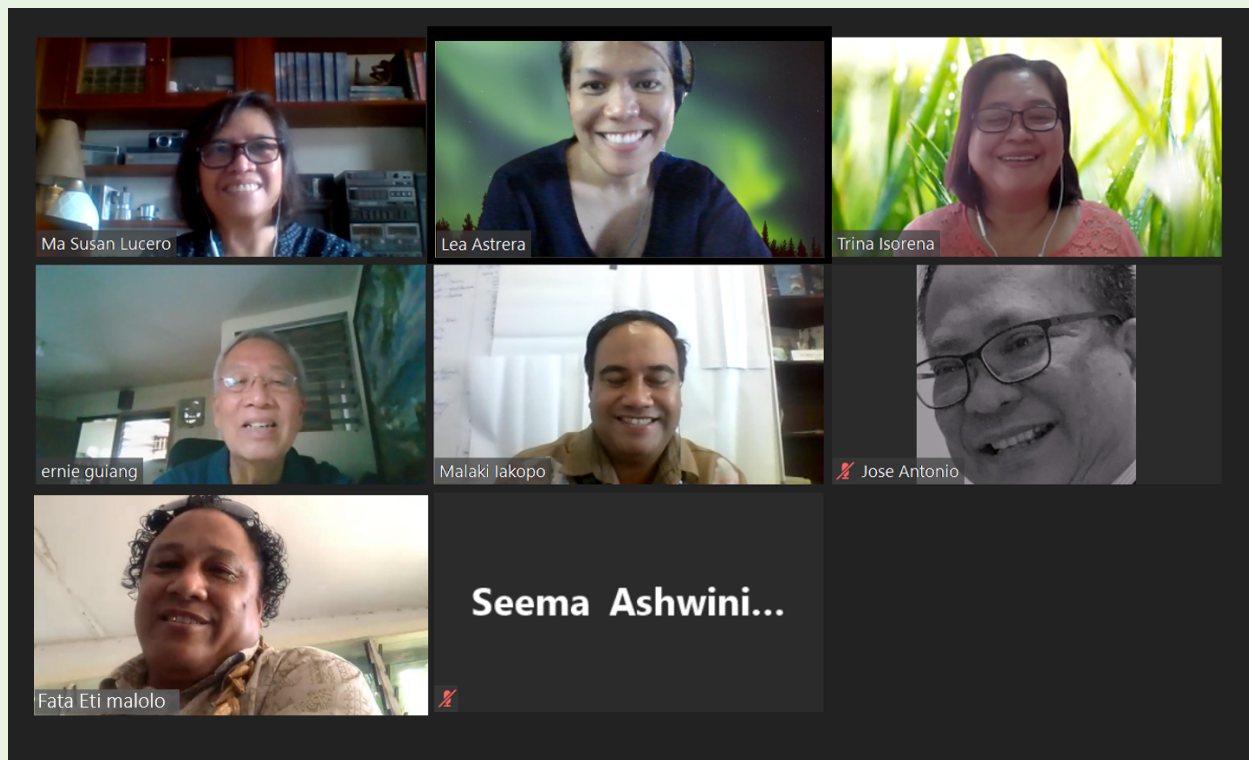
Country/Lead Agency	Key R2R IW Pilot Components
<p><b>Vanuatu<sup>9</sup></b></p> <p>Department of Environmental Protection &amp; Conservation</p> <p>Ministry for Climate Change</p> <p>Adaptation, Meteorology, GeoHazards, Environment, Energy and Disaster Management</p> <p>Melanesia Sub-Region</p>	<p>Strengthening coordination in support of the development and implementation of the <b>Tagabe Catchment</b> integrated Management Plan following the R2R approach</p> <p>Strengthening the capacity for participatory monitoring and evaluation of the Tagabe River Catchment R2R management plan to strengthen the enabling environment for coastal area management</p> <p>Establishing partnerships for sustainable coastal area development</p>



R2R Mainstreaming consultation with Ridge to Reef Vanuatu team

<sup>9</sup> Enhanced IW R2R Vanuatu Project Log Frame. Sourced from IW R2R RPCU.

Country/Lead Agency	Key R2R IW Pilot Components
<p><b>Samoa<sup>10</sup></b></p> <p>Ministry of Natural Resources and Environment</p> <p>Polynesia Sub-Region</p>	<p>Increasing knowledge-base and national replication of catchment management planning to strengthen management links between catchment and coastal areas</p> <p>Increasing capacity for effective environmental stress reduction practices and sustainable watershed management in the Fagalii Catchment</p> <p>Strengthen support of the National Environment Sector Plan to enhance the mainstreaming of watershed conservation policies in national reporting</p>



R2R Mainstreaming consultation with Ridge to Reef Samoa IW team

<sup>10</sup> Updated Samoa R2R Logframe Extension Request as of Nov 2019. Sourced from IW R2R RPCU

Country/Lead Agency	Key R2R IW Pilot Components
<b>Tuvalu</b> <sup>11</sup> Department of Waste Management - Ministry of Home Affairs and Rural Development Polynesia Sub-Region	Demonstration of innovative approaches to pig waste management on <b>Funafuti Atoll, Tuvalu</b>  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  National and local capacity for waste management implementation built to enable best practice in coastal waters, land, and public health protection



R2R Mainstreaming consultation with Ridge to Reef Tuvalu team

## Methodological Approach and Duration

A purposive literature review of available R2R-related publications from several websites was carried out to gauge the state of the art or knowledge related to integrated development approaches. Features of R2R-related frameworks combined with the authors' experiences and background served as initial "lens" in gathering, organising, analysing reports, filtering lessons and practices during the planning and implementation of the "testing of R2R mainstreaming" by the IW R2R project and to some extent, the initiatives of the STAR projects. Further review of R2R-related literature and related documents of IW R2R and STAR projects also helped in crafting a simplified logic statement as a guide for analysis. The team endeavoured to compile these documents in this virtual repository: [Annex A \(Compendium of References relevant to R2R mainstreaming in the Pacific\)](#).

<sup>11</sup> Tuvalu IW R2R Project Overview. Retrieved from Tuvalu | SPC-R2R (pacific-r2r.org).



Briefing meetings with the RPCU and participation in the RSC and RSTC meetings also were helpful in the analysis as they opened opportunities for interaction with the RPCU staff, country stakeholders and implementers. The meetings enhanced broader appreciation of issues and challenges in the PICs R2R planning and implementation.

As shown in Table 1, the review was carried out in only six of 14 PICs, representing their experiences in mobilising, planning, implementing R2R approaches as sub-regions. Experiences and lessons from other countries were also reviewed but mostly from documents and reports.

With the initial review of R2R-related documents, the process of formulating the “*If, Then and Thereby*” logic statement was carried out, to make sense of the connections of the activities undertaken in the demonstration sites (sub-national and national level IW R2R and STAR activities) to chains of pathways reflective of the envisioned future in each land-sea form in each PIC. The logic statement was simply used to “position” and understand the various processes, interventions, and measures that were designed, supported and implemented over the course of the projects within an R2R logic. The logic statement was not crafted for the purpose of evaluation but to help filter out lessons learned from the planning and implementation activities. Although both IW R2R and STAR were the focus in carrying out the case studies, the logic statement started with the key sub-components of the former since it was designed for “testing the R2R mainstreaming process”.

***IF*** national and local stakeholders understand the importance of and support the testing of planning and implementing integrated multi-sectoral strategies for managing water, land, forests, coastal resources, and biodiversity (IWRM/ICM) in land-sea forms to ensure sustainable supply of EGS in each PIC as a result of:

- Established demonstration sites to support R2R ICM/IWRM approaches for island resilience and sustainability (Program Component 1);
- Investments in island-based human capital and knowledge enhancement to strengthen national and local capacities for R2R ICM/IWRM planning and implementation that incorporate climate change adaptation (Program Component 2);
- Mainstreamed R2R ICM/IWRM approaches into national development planning (Program Component 3);
- Established regional and national R2R indicators for reporting, monitoring, adaptive management, and knowledge management (Program Component 4); and
- Established R2R regional and national coordination mechanisms (Program Component 5),

***THEN***, the Regional IW Ridge to Reef (IW R2R) programme has substantially supported the PICs’ efforts to mainstream R2R approaches for integrating land, water, forests, coastal resources, and biodiversity; and

***THEREBY***, significantly contributed lessons learned towards the PICs R2R’s vision of “maintained and enhanced PICs ecosystem goods and services” to help reduce poverty, sustain livelihoods, and build up climate resilience.

The logic statement provided an organised way of formulating focus group discussion (FGD) guide questions and filtering or drawing out lessons learned from the mid-term evaluation report, periodic project reports, technical assessments, studies and feedback or responses from the FGD discussions in each country case study site.

Experiences and feedback from the R2R demonstration sites, whether they have been successful or not with respect to the project outputs and outcomes, provide indicators as to the “doability,

effectiveness”, and possible replication and/or scaling up of measures or practices. After all, lessons learned are additional knowledge gained from completed processes, interventions, and activities. *They* reflect what worked, what didn’t work, what partly worked and why.

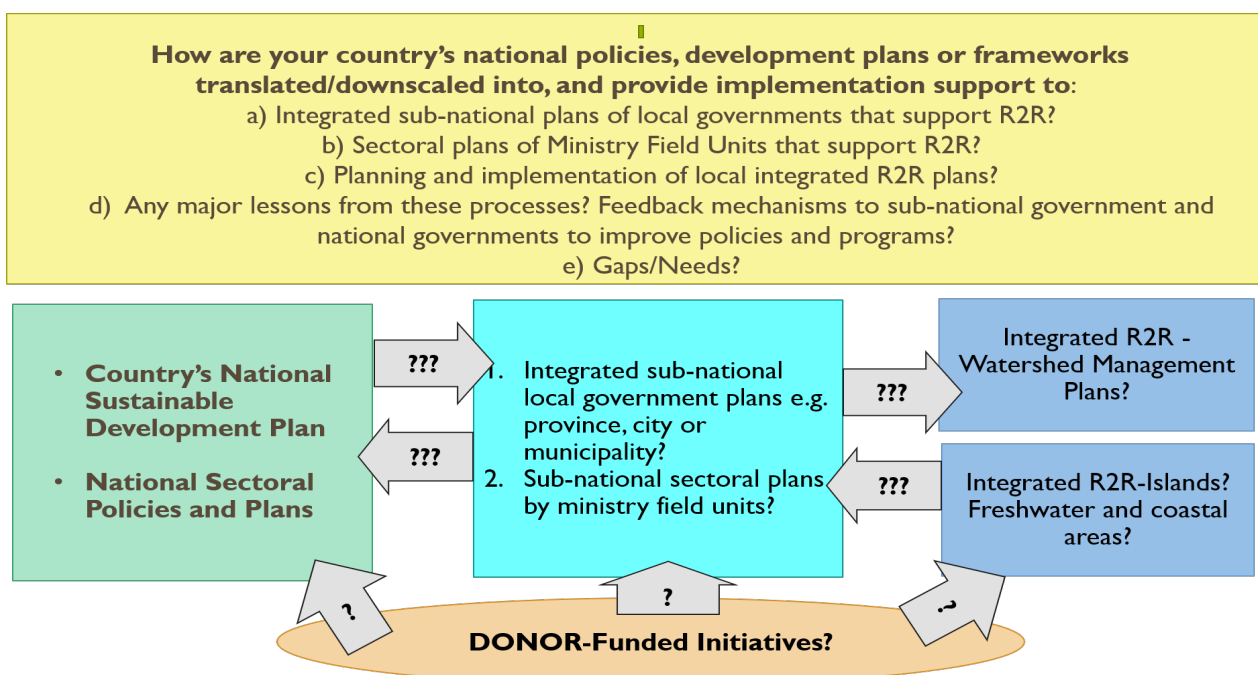
Lessons are building blocks in **determining** next set of “**innovations**” either for R2R approach replication or for scaling up, rather than for pinpointing blame for actions during the planning and implementation processes. They are perceptions of what are or could be made possible at the local level, expressions of “buy-in” or ownership regarding national direction, policies, and strategies. As a “testing R2R mainstreaming” project, the review notes the R2R-related lessons and challenges with respect to the processes in integrating sector concerns (forestry, agriculture, fisheries, biodiversity) in planning and implementing coordinated activities in an R2R site.

The lessons reflect *hindsight analysis* and reflections of past events, activities, and processes from the R2R piloting processes. They served as “observation points” for analysis and formulation of conclusions regarding the formulation of R2R mainstreaming options. They are treated as benchmarks for future programming and actions. Inadequacies, weaknesses, or even failures are regarded as opportunities to learn and move forward, pursue innovative action, and confronting expected challenges<sup>12</sup>.

The *if, then, thereby* approach reflects the inductive logic of the review and documentation of lessons learned from the testing of R2R mainstreaming in PICs. This is consistent with the approach of “looking *at* lessons from the processes and activities in piloting the R2R mainstreaming *along* the pathway of the greater vision of R2R at the national and regional levels”.

An important methodology supplementing the secondary data gathering process was the conduct of key informant’s interview (KII) or focus group discussion (FGD) in each of the six (6) country case study sites. The KIIs/FGDs were partly designed to validate initial emerging lessons learned and get on-site feedback from the key players in the planning and implementation of the IW R2R and STAR projects. The generic guide that was used for the KIIs/FGDs is presented in Figure 1. This framework was used as the basis for preparing country-specific power point presentations that guided the KIIs/FGDs.

Figure 1 . Emerging Framework for Supply- and Demand-Driven R2 Mainstreaming



<sup>12</sup> ibid.

The power point presentations (compiled in [Annex B. KII/FGD Guide](#)) provided the broad outline of the team's emerging framework for R2R mainstreaming in the PICs, which in turn summarises an approach that supports the goals/outcomes of Regional IW R2R and STAR and permits analysis of how the results of their activities converge and contribute towards each PIC's R2R envisioned future.

As an emerging framework, it considers *lessons learned, practices or interventions, processes, issues, and challenges in the national demonstration sites within the context of the larger picture, or the R2R mainstreaming pathway, as envisioned in the regional and national multi- and sector policies and frameworks*. The supply-driven pathway is provided by national and sub-national policies and sector frameworks that are translated into plans for implementation in R2R sites, which could be possibly supported by donors or the governments.

The framework captures how the regional, national (multi-sector and sectoral), sub-national and R2R site policies and governance processes (including planning) and strategic frameworks are translated/downdscaled to support the integrated, collaborative, complementary and coordinated planning and implementation of R2R strategies in selected land-sea forms. Lessons on effective and efficient implementation of site-specific R2R strategies to address challenges in biodiversity conservation, climate change resiliency, land and coastal/marine area degradation, sustainable forest management and international waters are key to mainstreaming R2R replication and scaling up at the local, sub-national, national, and among the PICs, as they face the challenges of coping with hazards and disasters resulting from erratic weather conditions and human-induced occurrences of negative environmental externalities from increasing demand for EGS-related livelihoods, enterprises, businesses, economic activities and urbanisation. Learnings along the supply-driven pathway are important as they reflect the government and private sector willingness to adopt R2R approaches in critical R2R sites. This is the reason why the national sector policies must be translated into ground realities and supported by decentralised governance processes if they are to serve as catalysts of R2R approaches.

In this framework, lessons from the on-site R2R planning and implementation from the stakeholders reflect the "buy-in" to the R2R approach. In most cases, problems and issues typically mimic the limitations and weaknesses of supply driven R2R strategies that may not be responsive to what the stakeholders want and are willing to carry out. Without buy-in from the local stakeholders, supply-driven initiatives are simply pushing R2R activities uphill and, therefore, ultimately are not effective and efficient. It is important for policy makers (local, sub-national- and national, civil society, implementing organisations and donors) to capture what changes are needed in sub-national and national policies and programmes to be responsive to the needs and opportunities at the local level. There must be mechanisms to communicate national and sub-national level policies and programmes to the local stakeholders, and for the local communities to express and advocate the changes that they propose in the policies and programmes of the governments and donors. This requires commitment to gender and social inclusive approaches and conducting in-depth analyses to understand existing social systems and functions.

The framework highlights the need to filter out lessons that will guide the R2R mainstreaming in developing processes and interventions that will support self-interested stakeholders (on-site communities, customary/traditional land, and sea owners, EGS users, local governments, civil society, local leaders, among others) in areas with high susceptibility to natural and human-induced hazards and disasters to take concerted actions in achieving the R2R goals and objectives. Self-interested stakeholders are the key to improving resiliency and reducing the overall hazard vulnerability of ecosystems, communities and their livelihoods, social and infrastructure support systems, and

urban centres.<sup>13</sup> Stakeholders that may show interest in many cases are linked to customary/traditional land and sea owners at the community level and working within links and customary and social associations that exist between these self-interested stakeholders is also key to improved engagement. Self-interested stakeholders which include onsite communities, traditional land and sea owners live in complex societies which require a good understanding of the roles of men, women, leaders, and other key stakeholders in communities.

With functional site-level management and information systems combined with targeted analysis, reporting, and upstream marketing (advocacy) to reach out to policy and decision makers, it is possible that R2R mainstreaming may get to a “tipping point” where R2R will take its own course as an approach to enhance the sustainable supply of EGS for the benefit of human wellbeing. This is what is represented by the framework’s feedback mechanism – how lessons from R2R sites are expected to contribute to the improvement of R2R-related policies and programmes at the sub-national, national, and regional levels.

[Annex C. KII/FGD Documentation](#) compiles all the written documentation and video recordings of virtual meetings conducted with the six focal PICs.

---

<sup>13</sup> Sayer. (2013). Ten lessons learned in landscape; Cernea MM. (1985). Putting People First: Sociological Variables in Rural Development. World Bank Publication; and Guiang ES. (2012). A Suggested Road Map for DENR’s Replication and Scaling Up of Governance-Oriented Integrated Ecosystems Management. DENR-World Bank-GEF Environment and Natural Resources Management Program, FASPO/DENR, Quezon City, Philippines.



## II. HIGHLIGHTS OF THE REVIEW

This section provides a summary of the key features of R2R-related frameworks that were briefly reviewed; major bio-geophysical and climatic features and R2R-related sector policies in the six country case studies, summary of key lessons learned, country-specific lessons, and promising R2R practices for possible R2R mainstreaming. A synthesis of this section directly and indirectly provided lens for offering the recommendations for R2R mainstreaming in PICs. The features of the R2R-related frameworks served as initial “lens” for the review and analysis of IW R2R experiences, lessons, and minutes of FGD meetings in the context of the bio-geophysical and climatic features and related policies in PICs especially in the six country case study sites. These are encapsulated in a short [Power Point presentation \(Annex D\)](#), which was briefly presented before the RSTC-Technical Consultation Meeting in February 2021.

### A Treatise of Some R2R-Related Frameworks

Since the R2R approach has emerged as a strategy for integrated rural development, it has benefited from several iterations of “integrated development frameworks” over several decades of experience. The list below provides a rough summary of several integrated approaches from the past up to the present time. Some of these frameworks are well documented while some only popped up as a result of donor-funded initiatives.<sup>14</sup>

1. Integrated Area Development (IAD), which appeared to be a fad in the late 1960s up to the 1980s, focused on land development, infrastructure, and key socio-economic issues.
2. Integrated River Basin Management emerged in the 1960s and Integrated Watershed Resource Management (IWRM) in the 1990s. Both continue to be used as frameworks for coordination and collaboration in a bio-physically defined area such as river basins with large watersheds or watersheds with major catchments or sub-watersheds. In some cases, the IAD approach has been planned and implemented in a specific river basin to address major flooding, subsidence, agriculture, and infrastructure development.
3. Integrated Coastal Resource Management (ICRM or ICM) from the 1990s remains popular especially in countries that are dominated by islands with extensive coastal lines. It focuses on the integration of the protection and development of coastal and marine areas, key marine and coastal resources, and the EGS from these assets especially with increasing urbanisation, demand for fisheries, worsening pollution, and international navigation and commercial fishing activities.
4. Integrated Ecosystems Management (IEM) has been promoted since the late 1990s by the Convention of Biological Diversity to connect biodiversity with larger landscape-seascapes, development processes and increasing use of EGS.
5. Integrated Resources Management (IRM) came out in the late 1990s or early 2000s and is almost similar to IWRM or the R2R approach and focuses on how key environment and natural resource management (ENRM) sectors and governance variables interact.

---

<sup>14</sup> See for instance the following references: Carino, BV. (1997). A Review of Integrated Area Development (IAD) Projects. *Philippine Review of Economics*, vol. 34, issue 2, 208-238; Dahl C. (1997). ‘Integrated coastal resources management and community participation in a small island setting’. [https://doi.org/10.1016/S0964-5691\(97\)00018-5](https://doi.org/10.1016/S0964-5691(97)00018-5). Wang, G, et. al. (2016). ‘Integrated watershed management: evolution, development and emerging trends.’ *Journal of Forestry Research* volume 27; Scherr SJ, K Heinen, LE Buck, and J Reed. (2015). *The Little Sustainable Landscape Book: Achieving sustainable development through integrated landscape management*. Research Gate

6. Ridge to Reef Management (R2R) has grown out of IWRM in the late 1990s or early 2000s. It is still being used as a framework especially in watershed-dominated landscape-seascapes to enable planners and implementers to link terrestrial land and resource uses with the sustainable development and management of the lowlands and coastal areas.
7. Integrated Landscape Restoration and Management (ILRM) or other similar phrases which emerged in mid-2000 is an approach advocated by international agencies to integrate climate change, biodiversity conservation, REDD+, restoration efforts, governance, and socio-economic development.
8. Integrated Conservation for Sustainable Development is an emerging iteration of the R2R framework in response to the increasing pressure to link biodiversity initiatives with development agenda at the local level.

Most of these R2R-related frameworks promote coordination, collaboration, and complementation in recognition of the interconnectedness among sectors, ecosystems, development, infrastructure, and social services support to the increasing demand of the population and economy. Recent iterations which now mostly appear as “integrated landscape management” underline the indispensable role of well-defined landscape-seascape or land-sea form boundaries as the starting point, identifying and strengthening the most appropriate governance systems including leadership and technical competence in resource management and development, linking the ecosystems and EGS to markets (EGS users including enterprises, consumers, farmers, fisher folks, and other households that are highly dependent on EGS for their livelihoods), and financing.<sup>15</sup> In PICs, existing governance systems are complex and governed by different cultural and social structures which, in many cases, can exclude members of the community. Thus, gender and socially inclusive approaches are important starting points in project development and implementation. These R2R catalysts ensure that issues and threats are properly and technically addressed over time to achieve the envisioned future. Depending on the condition of the land-sea forms or landscape-seascape, strategies may be prioritised to deal with challenges related to biodiversity conservation, climate change mitigation, climate adaptation, reducing negative externalities because of the inter-connectedness, interdependence and intergenerational impacts of ecosystems and EGS uses, payments for ecosystems goods and services (PES)<sup>16</sup> as a major source of internally-generated financing, balancing EGS uses (that may result to depletion and contamination) and protection and regulation, and sustainable multi-source R2R financing systems over time that may include public, private, PES, community counterparts and donors.

---

<sup>15</sup> Scherr SJ, K Heinen, LE Buck, and J Reed. (2015).

<sup>16</sup> Payment for Ecosystems Services (PES) is broadly defined as “a voluntary transaction for a well-defined environmental service purchased by at least one environmental service buyer from at least one environmental service provider, if and only if the environmental service provider meets the conditions of the contract and secures and environmental service provision (United Nations, 2009)

## Key Bio-Geophysical and Climatic Features of the Six Country Case Studies

In the six country case studies (as shown in Tables 2 and 3), the dominant R2R land-sea forms are islands including atolls, watersheds, catchments within larger watersheds or deltas and wetlands as part of large watersheds, lagoons, lakes, and coastal and marine areas. The major ecosystems may include a mix of forests, freshwater (rivers and inland waters), agricultural, mangroves, urban, and coastal and marine. Valuation studies (from project documents) show that forest and marine and coastal and coastal areas provide the most highly valued EGS. These ecosystems, if properly and sustainably managed, can strengthen climate change resilience, reduce vulnerability of communities and their livelihoods, and offer the highest value in terms of spiritual/educational/cultural services. The climatic features in the six countries represent typical tropical conditions with relative medium to high rainfall with wet and dry seasons (ranging from 2500 mm to 4000 mm), occurrences of cyclones and storms with dry and rainy months.

Table 2. Major types of land-sea forms and climatic features

SUBREGIONS		Land and Sea Forms	Climatic Features
Micronesia	FM	High volcanic mountains and low-lying atolls	<ul style="list-style-type: none"> <li>Mean annual rainfall is 3800 mm; highest in Jul (370 mm) and lowest in Feb (197 mm); Main wet season May to Sep; Typhoon season Jul-November</li> </ul>
	PW	Volcanic islands with catchments, flat karst islands, low-lying atolls	<ul style="list-style-type: none"> <li>Mean annual rainfall is at 3700 mm, highest 450 mm (Jun &amp; Jul), lowest 200 mm (Mar &amp; Apr); Main wet season May to October</li> </ul>
Melanesia	FJ	High volcanic islands, with catchments, barrier reefs, atolls, sand cays and raised coral islands	<ul style="list-style-type: none"> <li>Annual Average 3000 mm to 4800 mm with wet season (Jan-Mar; lowest in Jul (100 mm); Spatial variation in annual rainfall in Fiji's most populous island, Viti Levu, stronger rainfall on its east side compared to its west</li> </ul>
	VU	Part of volcanic island arc, characterised by high jagged mountains; watersheds, active volcanic eruptions, and earthquakes	<ul style="list-style-type: none"> <li>Mean annual rainfall is 2700 mm; varies with latitude, from wet tropical in the northern islands receiving 4000 mm to 1500 mm in subtropical in the southern extremes of the archipelago</li> <li>Cyclones are common during the warm months of Nov to April</li> </ul>
Polynesia	WS	Significant part of major islands are rugged volcanic mountains with watersheds; lagoons and coral reefs and sandy beaches	<ul style="list-style-type: none"> <li>Mean annual rainfall is 3000 mm and distribution patterns are influenced by the island topography, the meridional migration of the South Pacific Convergence Zone (SPCZ)</li> <li>Rainy and warm (Nov-Apr), and dry and cool (May-Oct), which are marked by significant differences in rainfall; 120 mm in Jul and 400 mm in Jan.</li> <li>Severe tropical cyclones occur in December to February.</li> </ul>
	TV	Reef islands and atolls; very low-lying lands, with narrow coral atolls; the reef islands are described as reef platforms and lagoons.	<ul style="list-style-type: none"> <li>High mean annual precipitation (2500 mm to 3000 mm); Tropical cyclone season from Nov to Apr and the dry season from May to October.</li> <li>Precipitation variability is high, with wet years receiving twice as much rainfall as dry years, link to regional weather patterns</li> </ul>

The key direct EGS include water for various purposes (households, commercial, industrial, energy in some countries), soil for agricultural production, forest products, recreation from unique and cultural attractions, fisheries not just for artisanal fisheries but even for the export of pelagic fisheries, and some minerals. The major indirect ecosystems services include climate and water regulation; pollination; buffering the damaging effects of erratic weather conditions, tsunamis, storms, typhoons, and drought; and filtration/reduction of pollution of freshwater and marine waters.

Table 3. Main ecosystems, ecosystems goods and services (EGS) and threats to ecosystems and EGS.

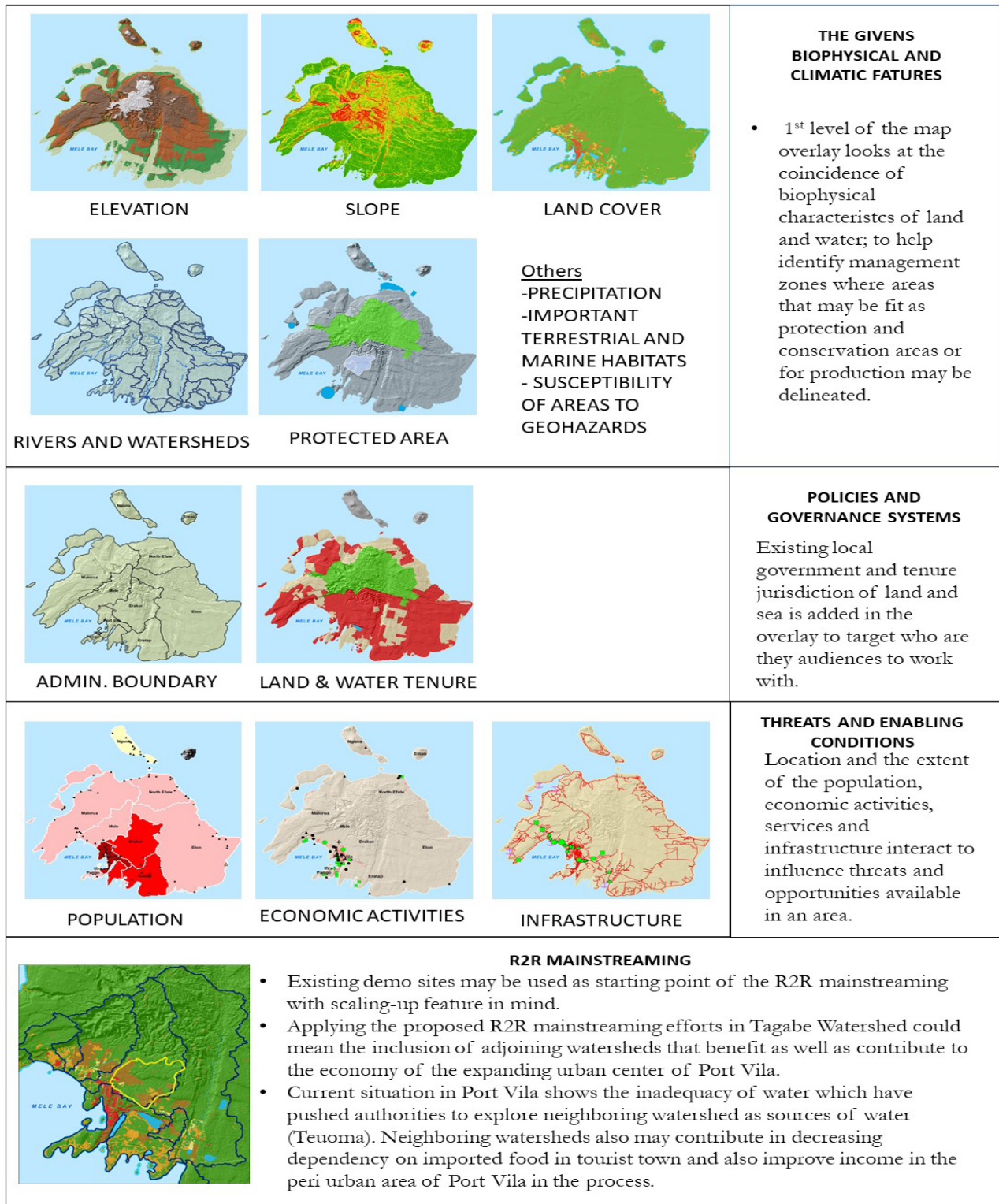
Sub-Regions		Major Ecosystems	Ecosystems Goods and Services	Major Threats
Micronesia	FM	<ul style="list-style-type: none"> <li>Evergreen forests, cloud forests, mostly dry mixed broadleaf forests, mangrove forests</li> <li>Savannas of the tropical dry forest</li> </ul>	<ul style="list-style-type: none"> <li>Water resources – 60% surface water in small, intermittent streams and 40% groundwater; many outer households use roof catchments</li> <li>Fisheries – artisanal and commercial fishing</li> </ul>	<ul style="list-style-type: none"> <li>Seasonal water scarcity due to availability issue and extreme weather events</li> <li>Saltwater intrusion from rising sea-levels damaging crops and freshwater supplies</li> </ul>
	PW	<ul style="list-style-type: none"> <li>Healthy and extensive coral reef, seagrass beds and barrier reefs</li> <li>Broadleaf forest makes up 4.1% of the islands; Home to the largest rainforests in the Micronesia region, mangrove forests</li> </ul>	<ul style="list-style-type: none"> <li>Abundant rainfall, supply the surface water from the streams and rivers</li> <li>Healthy reefs, seas and mangrove setting for tourism</li> <li>Food and livelihood from marine and forest ecosystems</li> <li>Soil/Land -subsistence agriculture</li> </ul>	<ul style="list-style-type: none"> <li>Water sources and distribution system are under pressure from urbanisation, development, and climate change e.g., drought</li> <li>Watershed degradation affecting water quality at the source</li> <li>Coastal waters and groundwater contamination due to leachate from nearby landfills and poorly maintained wastewater systems</li> <li>Saltwater intrusion into freshwater lenses in platform islands</li> </ul>

Sub-Regions	Major Ecosystems	Ecosystems Goods and Services	Major Threats	
Melanesia	FJ	<ul style="list-style-type: none"> <li>• Forest ecosystem (&gt;50%)</li> <li>• Marine ecosystem consists of estuaries, sea grass, macro-algal assemblages, lagoons, coral reefs</li> </ul>	<ul style="list-style-type: none"> <li>• Water – reticulated and individual access</li> <li>• Land/soil for sugarcane production</li> <li>• mineral (gold)</li> <li>• Recreation/ tourism</li> </ul>	<ul style="list-style-type: none"> <li>• Deteriorating water quality because of catchment development, forestry, agriculture, and growth of urban areas</li> <li>• Mismanaged land practices threatening the ability of catchments to drain resulting to flooding events.</li> </ul>
	VU	<ul style="list-style-type: none"> <li>• Mangrove forests, freshwater swamp</li> <li>• Lowland rainforests, seasonally dry forests and grasslands, and montane rainforests</li> </ul>	<ul style="list-style-type: none"> <li>• Tourism/ Recreation – one of the stops of cruise ships, top tourist destination</li> <li>• Water for households and tourism industry</li> <li>• Land/soil – 15% of land for agriculture</li> <li>• Fisheries – commercial and subsistence</li> </ul>	<ul style="list-style-type: none"> <li>• Land ownership issues that impact on water management</li> <li>• Decline in groundwater levels in areas of high population density</li> <li>• Unchecked pollution from household sewage as well as industrial and commercial producers of waste affect coastal and marine waters</li> </ul>

Sub-Regions		Major Ecosystems	Ecosystems Goods and Services	Major Threats
Polynesia	WS	<ul style="list-style-type: none"> <li>• Forest ecosystems – rainforest</li> <li>• Wetland vegetation</li> <li>• Agricultural ecosystem – taro, bananas, yams, cacao, and coconuts</li> <li>• Coastal and marine ecosystems – large and vulnerable reefs cover</li> </ul>	<ul style="list-style-type: none"> <li>• Water for drinking and energy production</li> <li>• Land and soil for agricultural sector – mainly coconut and banana for export and subsistence agriculture</li> <li>• Fisheries for local use and for export</li> <li>• Recreation one-tenth of the country's GDP</li> </ul>	<ul style="list-style-type: none"> <li>• Land degradation in the catchments due to land use conversion to urban expansion</li> <li>• Expansion of areas for cash crops reduces low water flows and increases flash run-off, also results in possible increases in erosion, sediment loading and increased nutrient water courses.</li> <li>• Inadequate wastewater management and stormwater management (SWM) lower catchments</li> </ul>
	TV	<ul style="list-style-type: none"> <li>• Coastal ecosystems composed of low-lying islands, coral reef part of atoll formation</li> </ul>	<ul style="list-style-type: none"> <li>• Gross domestic product (GDP) from domestic fishing and those with fishery access license contributes more than 50% of the national GDP</li> <li>• Water from rainfall for households</li> </ul>	<ul style="list-style-type: none"> <li>• Periodic water scarcity due to drought, pollution of groundwater</li> <li>• Urbanisation and pollution from households leaves untreated wastewater to seep to groundwater and coastal waters</li> <li>• Decline in subsistence fisheries and soil productivity</li> </ul>



Figure 2. Sample Map Overlay of a Site’s Biophysical and Climatic Features, and Policies and Governance Systems, Threats and Enabling Conditions<sup>17</sup>



Available spatial data from different parts of the Pacific Region, country and project hubs, websites and portals provide adequate material for carrying out targeted spatial analysis to show the key boundaries of major land-sea forms in each PIC, the major ecosystems in each area, the key EGS and their users, demography, political boundaries, current tenure systems in land and sea areas, areas under degradation or exploitation that include hotspots, climate data (rainfall, temperature, relative

<sup>17</sup> Section III of this report partly describes the process; Annex F provides an example in Fiji. The simple guide for R2R mainstreaming (Report No. 2) of the R2R Consultancy Team will provide the detailed steps and requirements for the analysis.

humidity and wind direction), areas that are highly susceptible to major natural and human-induced disasters, among others. [Annex E compiles useful links to Spatial Data and Maps References](#) on the PICs, particularly the six case study sites. Using available data, the overlay analysis of the conditions of land-sea forms, the key ecosystems in these areas, their conditions, the major EGS that they provide, and the main users/beneficiaries could serve as initial criteria for identifying and prioritising land-sea forms that could benefit from R2R initiatives, communication campaigns, advocacy, and preparatory planning activities. Site-level R2R planning can use available spatial data for pinpointing the benefit flows of R2R approach from the R2R site's ecosystems and EGS including the major threats they face, applicable policies, and susceptibility to the impacts of climate change or human-induced hazards because of the unique bio-geophysical and climatic features of the land-sea form. The spatial-based information could also be used for framing communication, advocacy, and social marketing campaigns. The benefit flows from the site level R2R planning should specifically break down the gender costs and benefits where threats are faced. Equally, risks and assumptions should be clearly stated to ensure that any threats to women or men in their different cultural contexts are considered.

[Annex F. Sample of Spatial Analysis](#) shows how the existing data (spatial and non-spatial) may be used to carry out spatial analysis to enhance local R2R planning that is participatory, multi-sectoral, integrated, and strategic. It presents a sample overlay analysis (using available spatial data from range of open sources including SPC) of a large watershed in Fiji that spans several provinces. It is an input to R2R prioritisation of catchments/sub-watershed of a large delta or watershed, catchment planning, and linking the key ecosystems to the supply of EGS, EGS users/consumers, demography, political boundaries, threats or degradation, and susceptibility to hazards.

The following is a summary of major threats to the key ecosystems and the EGS in the six case country studies:

- Degradation and urban expansion in watersheds, mangroves, and coastal areas;
- Pollution from off- and on-site communities and urban centres;
- Overfishing in near shore areas serving subsistence fisher folk;
- Agricultural expansion but with declining soil productivity;
- Susceptibility to floods and droughts due to climate change;
- Tenure issues in land and water area especially in relation to encroachments and leasing in customary/traditional/native-owned land and seas;
- Centralised governance combined with weak local capacity on environmental governance and ENRM;
- Marginal participation of sub-national governments and customary communities in land and resource use planning; and
- Absence of long-term, diversified, and sustainable financing requirements of local R2R programmes.

From the above summary, five out of the eight identified threats to key ecosystems and EGS in the six case studies identify social and human activities impact. Subsistence fishing activities, agricultural practices, land tenure issues and leasing in customary lands, weak local capacity on environmental governance and marginal participation of customary communities in land and resource use planning, underlie the need for rigorous community stakeholder engagement, consultation, and taking into consideration the importance of gender and social inclusion in all work done under R2R that target communities and resources.



## Highlights of the Review of the R2R-Related National Sector Policies

Table 4 provides an overview of R2R-related sector policies in the six country case study sites. In general, Pacific regional agreements, the national and sector policies and resulting national frameworks adequately support the R2R strategy, including its translation or downscaling into the sub-national and specific R2R land-sea forms in the six countries. The limited documentation at the sub-national level appears to confirm the intents of the national policies with respect to conserving biodiversity, enhancing EGS supply, improving climate change resiliency, reducing threats to key ecosystems and the EGS they supply such as freshwater and marine waters, among others.

Table 4. R2R-Related Policies and Frameworks at the National, Sub-National Levels<sup>18</sup>

GEF Focal Areas	Sector and Multi-Sector Policies	Six Case Study Countries					
		FM	PW	FJ	VU	WS	TV
Biodiversity	NBSAP	✓	✓	✓	✓	✓	✓
Climate change adaptation	Climate change	✓	✓	✓	✓	✓	✓
	Disaster Risk Reduction	✓		✓	✓	✓	
	Wastewater	✓	✓	✓	✓	✓	
	Solid waste		✓				
Climate change mitigation	Mangroves			✓	✓		✓
	Forest Management	✓	✓	✓		✓	
International water	Marine waters	✓	✓	✓	✓	✓	✓
	Fisheries						
	Navigation						
Land degradation	Land Use policies	✓	✓	✓	✓	✓	✓
	Agriculture	✓	✓	✓	✓	✓	✓
Sustainable forest management	Forest management	✓	✓	✓	✓	✓	
	Water	✓	✓	✓	✓	✓	✓
	Tourism	✓	✓	✓	✓	✓	

It is notable that the six PICs have prioritised policies, programmes and governance processes in response to their unique country-specific biophysical, climatic and geological features; customary and traditional cultural and social practices; historical and expected impacts of erratic weather conditions because of climate changes; need to sustain EGS from diverse ecosystems that are in various land-sea formations; increasing population and urbanisation; and worsening negative externalities of human-induced land use changes, increasing resource use, and pollution, contamination, degradation and loss of key ecosystems and biodiversity.

<sup>18</sup> See further Annex G. Chart of R2R-relevant Policies of the 6 Case Study Sites.

These policies serve as the platforms of the six PICs to govern and manage critical R2R land-sea forms that will determine their future as they face major threats to their biodiversity, key ecosystems, and supply of major EGS. But, given the fragility and susceptibility of the small island countries, these countries may have to focus on sustaining or even enhancing the inherent biophysical absorptive capacities of the ecosystems given their exposure to erratic weather conditions, regulation of key land and resource uses, and institutional commitments to ensure the delicate balance of EGS use, protection, and conservation for long-term sustainable development.

A summary of the review and analysis of the sector policies reveal the following:

1. There are national sector policies and frameworks adequate to catalyse and guide actions towards the same goals of an inter-sectoral R2R approach at the sites, sub-national, national, and even at PIC sub-regional levels. The continuing challenge is how these different sector policies that could be implemented in R2R sites can be integrated into coordinated, collaborative and complementary programmes to achieve the synergy in the land-sea forms.
2. Existing policies (statutory and customary) have served as starting points to R2R mainstreaming with existing frameworks providing guidance for clustering concerned sectors around the goals of reducing stress to ecosystems, EGS and communities. A quick look at Table 1 shows that the ‘testing R2R mainstreaming’ phase worked dominantly in environment and natural resources management, agriculture, waterways, waste management and climate change.
3. The national sector policies are supportive of an R2R approach and can make the implementation of an R2R approach more effective in minimising negative externalities or collateral damages of trade-offs between some sector programmes in the same land-sea form. These include for example, the impacts of intensive agriculture and settlement expansion on water pollution and coastal areas, or the siltation and pollution impact of mining, logging and agricultural expansion on terrestrial ecosystems and downstream ecosystems and the EGS they provide to various beneficiaries.
4. Dominant applicable national policies in a given R2R site provide guides on how to coordinate and steer processes respecting subsidiarity arrangements at lower levels of governance. Various R2R initiatives require different lead agencies and cooperation structures but could be identified and streamlined depending on the dominant ecosystems, EGS and threats in selected R2R sites.
5. Existing sector policies and frameworks generally support the GEF focal areas with some policies being more important in some countries.
6. There is need to consider policies outside the environmental framework especially those related to gender and human rights to partly address and incorporate inclusivity in the governance of R2R strategies to achieve improvements in the management of land-sea areas.

## Planning and Governance Processes, Lessons Learned and Challenges

As presented in [Annex H. Governance Review](#), the current policy-consistent planning and governance processes at the national and, to a certain extent, at the sub-national level (states and provinces exemplified by Palau, Vanuatu, Samoa, FSM, among others) can enable and muster assistance to site-level R2R integrated planning and implementation. Table 5 highlights some of the governance processes that are in place with some supported by the IW R2R and STAR projects, lessons learned from these processes, and the remaining challenges.

Governance processes in support of R2R approach are shown to be multi-level – national, some sub-national, and local level. Governance, being a major catalytic factor in realising the benefits of R2R approach, must be well understood, and carried out with an inclusive perspective that factors in the different needs of men and women and the different leadership and resource access. There is also the need to identify any gender gaps (e.g., access to and control over natural resources, access to benefits and services, and participation and decision making).

It must be established, made functional and strengthened, with the end view of providing direction, coordination among key sectors, collaboration to achieve complementation, advocacy for policy adoption and increased resource allocation, conflict resolution, and promotion of the R2R approach at all levels.

Table 5. R2R-Related Governance and Planning Processes, Lessons Learned and Challenges in the PICs six country case studies<sup>19</sup>

Six Case Study Countries	Major R2R-Related Governance Processes Supportive of R2R Mainstreaming	R2R-Relevant Sub-National and Local Governance and Planning Processes and Lessons Learned	Major Challenges and Opportunities Related to R2R Governance Processes
Federated States of Micronesia (FSM)	<p>FSM Strategic Development Plan, 2004 – 2023 (SDP) serves as the country’s highest-level sustainable development policy framework</p> <p>Development of the plan involved a highly consultative process with 400 participants representing the FSM’s 4 states, traditional leaders, national and state government agencies, private sector, civil society groups and donors.</p> <p>FSM SDP is supported by sectoral planning processes that produced key plan documents such as the NBSAP 2018 – 2023.</p>	<ul style="list-style-type: none"> <li>States can prepare and implement Integrated Environment Management Plans (IEMPs). The IEMP is a cross-sectoral plan that is possibly the closest to an R2R framework as exemplified by the Pohnpei State with its draft IEMP which was supported by STAR Project. The IEMP was prepared based on the results of a strategic environment assessment and all of FSM’s lessons learned in related programming, complementing the SDP and other sectoral plans. An IEMP for Kosrae is going to be formulated; the strategic environment assessment that will inform the updating of the existing land use plan (including marine ecosystems) has been completed (Siba, Nash and Yatilman, FGD 2020).</li> <li>With dedicated personnel who will have to be identified and assigned with defined responsibilities, the chance that the Pohnpei state will support IEMP will continue even after the STAR terminates. The setting-up of a coordinating unit for the IEMP is recommended, given its many actors.</li> <li>Preparing and defining a project exit strategy as demonstrated by STAR started with the process of getting the buy-ins and support from the local leadership (Siba, Nash and Yatilman, FGD 2020). Efforts toward this include the reactivation of what used-to-be a cross sector working group called Pohnpei Resource Management Committee not just for R2R, but also for the forestry and biodiversity strategic action plans in each state. (Siba, Nash and Yatilman, FGD, 2020).</li> </ul>	<ul style="list-style-type: none"> <li>There is wide variation in land tenure arrangements and land governance across the 4 states of FSM, including varying patterns of public and private ownership over land and aquatic areas. In Pohnpei and Kosrae, land is both privately and state owned, while aquatic areas are managed by the state as public trusts (Doran 2004).</li> <li>Private landowners have complete access to the land, and they can do whatever they want to do with it.</li> <li>Unless public welfare or public good is at stake, the government must closely agree with private land and sea owners on the extent and level of land and resource uses since the bundle of rights in these areas are clearly protected by law. In these areas, enforcement remains weak unless the private land or sea owner cooperates with the government and are supported. They have the complete power over those resources (Siba, Nash and Yatilman, FGD 2020).</li> <li>Land issues are conspicuously absent from the FSM constitution—a fact that cedes almost total authority over land to the individual states (Doran 2004).</li> <li>User rights to mangrove areas are generally controlled by the municipalities (Doran 2004).</li> </ul>

<sup>19</sup> Data gathered from FGDs with key informants from IW R2R and STAR Projects; Sustainable Development Goals Knowledge Platform <https://sustainabledevelopment.un.org>. UN Habitat Regional Office for Asia and the Pacific [https://www.fukuoka.unhabitat.org/projects/tuvalu/detail01\\_en.html](https://www.fukuoka.unhabitat.org/projects/tuvalu/detail01_en.html); Doran, K. (2004). ‘Private lands conservation in the Federated States of Micronesia’. Natural Res. Law Ctr., University of Colorado School of Law 2004). Retrieved from [https://scholar.law.colorado.edu/cgi/viewcontent.cgi?article=1166&context=books\\_reports\\_studies](https://scholar.law.colorado.edu/cgi/viewcontent.cgi?article=1166&context=books_reports_studies); Lucero, M.S.J. (2019). ‘IW R2R Mid-Term Evaluation Notes’. Unpublished

Six Case Study Countries	Major R2R-Related Governance Processes Supportive of R2R Mainstreaming	R2R-Relevant Sub-National and Local Governance and Planning Processes and Lessons Learned	Major Challenges and Opportunities Related to R2R Governance Processes
Palau	<ul style="list-style-type: none"> <li>The Palau 2020 Master Plan adopted in 1996 is a long-term comprehensive blueprint development framework meant to guide Palau through its first 25 years as an independent nation.</li> <li>The Plan was developed using participatory approach, involving several community consultations.</li> <li>Current GEF 6 Project is envisioned to assist the formulation of a template that will integrate Ridge to Reef as one of the planning considerations, in support of other existing policies and laws (Mueller and Sisor, FGD, 2020).</li> </ul>	<ul style="list-style-type: none"> <li>Planning Commissions in each administrative district are authorised to prepare master plan, subsidiary plans, and development programmes as well as necessary land use control laws. (Examples are Airai State Master Development Plan in 2008, Melekeok Conservation Network Management Plan, 2017 – 2021).</li> <li>Title 31 is being amended to update and strengthen its provisions requiring state master plans and use of maps to inform state zoning and land use policies (Mueller and Sisor, FGD 2020).</li> <li>Palau has existing planning and coordination mechanisms that could support integrated resources planning or R2R outcomes.</li> <li>The IMC and Project Steering Committee for both IW R2R and STAR are appropriately chaired by the Minister of Natural Resources, Environment and Tourism (MNRET).</li> <li>Cross-sectoral coordination has ensured that all projects signed on to by the MNRET are aligned with, and add value to national priorities and goals, and to advancing national and local capacities for sustainable NRM and tourism.</li> <li>The IMC also has effective civil society representation. Most of the members of NEPC are also members of the Environmental Consortium consisting of private individuals, industry and private organisations and civil society organisations (Lucero 2019 and Mueller and Sisor, FGD 2020).</li> <li>The members of the IMC are also members of the National Environmental Protection Council (NEPC) which coordinates environmental projects, and the prioritisation of incoming environmental projects of the administration. The NEPC consists of almost all ministries of Palau. The Chair of the NEPC is the Minister of MNRET.</li> <li>An Environmental Planning and Coordination Unit (EPCU) has been established within MNRET to further institutionalise the R2R and programmatic approach.</li> </ul>	<ul style="list-style-type: none"> <li>In Palau, states own the resources and are autonomous units. Watersheds are a state resource. Except for the rivers and water resources, the national government does not own any land except for the EEZ. If the state does not support the implementation of a watershed management plan, the national government cannot step in. It is only in case of emergency when the national government can step in.</li> </ul>

Six Case Study Countries	Major R2R-Related Governance Processes Supportive of R2R Mainstreaming	R2R-Relevant Sub-National and Local Governance and Planning Processes and Lessons Learned	Major Challenges and Opportunities Related to R2R Governance Processes
Fiji	<ul style="list-style-type: none"> <li>Fiji's 20-Year and 5-Year National Development Plan 2017 – 2036 is the country's first ever comprehensive inclusive development framework</li> <li>The plan is the outcome of a nationwide consultation process that involved the private sector, civil society, community groups, government, and the public.</li> <li>Other R2R related multi/cross-sectoral and sectoral plans and frameworks of Fiji are the Low Emission Development Strategy 2018 – 2050; Green Growth Framework 2014; National Disaster Management Plan 2017 – 2020; National Biodiversity Strategy and Action Plan 2020 – 2025; and Agriculture Sector Policy Agenda 2014</li> <li>At the national level, the above policies are expected to guide the operational functions and processes of relevant government ministries.</li> </ul>	<ul style="list-style-type: none"> <li>The Town Planning Act (Cap 139), the Local Government Act 1972 and other Acts establish the framework and system for managing land use and development, with the involvement of people and civil society in governance processes</li> <li>With the support of IWRM Project, the Nadi Basin Catchment Committee (NBCC), comprised of 24 members from government agencies, non-government agencies, resource owners and communities living in the catchment was established. The inclusive and multi-sectoral approach provides lessons and demonstration of a successful model of catchment governance that is worth replicating as one of the potential interventions in R2R mainstreaming (Lucero 2019).</li> <li>With the strong expression of support from the provincial government, village and the local community, IW R2R adopted the bottom-up approach to try to mainstream R2R. The thinking was to go ahead and implement IW R2R activities at the ground level even without the plan, and then let experience influence policy i.e., have them buy into the interventions and to the formulation of the plan and secure endorsement and mainstreaming by the national level actors (village committee through Roko → Tikina Committee (representatives from the various Districts in the province) → Provincial committee → Commissioner's office → national government. But to this date, the plan has not yet been formulated (Luisa, FGD 2021). The Water Authority of Fiji (WAF) established to provide efficient and effective water and wastewater services in Fiji expressed interest to be involved in the Waimanu Catchment Project. But as with the other stakeholders, they are waiting to see what the catchment management plan prescribes (Luisa, FGD 2021)</li> </ul>	<ul style="list-style-type: none"> <li>In mainstreaming R2R in catchments to help resolve water management issues, the Ministry of Waterways and Environment is a key stakeholder (Luisa, FGD 2021).</li> <li>The Environmental Impact Assessment System (EIA/EIS) prescribed under the Environment Management Act is an important component in monitoring development activities, especially in safeguarding fragile natural resources from unauthorised development or extractive activities. The EIA/EIS and the ensuing requirements for validation and monitoring compliance may be more robust with externalities, including mitigation and enhancement measures, becoming part of the R2R framework (Luisa, FGD 2021).</li> </ul>

Six Case Study Countries	Major R2R-Related Governance Processes Supportive of R2R Mainstreaming	R2R-Relevant Sub-National and Local Governance and Planning Processes and Lessons Learned	Major Challenges and Opportunities Related to R2R Governance Processes
Vanuatu	<ul style="list-style-type: none"> <li>The <i>Vanuatu 2030: The People's Plan (National Sustainable Development Plan 2016 to 2030)</i> outlines the overarching guide for government planning over the next 15 years. This was prepared with the people, community and elected representatives, the private sector and civil society over the course of a three-year consultation programme.</li> <li>The Department of Strategic Policy, Planning and Aid Coordination oversees the national sustainable development planning process in Vanuatu.</li> <li>The environment pillar seeks to ensure a pristine natural environment on land and at sea that continues to serve our food, cultural, economic, and ecological needs, and enhance resilience and adaptive capacity to climate change and natural disasters.</li> <li>The sector plans and annual plans and work programmes of line ministries and local authorities are expected to elaborate on the policy objectives of the Plan for which they are responsible.</li> </ul>	<ul style="list-style-type: none"> <li>National Land Use Framework decentralises land use decision-making and enforcement, a policy stance supported by both the Decentralization Act [CAP 230] and Physical Planning Act 1986.</li> <li>Land Sector Framework stipulates the embedding of land and environmental policies into provincial and municipal development plans, starting 2010.</li> <li>At local level, zoning/planning teams comprising of the concerned municipalities, provinces and the Department of Lands, the Department of Local Authorities formulate the planning proposals, in consultation with stakeholders.</li> <li>The governance of the water and sanitation sector at national level is divided among three ministries and local agencies (VISIP 2015 –2024): 1) Ministry of Infrastructure and Public Utilities (MIPU) is responsible for urban water supply with implementation under the provincial governments; 2) Drainage and sanitation is under Vanuatu Ministry of Internal Affairs (MIA) with implementation also under the provincial government; 3) Rural water supply is under the Rural Water Supply Section under Vanuatu Ministry of Land and Natural Resources (MLNR).</li> <li>At the local R2R Site, the Tagabe River Management Committee (TRMC) regulates activities in the Tagabe River Catchment Area (TRCA) and is inter-sectoral and multi-stakeholder composed of public and private actors (such as Department of Water (Chair), Departments of Forestry, Agriculture, and Shefa Provincial Government (Members), UNELCO – a locally-incorporated company, the major shareholders of which are ENGIE, a French multinational corporation and the Vanuatu National Provident Fund), Wan Smol Bag (WSB) – an NGO operating in the lower catchment and which runs numerous programmes targeted at the community)</li> </ul>	<ul style="list-style-type: none"> <li>The Malvatumauri (National Council of Chiefs) is the peak organisation providing advice to Government on kastom values and practices in Vanuatu, and according to the Constitution, it must be consulted on all matters related to land. Up to the time of the IW R2R project mid-term review, the TRMC did not include representatives from the customary owners/lessees. Today their representatives are not yet officially members of the TRMC but sit as observers to familiarise themselves with the processes, functions, and dynamics of the committee. They are expected to eventually participate as members/decision-makers (Lucero 2019 and Packett and Samie, FGD 2020).</li> <li>There is currently no approved spatial or physical development plan for any part of Vanuatu, or for the whole country. Thus, deciding where infrastructure might be most needed or identifying infrastructure project investments that could have synergies with other aspects of development (and conservation) is difficult (VISIP 2015 – 2024).</li> <li>Although land legislation is gender-neutral, the implementation of the process has adopted a male bias (Vanuatu Land Management Framework).</li> <li>The Water Strategy for Vanuatu 2008 – 2018 Strategy set policies but no locational priorities (VISIP 2015 – 2024).</li> </ul>



Six Case Study Countries	Major R2R-Related Governance Processes Supportive of R2R Mainstreaming	R2R-Relevant Sub-National and Local Governance and Planning Processes and Lessons Learned	Major Challenges and Opportunities Related to R2R Governance Processes
Vanuatu	<ul style="list-style-type: none"> <li>Other sectoral planning processes are in place for thematic concerns relevant to R2R Mainstreaming, generating plan documents including Vanuatu Infrastructure Strategic Investment Plan (VISIP) 2015 – 2024, National Environment Policy and Implementation Plan 2016 – 2030 and National Waste Management and Pollution Control Strategy and Implementation Plan 2016 – 2020.</li> </ul>	<ul style="list-style-type: none"> <li>IW R2R project initiatives in the TRCA are said to have encouraged the development of Port Vila Municipal and Shefa Provincial By-Laws integrating regulatory provisions for the TRCA (Packett and Samie, FGD 2020), containing: <ul style="list-style-type: none"> <li>For Shefa Province, a provision on water source protection (A drinking water source exercises a protected area of 30 m radius. Any works in this area requires a water works permit.)</li> <li>For Port Vila, a provision on the water protection zone (The Matnakara Water Source is a declared water protection zone. Any unapproved activities within the water protection zone are considered an offence.) There is a Shefa Strategic Plan, but it is unclear if this is the same as the local development plan or not, or if it integrates aspects of the TRMP (copy requested, not yet received).</li> <li>Port Vila City Government is a member of the Local Watershed Committee where decisions on watershed management are made.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>The Efate Land Management Area (ELMA) is a proposed protected conservation area, located in the central region of Efate. Over six (6) rivers are sourced within the ELMA, one of which is the Tagabe River. Currently there is no legal protection of the ELMA. With potential to impact the Port Vila water supply, it is important to additionally review and regulate activities in other adjoining rivers and catchments such as the ELMA, to ensure that the water supply is not affected (TRMP 2017 – 2030 and Packett and Samie, FGD 2020).</li> </ul>



Six Case Study Countries	Major R2R-Related Governance Processes Supportive of R2R Mainstreaming	R2R-Relevant Sub-National and Local Governance and Planning Processes and Lessons Learned	Major Challenges and Opportunities Related to R2R Governance Processes
Samoa	<ul style="list-style-type: none"> <li>The Strategy for the Development of Samoa (SDS) 2016 – 2020 outlines the sectoral priority areas and strategies, including sustainable management of Samoa’s resources towards environmental resilience in the face of disasters and climate change.</li> <li>In shaping the SDS, the Government was said to have consulted widely with community and industry groups.</li> <li>Supportive of SDS are other sectoral planning processes on important themes, including agriculture and biodiversity, thus the Agriculture Sector Plan 2016 – 2020; and the National Biodiversity Strategy and Action Plan 2015-2020.</li> </ul>	<ul style="list-style-type: none"> <li>The national sector plans guide the development of community integrated management plans (CIM) Plans. The CIM Plans are site-level convergent plans that tie all the different public service delivery requirements from an R2R perspective (Iakopo and Malolo, FGD 2020). The watershed management plans implement aspects of the CIM Plans focused on watershed issues (Iakopo and Malolo, FGD 2020).</li> <li>Plan documents that guide the urban development of Samoa’s capital city include the Samoa – City Development Strategy 2015 and Apia Spatial Plan 2014</li> <li>While there is no provision for local or village government within Samoa’s constitution, the Village Fono Act 1990 ‘validates and empowers the exercise of power and authority by village fono (councils) in accordance with custom and usage of the villages’ (Commonwealth Local Government Forum. (n.d.). Within the ambit of these powers, by-laws are adopted to promote community/village ownership and participation in the implementation and enforcement of activities covered by the by-laws (Iakopo and Malolo, FGD 2020).</li> <li>When catchment level management plans are prepared, the Fono passes by-laws in support of these. By-laws are not generic in their provisions; they are based on the different requirements of each catchment. Community and other stakeholder perspectives from consultations undertaken for the preparation of watershed management plans input into these by-laws (Iakopo and Malolo, FGD 2020).</li> </ul>	<ul style="list-style-type: none"> <li>There is currently no official mechanism to engage with the private sector, but government wants to improve on that (FGD).</li> <li>The sectoral plans already provide existing coordination and implementation mechanisms to enable stakeholders to carry out the work embedded in the plans. Instead of setting up new committees, it was decided to mainstream R2R in the national environment sector community. Samoa consists of very small islands and different projects all compete for the same stakeholders and the same resources. They felt it was prudent to use existing structures rather than create new ones for the IW R2R. The IW R2R National Demonstration Project is under Ministry of Natural Resources and Environment.</li> <li>Current local by-laws apply only to areas in the Apia catchment and sub-catchments where people mostly live because government does not have access to upland areas. Most are customary-owned although some of the lands in the ridges belong to the government and under the ministry-level decision-making. As a result, upland developments have been increasing. Communities have experienced increasing incidence of flash floods that may be linked to this (Iakopo and Malolo, FGD 2020).</li> </ul>

Six Case Study Countries	Major R2R-Related Governance Processes Supportive of R2R Mainstreaming	R2R-Relevant Sub-National and Local Governance and Planning Processes and Lessons Learned	Major Challenges and Opportunities Related to R2R Governance Processes
Samoa	<ul style="list-style-type: none"> <li>In 2008, Samoa articulated a water vision that targets inter-sectoral shared outcomes even as this was embedded in a sectoral plan - The Water for Life - “ensuring community access to water of suitable quality and appropriate quantities to meet all reasonable health, environmental and economic development needs” (Samoa MNRE 2007).</li> <li>Samoa is currently in the process of completing consultations pertinent to reviewing/updating the SDS. This strategic national development plan is now being translated into 14 sectoral plans.</li> <li>R2R is reported to being explicitly used as an approach in the infrastructure and environment sector (including the water and sanitation sub-sector) plans (Iakopo and Malolo, FGD 2020).</li> </ul>	<ul style="list-style-type: none"> <li>The Planning and Urban Management Act of 2004 established Samoa’s <b>Planning and Urban Management</b> Agency (PUMA), under the Ministry of Natural Resources, Environment (MNRE). PUMA was created to prepare and apply strategic urban planning tools such as planning provisions, plans and development standards; development consent and compliance of development activity; environmental impact control and compliance, and establish the planning tribunal and provide enforcement provisions (UN-Habitat).</li> </ul>	<ul style="list-style-type: none"> <li>The government has already favourably responded to this challenge, and talks are underway to formulate regulations on upland development (<i>a copy of the draft regulation has been requested from the ACEO of the Water Resources Division</i>). This regulation will require that lands above 600 meters should be developed in a sustainable manner. The formulation activities are with support of the EU and the aim is for this regulation to be adopted within the first three months of 2021 (Iakopo and Malolo, FGD 2020).</li> <li>The hope is that by calling it an ‘upper watershed regulation’, it will be appreciated as involving different agencies (versus calling it an upland conservation policy that would involve mainly the environment department). But bringing in their views will prolong the process. Moreover, there is a new Mayor and Board that must buy-in to the regulation (Iakopo and Malolo, FGD 2020).</li> <li>In terms of water resource management in the Letongo Fagali’i Catchment, the challenge remains to trying to monitor the resources, and translating a lot of data into important information that would be relevant to the sectoral agencies and communities (Iakopo and Malolo, FGD 2020).</li> </ul>

Six Case Study Countries	Major R2R-Related Governance Processes Supportive of R2R Mainstreaming	R2R-Relevant Sub-National and Local Governance and Planning Processes and Lessons Learned	Major Challenges and Opportunities Related to R2R Governance Processes
Tuvalu	<ul style="list-style-type: none"> <li>The Te Kakeega III (TKIII) or the National Strategy for Sustainable Development 2016 – 2020 is Tuvalu’s 8<sup>th</sup> development plan.</li> <li>The planning process was led by the Department of Planning and Budget, with participation from representatives from all the 8 island communities of Funafuti and their 7 counterparts in the outer islands, including 100 island leaders. After the consultative process, TKIII was subsequently subjected to comprehensive government reviews prior to submission to the Parliament.</li> <li>The TKIII includes 4 new focus areas including Climate Change and Oceans and Seas and gives new emphasis on Environment.</li> <li>Apart from the TKIII, the Tuvalu government-initiated efforts to improve governance processes to develop and adopt national plans most relevant to R2R Mainstreaming.</li> </ul>	<ul style="list-style-type: none"> <li>The Government of Tuvalu has committed to institutionalise participatory governance, including in urban development assessment approach (UN-Habitat).</li> <li>At the national level, law making is primarily undertaken by Congress, while the ministries implement them.</li> <li>National laws are adopted at the island level, by the Falekaupule, the legislative unit within islands composed of the council of elders.</li> <li>The executive arm in the islands is the Kaupule. National ministries coordinate with the Kaupule for enforcement and implementation of laws and programmes (Lifuka and Tumua, FGD 2020).</li> <li>All islands in Tuvalu are expected to develop and adopt an Island Strategic Plan (ISP). They are obligated since they own the lands. The National Government will also support the ISPs. They have allocated part of the national budget to support their implementation (Lifuka and Tumua, FGD 2020)</li> <li>Tuvalu has a National Development Coordinating Committee (NDCC) that coordinates the implementation of the national sustainable development plan (TKIII). It is composed of all the CEOs, secretaries, and ministers. For the IW R2R, this committee was identified to serve as the inter ministerial committee (IMC), which was consistent with the mainstreaming approach. It was initially planned to have a joint Inter-ministerial Committee between the STAR and IW R2R, but this did not materialise. Both the IW R2R and STAR used to be under the Department of Water, but IW R2R was transferred to the Department of Waste. IW R2R and STAR project matters are discussed and shared at the ‘department level’. Then all updates and concerns are shared all the way up to the Cabinet level, or the NDCC (Lifuka and Tumua, FGD 2020).</li> </ul>	<ul style="list-style-type: none"> <li>There is limited support for piloted water pollution reduction currently: <ul style="list-style-type: none"> <li>Through the IWRM experience, women found the Eco San toilets inconvenient because they are located outside their homes. They also found maintaining them labour-intensive and time consuming (MTE Notes and Lifuka and Tumua, FGD 2020).</li> </ul> </li> <li>The Eco San toilets were not endorsed by the Cabinet for widespread adoption and upscaling (MTE Notes).</li> <li>In the IW R2R, there is limited evidence of community uptake of backyard dry litter piggery (MTE Notes and Lifuka and Tumua, FGD 2020). It is also expensive to put up (Lifuka and Tumua, FGD 2020).</li> <li>With limited evidence of community uptake, it was difficult to justify significant investment in up-scaling.</li> <li>Nonetheless, it was still planned to establish a 1000-head municipal piggery, which would be run jointly by the Kaupule and community (IW R2R mid-term evaluation (MTE) Notes). As of latest update, the proposal is to establish the piggery in 3-stages of upscaling, increasing the number of heads by at least 300 each time (Lifuka and Tumua, FGD 2020).</li> <li>There is also no tested experience in Funafuti on commercial scale dry litter piggery (Lifuka and Tumua, FGD 2020).</li> </ul>

Six Case Study Countries	Major R2R-Related Governance Processes Supportive of R2R Mainstreaming	R2R-Relevant Sub-National and Local Governance and Planning Processes and Lessons Learned	Major Challenges and Opportunities Related to R2R Governance Processes
	<p>These include the National Strategic Action Plan for Climate Change and Disaster Risk Management 2012 – 2016, National Strategy for Sustainable Development 2016 – 2020, and Integrated Waste Policy and Action Plan 2017 – 2026.</p>		<ul style="list-style-type: none"> <li>The IW R2R focused on pollution reduction via demonstrating dry litter piggery, although it is unclear for what. The national project’s theory of change was still unclear as of MTE, although dry litter piggery as an approach to pig manure management was a highly logical solution to reducing stressors on water quality (MTE Report). But Tuvalu depends a lot on rainwater harvesting, rather than on surface water or groundwater (except in outer islands). The need and priority are to increase capacities of households and communal water harvesting units and manage collected water.</li> </ul>

Experiences and lessons in the six country case studies vary; but the key lesson is that when governance processes are in place, achieving the synergistic results of R2R has been made possible. Spreading thinly scarce resources by each sector in the same land-sea form with the same stated objectives is a waste of resources. Unless donor-funded R2R projects are mainstreamed or absorbed as “one” of the regular programmes of sub-national and national governments or taken over by community stakeholders, there is a gradual collapse of governance processes and systems as soon the project terminates. How long will donors support and invest in R2R projects is a major design issue because it largely depends on stakeholders’ capacities to carry out and sustain support with the right policy incentives. This points to the importance of gender inclusive stakeholder assessments and capacity building throughout the programme. Any background and stocktaking exercises associated with development of the plans and strategies should adequately account for the different roles for women and men, to ensure that there is a wider group of responsible community members who can take over the responsibilities and accountability for sustaining projects.

Reaching a shared understanding of the bio-geophysical, climatic features, applicable policies, key ecosystems and the EGS they provide, the threats, and the users and beneficiaries of the EGS would facilitate the establishment of effective governance systems with members that appreciate the relevance of the collective good/s in a given land-sea form.

## Lessons Learned and Best Practices in Each Case Study<sup>20</sup>

This section briefly discusses key lessons learned from the demonstration sites of IW R2R and STAR project sites in each country. Generally, the lessons appear to be repetitive, but they reflect the level of understanding of the R2R approach in their sites. These sites, with the appropriate technical assistance and project support, can build on these lessons for refined replication to achieve the R2R benefits in their land-sea forms.

The lessons and the evolving best practices in R2R planning and implementation of the IW R2R and STAR projects are in themselves useful in mainstreaming through the replication or scaling up pathways, with some modifications depending on the degree of effectiveness and efficiency they demonstrated during the testing phase of R2R mainstreaming in the PICs. Replications with the necessary modifications will be useful for determining the scale of efficient implementation for reducing the threats in ecosystems and of EGS use; in facilitating joint planning, participation, collaboration, and coordination; and enhancing the livelihoods of marginal communities or of on-site land and sea owners that will lower poverty incidence

In all replications of evolving best practices of the R2R, gender and social inclusion from the design, implementation, and monitoring of projects to ensure that projects are gender sensitive and social inclusive.

### **Fiji**

An increasing realisation that the R2R approach requires a response that is comprehensive and ambitious in design to adequately address the many interlinked issues in a land-sea form (e.g., like those addressed by the GEF Focal areas) (Sadole 2020). Here, a rolling approach to planning and implementation, with various sectors coordinating towards shared outcomes is crucial (Lucero 2019).

---

<sup>20</sup> Most of these lessons learned were interpreted from the responses of the FGD participants. Some were documented in reports from RPCU. These, the R2R Consultancy teams believe, reflect what worked, what partly worked, and what the implementers struggled with during the planning and implementation of R2R activities in the demonstration sites.

Early buy-in of key stakeholders (such as the customary landowners, Ministry of Environment and the Department of Water and Sewerage) will be helpful if they could be made as a pre-condition and part of the Inception Phase (Luisa, FGD 2021 and Sadole 2020). But, as more scientific data and better understanding of the inter-linkages among (sub-ecosystems) become available, subsequent coordination meetings among national and local stakeholders, projects and donors could discuss changes in activity interventions (Luisa, FGD 2021).

Customising a communication strategy helps in addressing awareness gaps among various audiences but based on the interaction of bio-geophysical and policy determinants already in place.

A capability-building approach involving key stakeholders may be more useful and appropriate than a consultancy output-driven R2R planning exercise to strengthen ownership, accountability, and continuity of the project's interventions even beyond the project duration.

## **FSM**

Mainstreaming R2R into governance systems and mechanisms in R2R sites do not follow a “one size” fits all approach. The differing contexts of governed landscapes, multiple shared goals of R2R, the required convergent actions to achieve them, and the diversity of stakeholders and their competing interests, make it so.

Both genuine community and public actor engagement are needed in achieving R2R mainstreaming and outcomes, and that the involved processes take time (Siba, Nash and Yatilman, FGD 2020).

Public leadership commitment (championing) at the highest levels is crucial when it comes to enacting policies or endorsing plans. R2R projects may need the leadership of agencies with mandates aligned with project objectives. Maintaining good working relationships with key contacts especially those in positions at each of the different levels of governance (national, state, local) (Siba, Nash and Yatilman, FGD 2020) is necessary, especially during the early stages of R2R mainstreaming.

Across IWRM, STAR and IW R2R, the community-based bottom-up approach was found necessary and effective in understanding the real issues on the ground and in securing community buy-in (Siba, Nash and Yatilman, FGD 2020).

Following the law is not a sufficient incentive for communities to engage in protected area or watershed management. Communities usually want to know if there is some sort of sustainable livelihood-related benefits to their engagement. Demonstration and piloting must show concrete socio-economic developmental benefits to farmers and fisher folks (Siba, Nash and Yatilman, FGD 2020).

## **Palau**

Since R2R activities and outcomes occur at different scales or levels (site, local, landscapes and seascapes, sub-national, national, regional), it requires a structural mechanism for effective participatory decision making, involving management of information flows from one level to another (top-down and bottom-up), across sectors and the entire governance structures (akin to the Palau IMC and the EPCU).

A “bottom line” or “whole thinking” approach to implementation, adaptive management and programming are key to delivering R2R outcomes. Site-specific result chains under complete and clear Theory of Change might help in determining project-funded activities and which ones are not to direct fund leveraging and determining contributions of activities towards the desired outputs and outcomes (Lucero 2019).

Continuity of interventions between projects such as the IWRM, IW R2R and STAR provides inter-project learnings. Institutionalisation of R2R approach must be intentional. Project interventions need to be integrated/embedded/ mainstreamed into relevant existing governance structures, plans and financing mechanisms. There is a need to institutionalise best practices, guidance manuals, research into knowledge products in support of legislation and for use by states because they are the resource owners that can continue implementing that work. Strong partnerships could leverage inherent institutional strengths and existing social capital among R2R-interested/related networks, including public-private partnerships. For instance, a strong partnership with the Palau Conservation Society (PCS) built the MNRET’s/IMC’s credibility with the state governments and earned their trust, because PCS is widely credible and trusted among public and private organisations. Partnership with PCS made the government more approachable.

## Samoa

For small countries, working with sectors with mandates related to R2R are appropriate entry-points for raising awareness and support regarding the need for inter-sectoral/convergent action to attain shared sustainable development/R2R outcomes (Iakopo, FGD 2020).

The local level is an important subsidiary integrating unit for environment and natural resources management using the R2R approach. In this regard, it is important to have a policy decentralising power and providing a clear framework of roles, responsibility, authority, and accountability for convergent local action towards sustainable development outcomes.

In land-sea forms characterised by predominant customary and private ownership of land and seas, innovative strategies for negotiating private and customary land uses are necessary:

- The intensive engagement and negotiations at all levels, involving all stakeholders, especially the communities and customary landowners in catchment planning and management is imperative because they are the private and customary landowners who by law have the right to the catchment land and resources.
- Where feasible, government can opt to buy customary and private land for protection and conservation.

Formulating plans from an R2R perspective provides a framework for programmatic and sustained action. It can also provide a financing framework for coordinating donor support (Iakopo, FGD 2020).

The effective and meaningful use of Participatory Monitoring and Evaluation/Participatory Research/Participatory Appraisal methods and tools can influence:

- Ground truthing boundaries and zones and understanding that spatial analysis is critical for sustainable management to facilitate buy-in of stakeholders, especially at the community level;
- Behaviour changes necessary for mitigating impacts of unsustainable livelihood and other practices; and
- Prioritisation of options for risk-reducing investments at all levels.



## Tuvalu

Even if stress reduction measures may be logically linked to several desired change pathways, it would be difficult to realise these changes, or capture and measure them, if the links are not explicitly articulated in a result chain at the beginning of the project. Without the clear links of activities in a result chain that will contribute towards stress reduction in land-sea areas, interventions may not necessarily contribute to the stress reduction objective such as the piggery and ecosan toilets (Lucero 2019).

Stakeholders are willing to participate if they are convinced about the concrete benefits of R2R approach (Lifuka and Tumua, FGD 2020).

## Vanuatu

In Vanuatu, mainstreaming actions are beginning to sustain project gains, especially the protection and management of the watersheds that supply water, a key EGS for Port Vila and nearby communities. In the process, the catchment management stakeholders are learning important principle-based requirements of R2R mainstreaming including:

- enacting the necessary policy support to landscape management from national to sectoral to local levels;
- integration of the catchment management plan into local and sectoral development plans and budgets;
- using an R2R perspective to coordinate continuing donor support, research studies and modelling, developing strategies for identifying adjacent watersheds and replication within the island, and coordination that is aligned with and driven by the catchment plan's implementation needs and components;
- the centrality of communities in decision-making over the uses and management of the catchment's/river's resources is being recognised.; and
- science produces the evidence to support an R2R approach in resource management because it shows the complementarities, externalities, and trade-offs between and among inter-linked natural and social systems. More important is that the scientific information may be used to generate buy-in to the needed policy support and management actions and for framing communication messages to elicit desired actions from target audiences.

## Summary of Lessons Learned and Promising R2R-Related Practices

This section summarises the lessons learned that emerged from the testing of various facets of R2R mainstreaming planning and implementation; establishing national and local level governance processes for coordination and steering; communication and advocacy; capacity building; and establishing M&E systems. Lessons learned are considered “**knowledge gained**” from deeper understanding, additional insights of success factors, realisations of gaps and shortcoming during a project’s planning and implementation processes. They are taken to be the results of “**reflections**” of what worked, what did not work, what partly worked, how and why. They are building blocks in determining the next set of “**innovations**” either for replication or scaling up purposes. As mentioned earlier, they are not identified here to pinpoint blame,<sup>21</sup> but as lessons that could provide the entry points, baselines, and possible trajectory for fuller R2R mainstreaming in the PICs.

Lessons learned are normally generated from a logic statement based on the “features” of a certain framework for analysis, which was stated in an earlier section. Thus, normally lessons are filtered from gaps, weaknesses, limitations, shortcomings, or even failures during the testing phase of a new way of doing things. In this case, this new way means moving away from sector-based planning and implementation to an integrated, coherent, coordinated, collaborative and complementary set of initiatives across different sectors to achieve a commonly agreed vision, and shared goals and objectives in a defined land-sea form. In this review, the raw materials that were used in generating the lessons learned include the findings of the mid-term report, feedback, and updates from the IW R2R and STAR project managers and partners, and written documents and reports.

A summary of the major lessons learned are listed below with details of the involved governance processes in the next sections.

- 1. Effective communication and advocacy campaigns** could speed up the recognition of, and buy-in to, R2R as an effective integrated approach for sustainable resource governance and management of various land-sea forms in PICs;
- 2. Establishing and/or strengthening inclusive governance bodies** (such as Steering Committees, IMCs, Project Management Committees) **is/are key in** supporting multi-level advocacy and communication campaigns, R2R policy advocacy, fund leveraging, collaboration, coordination and direction setting, conflict resolution, participation of communication and promoting private investments;
- 3. Engagement of customary/traditional/native land and sea owners as “on-site resource managers”** in a land-sea form could determine the success (or not) of site-level R2R approach;
- 4. To address limited capacities to plan and implement R2R initiatives and** increase the supply of R2R-trained local staff, improve formal and informal ENR educational systems, and broaden community perspectives, **capacity building** is best approached through a mix of technical support, networking, coaching, partnership, cross visits, and on-site assistance.
- 5. Effective project management units (PMUs)**, with committed, competent, and incentivised staff are needed for replication and scaling up R2R approaches and even in establishing partnership arrangements. Processes, rules, and procedures are more

<sup>21</sup> Drucker P. (1985); USAID (2016); Korten D. (1980). Community organization and rural development. A learning process approach. Public Administration Review, Vol. 40, No. 5 (Sept-Oct 1980).

effective if these support local and site-level goals, objectives, and targets. In this regard, MOAs need to spell out transparent agreements among executing agency and project partners with the participation of on-site communities.

6. **Assessments** such as the IDA and RapCA, modelling studies, technical studies, watershed planning, spatial analysis, community mapping, and community consultations could direct prioritisation of R2R strategies within an R2R subsidiary unit, re-align project resources, provide scientific information to policy advocacy, inform, and substantiate audience-appropriate communication campaigns, and help identify replication sites.
7. **Management information systems, supported by functional M&E systems**, are beneficial to strengthening and substantiating the actions of governance bodies, policy making organisations and project management units.
8. **Factoring adaptive management** into an R2R programmatic approach encourages country ownership, systems thinking, innovation and flexibility in aligning plans, project priorities and designs with the changing realities in countries and R2R sites. In terms of implementation of approved project interventions, it renders on-site management more effective.
9. **Functional Site Level R2R Project Committees** or implementing units could serve as the **conduits for transmitting community feedback and recommendations** to the IMCs in updating national and sub-national policies and programs in R2R sites.
10. **Knowledge products on R2R such as** orientation and training materials, enriched/enhanced existing manuals on watershed planning, ICRM, RapCA, guides for spatial mapping and analysis, technical bulletins or how-to's based on lessons and relevant best practices are going to be useful in R2R mainstreaming.
11. Adapting a gender and social inclusive approach to community stakeholder engagements, community consultations and project development and implementation ensures the buy-in and ownership of the projects by the people, which leads to accountability and community responsibility. Conducting inclusive stakeholder analysis and selecting participatory consultation methods that ensure that women's and men's needs, knowledge and expertise are heard and that they are provided equal opportunity for participation and decision making in project design.

## Emerging Effective R2R Interventions or Measures in the Demonstration Sites that Offer Opportunities to Reduce Ecosystems and EGS Stresses<sup>22</sup>

- R2R planning in catchments, watersheds and atolls that link coastal impacts of terrestrial changes such as agricultural expansion, urbanisation, changes in land cover and other land use changes.
- Zoning in terrestrial and coastal/marine areas for the protection and sustainable use of key ecosystems that provide EGS for on- and off-site communities.
- Adaptive management in developing annual and multi-year work plans and during the implementation phase supported by adequate and sustainable resourcing. These adaptive management strategies are to be gender and socially inclusive, considering the complexities within community governance mechanisms.
- Co-financing and leveraging support for joint activities especially in initiatives that are not included in the IW R2R and STAR work plans.
- M&E systems that are linked with major ENRM issues and conditions of ecosystems and EGS.
- Designing inclusive capacity building support for site-level R2R planning and implementation and effective participation of community stakeholders. Effective participation of community stakeholders should be inclusive of gender and social concerns which include finding the most suitable times for consultations, appropriate means of communication, inclusion of women and youth groups and having indicative information on gender considerations relevant to the proposed activity, and any measures to address these, including the process to collect sex-disaggregated data and information on gender
- Livelihood support for marginalised communities after zoning and resettlement that may potentially marginalise their livelihoods. Consideration of displaced populations, especially women and the most vulnerable after zoning and resettlement.
- Simulation and modelling via research – science-based findings to improve local policies for regulation, management and development of landscape-seascape formations, ecosystems, and EGS, and land and resource use changes.
- Establishing payment for ecosystems services (PES)<sup>23</sup> such as imposing conservation fee and tax as policies or regulations as done in Palau and Fiji, the Green Fund or Trust Fund.
- Incentivisation of sustainable behaviours and practices such as Green Boots in Palau.
- Engaging traditional/customary landowners from the start of project design to the end of implementation to strengthen self-interested on-site regulation, management, restoration, and development and in setting up local governance bodies for steering, coordination, leveraging support, and collaboration among the ethnic groups. This engagement is to include gender and social inclusion approaches and participatory engagement from the start of the project design to the end of the implementation.
- IEC campaigns utilising various media: print, radio, classroom, training, social media, and other modes of communication.

<sup>22</sup> ibid.

<sup>23</sup> PES - A voluntary transaction for a well-defined environmental service purchased by at least one environmental service buyer from at least one environmental service provider, if and only if the environmental service provider meets the conditions of the contract and secures and environmental service provision (United Nations, 2009)

### III. SUGGESTED R2R MAINSTREAMING IN PICs

This report adopts a redefined mainstreaming definition from Huntley and Redford 2014, and IW R2R Project Document 2016. It is the “*process of embedding R2R approach and processes into national, sub-national, and community policies, strategies, programs, and practices to ensure that the ecosystems and EGS in various land-sea formations in PICs are maintained and enhanced to help reduce poverty, sustain livelihoods and build up climate resilience*”. R2R mainstreaming may include policy development (legislative and administrative as forms of statutory policies; and customary), governance systems (direction, coordination), and policy implementation (prioritisation; programming; support for site implementation including financing, re-alignments, capacity building, leveraging, networking, others), database and M&E and feedback systems. The major tools for mainstreaming may include communication, advocacy, behaviour change campaigns at all levels, including popularising the results of scientific studies into audience-appropriate campaign materials; and local, sub-national, national, regional and international networking systems; spatial-driven analysis of key sectors in R2R planning and implementation; research and development including extension and curriculum development; capacity building; and support for the replication and/or scaling up forms of mainstreaming R2R.

It is recommended that only effective R2R models, measures, interventions, processes, practices should be replicated (with or without modifications depending on lessons learned, feedback and best practices outside PICs). This means that only R2R measures or processes that have been found to contribute towards the achievement of the envisioned vision, mission, goals, and objectives of R2R approach may be replicated in R2R mainstreaming to determine their efficiency or cost per unit. Hence, it is recommended that the replication process considers the needed modification to the measure, intervention, or process before replication activities. Activities that largely depend on consultants and external funding may be effective but not necessarily efficient. The replication process can assess the efficiency of a measure or intervention to validate effectiveness. It is advised that only the effective and efficient R2R measures, practices, and processes may be scaled up to ensure that resources will not be wasted over time.<sup>24</sup> Mainstreaming assumes that the measures, interventions, or processes have been tried and found or observed to be effective and/or efficient before replication or scaling up. R2R mainstreaming to be gender and social inclusive with a Gender Mainstreaming Strategy and Gender Action Plan developed to facilitate the inclusion of men, women, youth, and vulnerable groups and indicators developed to monitor progress.

Accordingly, based on the key features of R2R-related frameworks and experiences<sup>25</sup>, analysis of the givens as the context in PICs especially in the six country study sites, and lessons learned, this report recommends that the GEF Regional IW R2R with its key government counterparts thoroughly discuss the suggested pathway to R2R mainstreaming in PICs.

The R2R Consultancy Team initially suggests a three-stage R2R Mainstreaming in PICs with the unifying message of: “*Optimising benefits of R2R mainstreaming by ensuring that natural capital (ecosystems and the EGS they provide) are sustainably transformed into environmental, economic and financial assets based on governance-oriented, holistic, inclusive, sustainable and resiliency-focused processes*”.

<sup>24</sup> Korten D. (1980); and Guiang ES. (2014).

<sup>25</sup> See further Sayera J, T Sunderlandb, J Ghazoulc, J Pfundd, D Sheilb, E Meijaardb, M Ventera, A Boedhihartonoa, M Dayb, C Garcia, C van Oostenj, and L Buckk. (2012). Ten principles for a landscape approach to reconciling agriculture, conservation, and other competing land uses. University of Nebraska, USA; Huntley, B.J. and Redford, K.H. (2014). Mainstreaming biodiversity in Practice: a STAP advisory document. Global Environment Facility, Washington, DC; Bonita, M. (2021). Ten Strategic Lessons from DENR the Integrated Natural Resources and Environmental Management Project (INREMP) in the Philippines. Society of Filipino Foresters, Inc. DENR/FMB, Quezon City, Philippines.

The three major stages are listed below with the next sub-sections providing brief discussions of what they are, their intents and how they could be translated into realities. The approach in all the three stages should be gender inclusive, looking at the participation and the benefit or costs to proposed interventions.

- *Scaling up communication, advocacy and social marketing campaigns based on spatial, bio-geological, climatic, policy, governance and stakeholders' integrated analysis and unifying message of optimising R2R benefit flows in PICs land-sea areas;*
- *Replicating participatory integrated R2R site planning* with envisioned R2R benefit flows at the local, sub-national and national levels; and
- *Replicating R2R implementation of approved integrated R2R site plans* to realise R2R benefit flows at the local, sub-national and national levels.

## Stage 1: Communication, advocacy, and social marketing campaigns

The proposed first stage of R2R mainstreaming is the development of multi-level effective communication, advocacy and social marketing campaigns that target various audiences with the right message, defined objectives, and response. To be relevant, these campaigns must be **based on spatial, scientific, policy and governance, and socio-economic analysis** with clearly defined inclusive benefit flows of the transformation processes from natural capital to environmental, economic, and financial assets.

Stage 1 can be carried out immediately even during the extension phase of the IW R2R as a “Testing R2R Mainstreaming” project. Lessons learned and state of the art knowledge of R2R have shown that scaling up communication, advocacy, and social marketing campaigns<sup>26</sup> that target specific audiences can be effectively and efficiently developed and implemented not only before and during the R2R planning but during the implementation phase. The R2R campaigns should be formulated as improved versions of the IEC approach, which in many ways is only designed to increase “awareness”. Social marketing has been used for “upstream” and “downstream” audiences with proper messages and strategies. Short-, medium-, and long-term activities are embedded in R2R plans. As explained by Kotler and Lee (2009) and early broadening of Andreasen (2006), social marketing has emerged as a tool to influence behaviours of target audiences even of those that could impact the state of the environment and natural resources. Social marketing is defined by Kotler and Lee (2009) as,

*“a process that applies marketing principles and techniques to create, communicate, and deliver value in order to influence target audience behaviours that benefit society (public health, safety, the environment, and communities) as well as target audience.”<sup>27</sup>*

In social marketing, “sellers” intend to get to the *minds, hearts, and spirit* of the “buyers” for them to “buy” the desired behaviours and enjoy the benefits of the desired behaviours or products. In R2R mainstreaming, the target upstream and downstream audiences are the policy and decision makers and local stakeholders, respectively, with the intent to facilitate the adoption of clearly stated desired behaviours<sup>28</sup>:

---

<sup>26</sup> Kotler P and NR Lee. (2009). *Up and Out of Poverty: The Social Marketing Solution*. Wharton School Publishing; and Andreasen AR. (2006). *Social Marketing in the 21st Century*. Sage Publication, Inc.

<sup>27</sup> Ibid.

<sup>28</sup> Modified with different examples from Kotler P and NR Lee. (2009).



- *Accepting* a new behaviour (such as approving/endorsing an R2R-related policy, an R2R plan, and/or deciding to increase budget; segregating solid wastes by households).
- *Rejecting* a potentially undesirable behaviour (such as not being supportive of inter or cross-sectoral approach to R2R coordination, or not including traditional land and sea owners as members of the project steering committee; or communities not complying to prescribed land uses in protection zones).
- *Modifying* a current behaviour (such as being open to re-aligning budget resources for R2R capacity building support; or adopting fishing practices that will discriminate against catching juveniles).
- *Abandoning* an old, undesirable behaviour (such as continuing and maintaining an open dumpsite or illegal harvesting of forest products or households not constructing septic tanks).

The R2R campaigns should develop messages and ways of communicating, advocating, or “selling” the benefits of acting on the desired behaviours of target audiences or groups such as the policy and decision makers at the national and sub-national levels and local stakeholders. Policy and decision makers hold the key to influencing R2R policy development, plan approvals and in directing, aligning, and programming resources, while local stakeholders in R2R sites are the “de-facto” on-site resource managers who depend on ecosystems and EGS for their livelihoods, enterprises, businesses, long-term resiliency against natural and human-induced hazards.

The policy and decision makers are the dominant voices in at least two of the three major catalysts – governance, finance, and markets – in integrated landscape management.<sup>29</sup> The local stakeholders – EGS users and consumers, households who depend on EGS for their livelihoods and backyard enterprises, and urban communities – are simply the main markets and consumers of the EGS from R2R sites. The key role of communication, advocacy and social marketing campaigns is providing an initial platform that will facilitate the processes (small meetings, consultations, FGDs, key informant interviews, media coverage, etc.) in arriving at a “shared understanding of the benefits flow of the R2R approach from policy development, programming, site planning and implementation at various levels”. This is critical for the mainstreaming of R2R approach whether for replicating certain strategies in different or similar setting or for scaling up purposes.

Figure 3 provides a simplified benefit flow of R2R approach at the site level that could be used for aggregation with other sites for sub-national and national level planning and programming. As earlier mentioned, the spatial, bio-geological, climatic, policy and governance, and socio-economic analysis must show how the natural assets are transformed into environmental, economic, and financial assets for the benefit of ecosystems, households, and their livelihoods, EGS users and consumers, and overall site resiliency. In the end, the wellbeing and the whole economy improves. But, without collective efforts towards a common envisioned future to compel actions and address the increasing threats to the ecosystems and EGS, the sustainability, quality, quantity, and even the availability of the EGS will decline over time. Thus, it is in the self-interest of the local stakeholders with the support of the sub-national and national leaders to ensure that the land-sea forms of PICs are managed based on R2R approaches with adequate financing and appropriate regulatory governance systems, strategic leadership, and competent management teams. With shared understanding, donors with the private sector can work together with the public agencies and communities to mainstream R2R approaches in PICs.

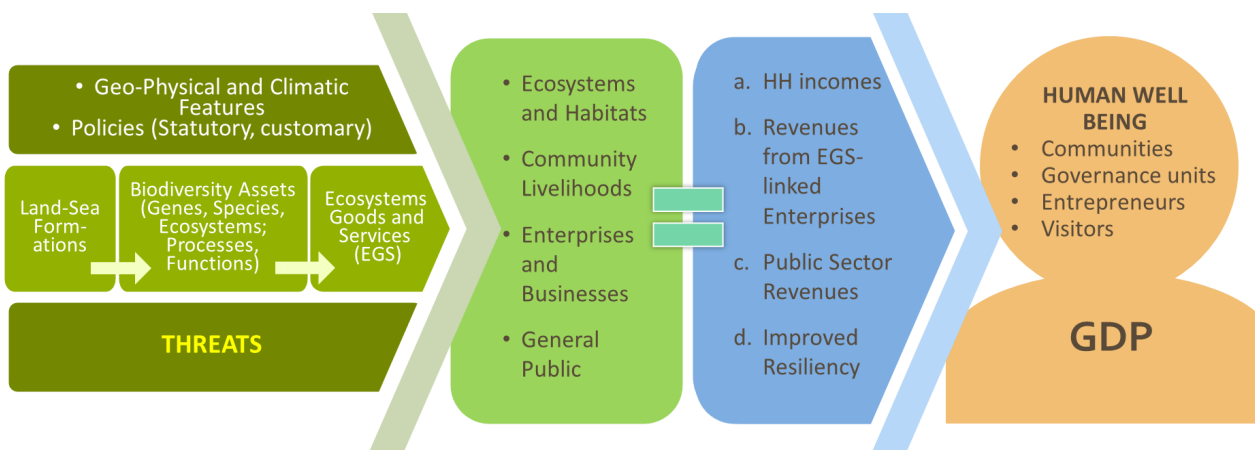
<sup>29</sup> Scherr SJ, K Heinen, LE Buck, and J Reed. (2015).



The starting points for the spatial analysis and science-based assessments of possible R2R sites for replication in planning and implementation with the sub-national governments are where the IW R2R and STAR projects are located, such as the adjacent watersheds or catchments in the IW R2R sites in Vanuatu, Fiji, Palau, Samoa and FSM or neighbouring atolls or islands in other countries. The analysis may be able to highlight gaps and opportunities for strengthening communication, advocacy, and social marketing campaigns for updating or reconfiguring the R2R plans for enhanced implementation. The analysis could also be used to identify key target audiences and formulating key messages to deepen the “shared understanding” of the R2R approach (see again, Figure 2).

Linking the communication, advocacy, and social marketing campaigns with the spatial-, science-, policy and governance- and socio-economic analysis may be started immediately even during the last year of the IW R2R and STAR implementation period. The spatial-driven analysis and assessments, however, must focus on the “givens” – the key ecosystems that supply the major EGS for community livelihoods, operations of EGS-linked enterprises such as the water utilities and the resort owners, the threats to the ecosystems and EGS, and possible partners in the R2R sites such as the on-site and off-site stakeholders, resource institutions, and civil society organisations. If gender-responsive measures have been identified in linking the communication and advocacy to spatial science and socio-economic information then, the results framework or logical framework include actions, gender-sensitive indicators, and sex disaggregated targets.

Figure 3. Optimising the Benefits of R2R Mainstreaming – From Natural Capital to Overall Resiliency, Economic and Financial Assets



Buy-in from the local stakeholders and sub-national and national leaders based on the scaled-up communication, advocacy and social marketing campaigns may be used to prioritise R2R sites – identified and prioritised by policies, programmes and initial “buy-in” from all stakeholders – where the R2R-related sectors and stakeholders “collaborate, coordinate, complement and work together to jointly plan, design and manage their land-sea forms and institutional resources to:

- a) conserve biodiversity and ecosystems,
- b) sustain ecosystems goods and services for ecological stability, livelihoods, and enterprises,
- c) improve agricultural production, and
- d) strengthen capacities for climate change mitigation and adaptation”<sup>30</sup>.

<sup>30</sup> Adapted and formulated based on Winterbottom, R, et. al. (2013). Improving Land and Water Management. World Resources Institute Working Paper. Washington, D.C; Barnes T. (2000). Landscape Ecology and Ecosystems Management. <http://www2.ca.uky.edu/agc/pubs/for/for76/for76.pdf>; DENR/ENRMP. (2013). Primer on Governance-Oriented Integrated Ecosystems Management (IEM): Getting Each Stakeholder to Contribute towards Common Goals; Reed, J, et.al. Integrated Landscape Approaches to Managing Social and Environmental Issues in the Tropics: Learning from the Past to Guide the Future Global Change Biology (2016) 22, 2540–2554, doi: 10.1111/gcb.13284; Senge, P. (2006). The Fifth Discipline: The Art and Practice of Learning Organizations. Currency Doubleday.

The spatial analysis of geo-physical, climatic and biodiversity features combined with the incorporation of policy and governance context could help pinpoint and delineate responsibilities, jurisdictions, authority and accountability of the key sectors and stakeholders who must participate in planning, collective regulatory governance, implementation and monitoring and evaluation of the outcomes of R2R approaches to achieve envisioned future, goals, and objectives.

The recommended regional guidelines in carrying out spatial analysis<sup>31</sup> for R2R, combined with an intentional focus on the sites' R2R geographical, policy and institutional context may be adapted; and clearly linked to areas that are highly threatened and in need of urgent protection and conservation to ensure that the ecosystems continue to provide EGS-linked environmental and economic benefits. The major ecosystems and their locations in the land-sea formation, the EGS they provide, the major EGS users, the major threats from both climate- and human induced-related risks need to be clearly shown in the composite or derived maps. Ideally, the spatial-driven analysis could help link and visualise the process of developing appropriate messages to target different audiences either for policy advocacy and resource allocation actions, increasing awareness, changing attitudes, or pushing for the adoption of certain desired behaviours at the community level such as waste segregation, sanitation practices, stopping open defecation, shifting to soil and water conservation practices, or complying with fisheries regulations and zoning policies.

The spatial overlays and various derived maps can also help “frame” and show what messages and actions are required from policy and decision makers (national, sub-national and local including communities), the dangers of not taking the actions with respect to the supply of EGS from key ecosystems in R2R sites (national, sub-national, local), and the benefits if there is coordinated, concerted, and collaborative actions with policy and governance support from leadership and stakeholders.

In summary, R2R mainstreaming through the scaled-up strategy of communication, advocacy and social marketing campaigns has the main objectives of:

- a) **Reaching a shared understanding** of the R2R approach, its basis/starting point on givens, benefits, where it is applied, and how it can be realised in priority R2R sites;
- b) **Facilitating buy-in of national and sub-national policy makers** to improve and provide policy and programmatic support for R2R mainstreaming especially in prioritising R2R sites, allocating more staff, increasing budget support, affirming leadership that could leverage resources from non-government partners and donors, and resolving institutional issues and mandate overlaps;
- c) **Enabling local stakeholders'** (EGS users and consumers, communities, private sector, civil society or conscience industry, resource institutions) commitment to actively participate and engage in the joint protection, restoration, governance, regulation and enforcement, and development of R2R sites for their own wellbeing.

---

<sup>31</sup> Pacific Ridge to Reef Programme. 2020. Regional Guidelines for the Application of Ridge to Reef (R2R) Spatial Prioritization and Planning Procedures to Identify and Select Priority Coastal Areas and Sites for the Conservation and Sustainable Use of Ecosystem Goods and Services Ridge to Reef. Suva, Fiji 22nd – 23rd October 2020.

## Stage 2: Replicating participatory integrated R2R site planning with envisioned R2R benefit flows

Figure 4 shows the ideal process in R2R planning – at the site, sub-national and national levels – but with specific details and coverage of each level. In R2R sites, attention is given more to analysing the existing situation and/or condition as the starting point for the visioning exercise and determining effective and hopefully efficient strategies to reach the envisioned future with projected positive and negative environmental and socio-economic impacts of interventions. R2R site level planning is more than a sectoral plan such as a forestry, watershed, or coastal plan, but looks at the givens (bio-geophysical, climatic features including the key ecosystems and EGS; and the policies and governance systems that could potentially, or are already, impacting land and resource uses) and the threats and enabling conditions in an R2R site. Replication of participatory integrated R2R site planning with envisioned R2R benefit flows to be holistic in approach and include gender and social inclusion. Gender and social inclusion will be key components of any discussions on demographic expansion, economic activities, infrastructure, and social services- as it involved looking at the how planned interventions impact on men and women differently.

Normally, demographic expansion, economic activities, infrastructure, and social services are key variables that may affect the initial state of the ecosystems and EGS in an R2R site. Population and economic activities need infrastructure and social support in and outside the R2R site. Where communities, enterprises and businesses heavily rely on the condition of the ecosystems and EGS for their survival and sustainability, it is expected that there will be more willingness to adopt an R2R approach if shared understanding is reached. It is important to highlight the key problems, issues, and constraints, including the opportunities and comparative advantages of an R2R site as the take-off points from the analysis of the existing condition or situation. To ensure that any background or stocktaking exercises associated with development of the replicated R2R sites, strategies should adequately account for the different roles for women and men, ensure that men and women are effectively engaged as members of stakeholder groups consulted during the planning of the replication of the R2R and where applicable there should be collection of gender-disaggregated data.

With a deeper and broader understanding of the key stakeholders (national, sub-national and local) of the current situation in an R2R, they should be able to “envision” the desired future with respect to the R2R site, ecosystems and EGS, communities, economy, and overall resiliency. The identification, assessment and prioritisation of strategies, interventions and measures that will contribute towards the vision, mission, goals, and objectives (VMGOs) can be straightforward with effective facilitation of technocrats, scientists, civil society, community leaders and policy and decision makers. At this point, however, the planning activities must be directed towards the development of sets of inter-related results chains (from the activities and measures and their intermediate results and outputs, and the expected outcomes from the use of these outputs) trajectories, showing how the chains will contribute towards threat reduction and improvements in the enabling conditions that will subsequently move towards achieving the desired outcomes.<sup>32</sup> The results chains can then be used in scheduling annual and multi-year activities by various partners. In the end, the major challenge will be estimating the total costs, source of financing over the short, medium, and long-term periods to cover the costs of interventions, project management and coordination/implementation arrangements, capacity building and mitigation/adaptation measures if needed.

---

<sup>32</sup> Serrat O. 2017. Asian Development Bank 2017: Knowledge Solutions, DOI 10.1007/978-981-10-0983-9\_24 237

The key questions are: How much will it take and how long will the R2R approach realise its benefits and sustain the flows from the ecosystems and EGS? Do the community, sub-national and national governments, and EGS users and consumers have what it takes (passion, commitment, resources, institutions) to make the R2R approach work? Donors and projects, at best, may be able to provide catalytic support to “jumpstart” the process of replicative-type of R2R mainstreaming in the planning phase. Most donor-funded projects will focus on bringing in local and international expertise, coaching, training, on-site assistance and software and hardware support. In the long haul, mainstreaming the R2R planning outside the IW R2R and STAR sites becomes local, sub-national and national programmes with supportive policies, governance and programmatic systems for continuity and sustainability.

For immediate activities of the replicative type of mainstreaming the R2R planning phase, the team recommends that the current IW R2R sites perform spatial-driven analysis with overlays that will highlight the integration of major sectors – forestry, environment, sanitation, coastal and marine, demography, economic sectors, infrastructure, and social services - in the R2R sites. With the overlays, the spatial-driven analyses could reveal gaps and opportunities in proposing innovative activities to help achieve the R2R goals and objectives. The composite map (derived maps) can show the benefit flows from the natural capital to the ecosystems, livelihoods, enterprises, and public. These maps can highlight areas for collaboration, complementation, coordination, resolution of conflicts, hot spots for more effective enforcement, and areas needing better regulatory policies, restoration, protection, and development.

In replicating R2R planning for mainstreaming, it is recommended that the sub-national governments with the support of national government take the main responsibility. This means that the spatial-driven integrated analysis of R2R sites within the jurisdiction of sub-national governments will have to facilitate “buy-in” to the importance of R2R approach in their political jurisdictions. The local and national policy makers, sector agencies, concerned sub-national governments, EGS users, land and resource management units including traditional/customary/native land and sea owners must reach a shared understanding of how R2R planning should proceed at the sub-national level. Clear expressions of the R2R “buy-in” of sub-national governments, EGS users and consumers, land and sea owners and managers, donors and civil society are needed before planning starts. This way, there is a certain move towards “demand-driven” type of replicative type R2R mainstreaming rather than supply-driven (“donor” or “national government) programmes serving as “push” towards replicative type of R2R mainstreaming. Donors or programmes can re-configure their strategies in response to common needs, interests, and strategies to reduce threats to ecosystems and EGS. Then, R2R mainstreaming becomes shared actions to achieve self-interested common goals. It might even reach the ideal “tipping point” where mainstreaming takes a course of its own. The proposal to have sub-national governments take over the responsibility of replicating R2R especially with the focus on facilitating buy in from sub-national governments, EG users, land and resource management units including traditional/customary/native land and sea owners- to reach a shared understanding and interest on how R2R planning should proceed is good as it creates a platform for gender inclusion and the participation of men, women and all sectors of communities from the planning stage of R2R replication, This ensures buy in and support for work that will be undertaken later, and there is ownership at all levels and all sectors of communities including women, youth and vulnerable groups..

Moving towards actual R2R planning and implementation as shown in Figures 4 and 5, would require continuing and long-term strategy for improving and multiplying local capacities by doing both formal and informal training programmes, on-the job training, coaching, on-site technical assistance, modelling, and enjoining the active involvement of communities, staff of sub-national governments and national governments, civil society organisations and the private sector.

In both R2R planning and implementation, R2R site-based map overlay analysis is crucial. While planning and implementation will continue to address communication and behaviour change campaigns at the site level, these activities will focus on integrating not only the biophysical (land cover, slope, elevation, susceptibility to geohazard, etc.), but also governance jurisdictions (administrative boundaries, land ownership, protected areas, etc.), and socio-economic characteristics of a land-sea form. Using map overlay technique in the analysis brings together the different characteristics of an R2R site in a compound overlay map, intersecting polygons and marking coincidence of the different attributes of an area. Because of the rich structure of GIS data, having graphic (map) and spatial attribute (tabular data) components, the map overlay result can be assessed both spatially and through tabular data in Excel.

The spatial overlays must show why the analysis must be done. Some key items that must be identified are:

- a) Key bio-geophysical and climatic features of the R2R site
- b) Applicable policies and governance systems in the R2R site
- c) Boundaries of governance and management units with responsibilities, authorities and accountability that relate to the conditions of the ecosystems and EGS
- d) Key ecosystems and EGS from the R2R site, EGS users and threats from natural and human-induced factors
- e) Hot spot areas for monitoring, compliance, and rehabilitation
- f) Key stakeholders for planning and implementation and setting up governance bodies
- g) The free riders among the EGS users including the negative externalities of their actions, operations, and activities
- h) Priorities for resource management actions – awareness/communication/behaviour change campaigns, enforcement, restoration and rehabilitation, policy actions such as zoning, research and development support, marginal communities in need of safety net support, among others.
- i) Key performance indicators for database development and M&E systems.

With Excel-based data, the land-sea area may be disaggregated into resource management zones based on certain biophysical criteria that may be designated by a policy or agreed upon by technical committee. Relating threats of heavy siltation and frequent flooding in the settlement downstream can be correlated to the kind of land use or land cover in the upper reaches of a watershed or catchment which ideally should be a protection zone. Improper land uses in this area should be discussed with land and resource managers – occupants, customary or native title owners, public lands, etc. Examples of inconsistent land or resource uses can be pointed in the map overlay result. The map is useful in communicating with municipal or village chiefs how the current land or resource uses upstream, or protection zones may negatively impact another group of people in their village or municipality or in coastal and marine areas. Spatial analysis is an indispensable tool in the planning (determining where are we now, where do want to be, how do we get there, and how do we measure results) and implementation phases of R2R.

Spatial overlays will allow for the different uses of land and marine resource to be identified and discussed by all stakeholders including men, women and other vulnerable groups that depend on resources for survival, Examples of improper land use, and impact to resources can be pointed out to community leaders and how those in upstream locations affect those in coastal and marine areas,



focusing on planning and what could be improved. Maps will enable a clearer and more practical tool that can relay messages better to women, youths, and other vulnerable groups.

In Stage 2 of R2R mainstreaming, experiences, best practices, and reflections from the participatory approach to R2R planning at all levels – local, sub-national, national – may be used to enhance existing planning manuals, analytical or modelling techniques, training programmes, cross visits, inclusivity of governance bodies and processes, fund sourcing strategies, partnerships, and R2R approach improvements.

Figure 4. Planning for R2R Mainstreaming – local, sub-national, national, sub-regional



### Stage 3: Replicating R2R implementation of approved integrated R2R site plans to realise R2R benefit flows

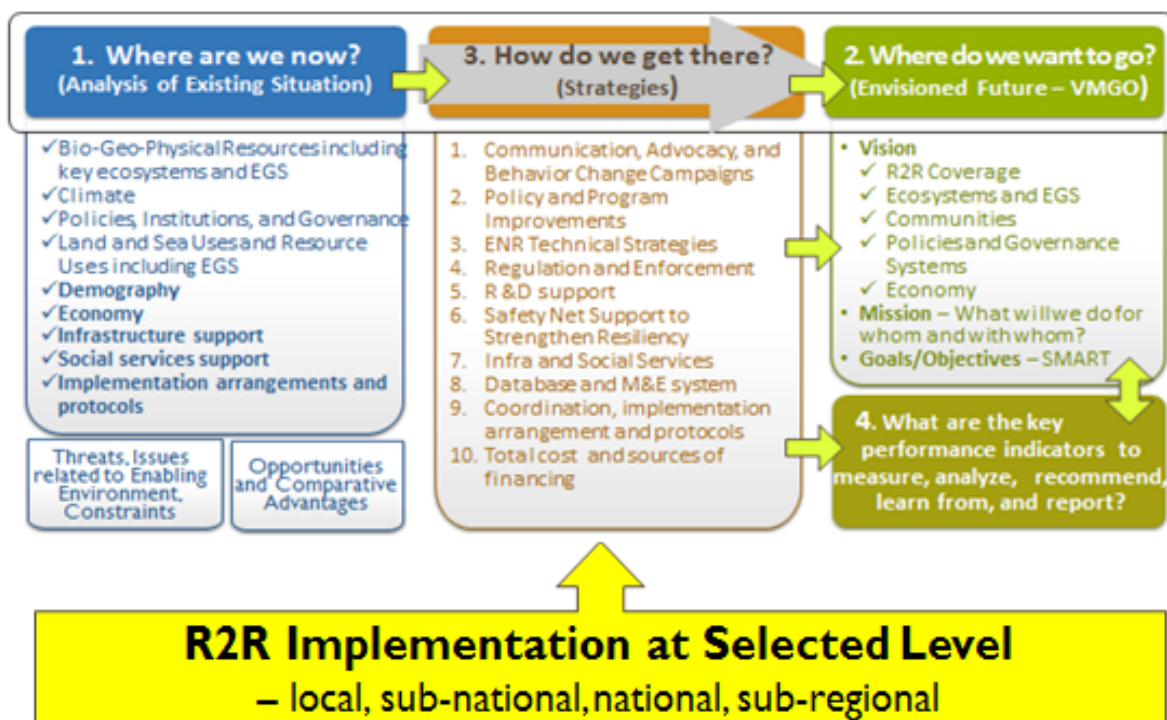
With approved R2R plans at the local, sub-national or national levels, implementation could begin. In the current IW R2R demonstration sites, it is suggested that replication of R2R mainstreaming may be carried out by identifying gaps and opportunities in the approved plans that are worth repeating to ascertain effectiveness and efficiency of R2R measures or interventions. Some activities based on revised log frames or newly-crafted results chains may be worth revisiting in other R2R sites under the mainstreaming strategy. This approach may be considered if the IW R2R project will be extended or will have a follow-on phase.

It is, however, recommended that in replicating R2R implementation, only approved or enhanced R2R plans that have the buy-in of sub-national and technical agencies, communities, and other concerned stakeholders, be implemented and developed as “learning sites” for future replication and scaling up of R2R planning and implementation.

Replicating R2R implementation of approved RTR site plans to realize R2R benefit flows could start with a precautionary approach where only approved plans with buy in of sub-national and technical agencies, communities and other concerned stakeholders will be implemented as “learning sites” for future scaling up of R2R planning and implementation. Thus, wide support is first needed at the sub-national or local governance level and at community level and gender inclusion is important as the participation of women in analysis work, discussions and planning will be crucial given the important roles they play in communities and in resource management in general.

Figure 5 shows the implementation of the approved “strategies” in the R2R plans. The database and M&E measures within adaptive governance and management systems will continue to facilitate learning from the implementation as implementers conduct annual assessment and planning activities. It is imperative to have flexibility in planning specific activities for implementation under the approved R2R plan if they contribute to the overall R2R VMGOs. The critical periods in the implementation include the period of project mobilisation, which involves among others: clarifying governance processes and partnership/implementation arrangements including protocols, setting up the overall philosophy of governance-oriented and integrated R2R implementation and basic principles of project management. In the long run, donor-funded projects under the R2R mainstreaming strategy should be set up as functioning catalysts with the intention to leave a legacy of highly capable national, sub-national and local stakeholders and support of EGS users and consumers, communities, and civil society to sustain R2R implementation activities as their continuing resource management practices.

Figure 5. Implementing R2R Mainstreaming Plans – local, sub-national, national, sub-regional





## REFERENCES

- Andreasen AR. 2006. Social Marketing in the 21<sup>st</sup> Century. Sage Publication, Inc.
- Barnes T. 2000. Landscape Ecology and Ecosystems Management. <http://www2.ca.uky.edu/agc/pubs/for/for76/for76.pdf>;
- Bonita M. 2021. Ten Strategic Lessons from DENR the Integrated Natural Resources and Environmental Management Project (INREMP) in the Philippines. Society of Filipino Foresters, Inc. DENR/FMB, Quezon City, Philippines.
- Carino BV. 1997. A Review of Integrated Area Development (IAD) Projects. Philippine Review of Economics, vol. 34, issue 2, 208-238
- Chen H., Rauqueque L., Raj Singh S., Wu Y., and Yang Y. 2014. Comparative Advantage of PICs (in Exports): Pacific Island Countries: In Search of a Trade Strategy. IMF Working Paper (WP/14/158/ Washington DC: International Monetary Fund.
- Dahl C. (1997). 'Integrated coastal resources management and community participation in a small island setting'. [https://doi.org/10.1016/S0964-5691\(97\)00018-5](https://doi.org/10.1016/S0964-5691(97)00018-5).
- DENR/ENRMP. (2013). Primer on Governance-Oriented Integrated Ecosystems Management (IEM): Getting Each Stakeholder to Contribute towards Common Goals
- Drucker P. (1985). Innovation and Entrepreneurship: Practice and Principles. Collins Business.
- Fifth Regional Steering Committee Meeting (Virtual) for the GEF Pacific International Waters Ridge to Reef Project entitled: Ridge to Reef – Testing the Integration of Water, Land, Forest & Coastal Management to Preserve Ecosystem Services, Store Carbon, Improve Climate Resilience and Sustain Livelihoods in Pacific Island Countries Suva, Fiji, October 22nd – 23rd, 2020
- Guiang ES. (2012). A Suggested Road Map for DENR's Replication and Scaling Up of Governance-Oriented Integrated Ecosystems Management. DENR-World Bank-GEF Environment and Natural Resources Management Program, FASPO/DENR, Quezon City, Philippines.
- Huntley, B.J. and Redford, K.H. (2014). Mainstreaming biodiversity in Practice: a STAP advisory document. Global Environment Facility, Washington, DC.
- Korten D. (1980). Community organization and rural development. A learning process approach. Public Administration Review, Vol. 40, No. 5 (Sept-Oct 1980).
- Kotler P and NR Lee. (2009). Up and Out of Poverty: The Social Marketing Solution. Wharton School Publishing.
- Pacific Ridge to Reef Program. (2020). Regional Guidelines for the Application of Ridge to Reef (R2R) Spatial Prioritization and Planning Procedures to Identify and Select Priority Coastal Areas and Sites for the Conservation and Sustainable Use of Ecosystem Goods and Services Ridge to Reef. Suva, Fiji 22nd – 23rd October 2020.
- Reed, J, et.al. Integrated Landscape Approaches to Managing Social and Environmental Issues in the Tropics: Learning from the Past to Guide the Future Global Change Biology (2016) 22, 2540–2554, doi: 10.1111/gcb.13284

- RPCU. Updates of the Regional International Waters Ridge to Reef Project contributions to the GEF Focal Area outcomes and outputs Mr. Samasoni Sauni, Regional Program Coordinator Session 2 – Country Reporting of GEF focal Areas and Lessons Learned Highlights Virtual Meeting, October 8, 2020;
- Sayer. (2013). Ten lessons learned in landscape; Cernea MM. (1985). Putting People First: Sociological Variables in Rural Development. World Bank Publication
- Sayera J, T Sunderlandb, J Ghazoulc, J Pfundd, D Sheilb, E Meijaardb, M Ventera, A Boedhihartonoa, M Dayb, C Garcia, C van Oostenj, and L Buckk. (2012). Ten principles for a landscape approach to reconciling agriculture, conservation, and other competing land uses. University of Nebraska, USA
- Scherr SJ, K Heinen, LE Buck, and J Reed. (2015). The Little Sustainable Landscape Book: Achieving Sustainable Development Through Integrated Landscape Management. Research Gate.
- Senge, P. (2006). The Fifth Discipline: The Art and Practice of Learning Organizations. Currency Doubleday.
- Serrat O. (2017). Asian Development Bank 2017: Knowledge Solutions, DOI 10.1007/978-981-10-0983-9\_24 237
- UNDP/GEP SPC/CPS. (2015). Ridge to Reef - Testing the Integration of Water, Land, Forest & Coastal Management to Preserve Ecosystem Services, Store Carbon, Improve Climate Resilience and Sustain Livelihoods in Pacific Island Countries (Project Document).
- Wang, G, et. al. (2016). 'Integrated watershed management: evolution, development and emerging trends.' Journal of Forestry Research volume 27
- Winterbottom, R, et. al. (2013). Improving Land and Water Management. World Resources Institute Working Paper. Washington, D.C.
- Fiji**
- Commonwealth Local Government Forum. (2019). The local government system in Fiji. Retrieved from <[http://www.clgf.org.uk/default/assets/File/Country\\_profiles/Fiji.pdf](http://www.clgf.org.uk/default/assets/File/Country_profiles/Fiji.pdf)>.
- Department of Environment of Government of the Republic of Fiji. (2020). National biodiversity strategy and action plan 2020 - 20205. Suva, Fiji. Retrieved from <<https://www.mowe.gov.fj/wp-content/uploads/2020/06/National-Biodiversity-Strategy-Action-Plan.pdf>>.
- Department of Environment, Ministry of Local Government, Urban Development, Housing and Environment of the Government of the Republic of Fiji. (2011). Integrated coastal management framework of the Republic of Fiji 2011.
- Department of Town & Country Planning of the Government of the Republic of Fiji. (n.d.). Land tenure. Retrieved from <<http://www.townplanning.gov.fj/index.php/planning/planning-issues/land-tenure>>.
- Drainage Act No. 20 of 1961 of the Republic of Fiji.
- Environment Management (EIA Process) Regulations of 2007 of the Republic of Fiji.
- Environment Management (Waste Disposal and Recycling) Regulations of 2007 of the Republic of Fiji.

- Environment Management Act of 2005 of the Republic of Fiji.
- Fiji Ridge to Reef STAR Project. (2 March 2020). Project steering committee meeting minutes.
- Fiji Ridge to Reef STAR Project. (3 May 2019). Project steering committee meeting minutes.
- Government of the Republic of Fiji. (n.d.). National water resources management and sanitation policy. (DRAFT)
- IW R2R Logical Framework: Fiji (13 August 2019).
- Local Government Act of 1972 of the Republic of Fiji. (2014). Fiji national gender policy. Retrieved from <https://www.fiji.gov.fj/getattachment/db294b55-f2ca-4d44-bc81-f832e73cab6c/NATIONAL-GENDER-POLICY-AWARENESS.aspx#:~:text=The%20Government%20of%20Fiji%20is,endorsed%20by%20Cabinet%2C%20aims%20to%3A&text=Improve%20the%20quality%20of%20life,of%20gender%20equity%20and%20equality>.
- Lucero, M.S.J. (2019). 'IW R2R Mid-Term Evaluation Notes'. Unpublished.
- Luisa, Tavenisa (virtual FGD, January 11 and 13, 2021)
- Ministry of Agriculture of the Government of the Republic of Fiji. (2014). Fiji 2020: Agriculture sector policy agenda: "Modernizing agriculture." Retrieved from <<https://pafpnet.spc.int/pafpnet/attachments/article/219/fiji-2020-agriculture-sector-policy-agenda.pdf>>.
- Ministry of Commerce, Trade, Tourism & Transport of the Government of the Republic of Fiji. (n.d.). Strategic plan 2018-2023. Retrieved from <<https://www.mcttt.gov.fj/wp-content/uploads/2018/10/Strategic-Plan-2018-2023-min-1.pdf>>.
- Ministry of Economy of the Government of the Republic of Fiji. (2017). 5-year & 20-year national development plan: Transforming Fiji. Retrieved from <<https://www.fiji.gov.fj/getattachment/15b0ba03-825e-47f7-bf69-094ad33004dd/5-Year---20-Year-NATIONAL-DEVELOPMENT-PLAN.aspx>>.
- Ministry of Economy of the Government of the Republic of Fiji. (2019). Republic of Fiji national climate change policy 2018 - 2030. Retrieved from <[https://www.pacificclimatechange.net/sites/default/files/documents/National-Climate-Change-Policy-2018---2030\\_0.pdf](https://www.pacificclimatechange.net/sites/default/files/documents/National-Climate-Change-Policy-2018---2030_0.pdf)>.
- Ministry of Economy of the Government of the Republic of Fiji. (2019). Republic of Fiji national climate change policy 2018-2030.
- Ministry of Strategic Planning, National Development and Statistics of the Government of the Republic of Fiji. (2014). A green growth framework for Fiji" Restoring the balance in development that is sustainable for our future.
- Ministry of the Environment of the Government of the Republic Fiji. (2007). Fiji national liquid waste management strategy and action plan by the Ministry of Environment, Government of Fiji. Apia, Samoa. Retrieved from <[https://www.sprep.org/att/publication/000556\\_IWP\\_PTR48.pdf](https://www.sprep.org/att/publication/000556_IWP_PTR48.pdf)>.
- Naivalurua, N. (2020). The internal village development plan is to determine the development needed for a province - Bainimarama. Retrieved from <<https://www.fijivillage.com/news/The-Internal-Village-Development-plan-is-to-determine-the-development-needed-for-a-province--Bainimarama-f8r4x5/>>.

- Nation, J. (1965-1991). Customs of respect: The traditional basis of Fijian communal politics. [Australia]: Australian National University,
- Sadole, B. (13 October 2020). Update of the project contributions to the GEF Focal Area outcomes and outputs: Fiji R2R STAR Project. [Powerpoint].
- Subdivision of Land Act (Chapter 140) of 1978 of the Republic of Fiji.
- The iTaukei Land Trust Board. (n.d.). Land ownership in Fiji. Retrieved from [https://www.tltb.com.fj/getattachment/Media/Brochures/Land-Ownership-in-Fiji-Booklet-\(1\).pdf.aspx?lang=en-US](https://www.tltb.com.fj/getattachment/Media/Brochures/Land-Ownership-in-Fiji-Booklet-(1).pdf.aspx?lang=en-US)
- Town Planning Act of 1978 of the Republic of Fiji.
- Water Authority of Fiji, & Ministry of Finance. (2016). Initial environmental examination: Fiji urban water supply and wastewater management project | Rewa River water supply subproject. Asian Development Bank. Retrieved from <<https://www.adb.org/sites/default/files/linked-documents/49001-002-ieeab.pdf>>.

## **FSM**

- Asian Development Bank. (2016). Federated States of Micronesia: National tourism sector development framework and state government tourism investment plans. Retrieved from <<https://www.adb.org/sites/default/files/project-document/181208/47236-001-tcr.pdf>>.
- Department of Resource and Development of the Federated States of Micronesia. (n.d.). Federated States of Micronesia agriculture policy. Retrieved from <[http://www.fao.org/fileadmin/user\\_upload/sap/docs/FSM%20Agriculture%20Policy%20DraftSR2Sept2011.pdf](http://www.fao.org/fileadmin/user_upload/sap/docs/FSM%20Agriculture%20Policy%20DraftSR2Sept2011.pdf)>.
- Department of Transportation, Communication & Infrastructure of the Federated States of Micronesia. (2015). Federated States of Micronesia infrastructure development plan FY2016 - FY 2025. Retrieved from <<https://dofa.gov.fm/wp-content/uploads/2018/12/FSM-Infrastructure-Development-Plan-2016-2025.pdf>>.
- Doran, K. (2004). Private lands conservation in the Federated States of Micronesia. Natural Res. Law Ctr., University of Colorado School of Law 2004). Retrieved from <[https://scholar.law.colorado.edu/cgi/viewcontent.cgi?article=1166&context=books\\_reports\\_studies](https://scholar.law.colorado.edu/cgi/viewcontent.cgi?article=1166&context=books_reports_studies)>.
- Government of the Federated States of Micronesia. (2015). FSM 2023 action plan. Palikir, Pohnpei. Retrieved from <<https://dofa.gov.fm/wp-content/uploads/2018/12/FSM-2023-Action-Plan.pdf>>.
- Government of the Federated States of Micronesia. (2019). Environmental law in the Federated States of Micronesia: A review. Department of Environment, Climate Change & Emergency Management (DECEM), FSM. Retrieved from <<https://www.sprep.org/publications/environmental-law-in-the-federated-states-of-micronesia-a-review>>.
- Government of the Federated States of Micronesia. (n.d.). Federated States of Micronesia's strategic development plan (2004-2023). Vol 1: Policies and strategies for development. Retrieved from <<https://www.adb.org/sites/default/files/linked-documents/cobp-fsm-2015-2017-sd-02.pdf>>.

Government of the Federated States of Micronesia. (n.d.). Federated States of Micronesia infrastructure development plan FY 2016 - FY 2025 Volume 4: Kosrae State infrastructure development plan FY2016-FY2025. Retrieved from <[https://www.tci.gov.fm/documents/infrastructure/IDP/FSM%20IDP%20FY2016-FY2025%20-%20Kosrae%20State%20\(version%20151202\).pdf](https://www.tci.gov.fm/documents/infrastructure/IDP/FSM%20IDP%20FY2016-FY2025%20-%20Kosrae%20State%20(version%20151202).pdf)>

IW R2R Logical Framework: Federated States of Micronesia (n.d.).

Kosrae State Government of the Federated States of Micronesia. (2019). Kosrae biodiversity strategy and action plan 2018 (Kosrae BSAP 2018). Retrieved from <<https://fsm-data.sprep.org/dataset/fsm-national-and-states-biodiversity-strategy-and-action-plan-nbsap/resource/5b737494-3946>>.

Lucero, M.S.J. (2019). IW R2R Mid-Term Evaluation Notes. Unpublished.

National Tourism Sector of the Government of the Federated States of Micronesia. (2014). Volume 2: Four state tourism investment plans | FSM: National tourism sector development framework and state government tourism investment plans. Retrieved from <<https://pafpnet.spc.int/attachments/article/547/Vol%202%20FSM%20State%20Inv%20Plans-V2.pdf>>.

Pacific Community. (n.d.). Integrated water resource management demonstration project | Ridge to reef: protecting water quality from the source to sea in the Federated States of Micronesia. [Draft].

Pacific Islands Forum Secretariat. (2013). Forum compact peer review report: Federated States of Micronesia. Suva, Fiji. Retrieved from <[http://www.forumsec.org/wp-content/uploads/2017/10/FSM\\_Peer\\_Review\\_Report.pdf](http://www.forumsec.org/wp-content/uploads/2017/10/FSM_Peer_Review_Report.pdf)>.

Pacific Ridge to Reef. (n.d.). GEF Pacific ridge to reef program: Federated States of Micronesia national R2R program document. Retrieved from <<https://www.pacific-r2r.org/sites/default/files/2020-03/FSM.pdf>>.

Secretariat of the Pacific Regional Environment Programme (SPREP), & EDO NSW. (2018). Federated States of Micronesia: Review of natural resource and environment related legislation. Apia, Samoa. Retrieved from <<https://www.sprep.org/attachments/Publications/EMG/sprep-legislative-review-fsm.pdf>>.

Secretariat of the Pacific Regional Environment Programme. (2019). Kosrae State solid waste management strategy 2018 - 2027 (Action plan: 2018-2022). Retrieved from <<https://www.sprep.org/publications/kosrae-state-solid-waste-management-strategy-2018-2027>>.

Siba, F., Nash, R., and Yatilman, R. (Virtual FGD, December 21, 2020)

Siba, Faith. (personal communication (email), January 14, 2021)

## **Palau**

\_\_\_\_\_. (2012). Republic of Palau sustainable land management policy. Retrieved from <[https://chm.cbd.int/api/v2013/documents/863D1F62-8A10-1396-DEBC-ECF566BE0EF0/attachments/SLM%20\\_%20Land%20Management%20-%20SLM%20Policy%20Packet\\_Final\\_april17.pdf](https://chm.cbd.int/api/v2013/documents/863D1F62-8A10-1396-DEBC-ECF566BE0EF0/attachments/SLM%20_%20Land%20Management%20-%20SLM%20Policy%20Packet_Final_april17.pdf)>.

Executive Order No. 401: Establishing Water Use and Conservation Policies of 2017 of the Republic of Palau.

Executive Order No. 419 of 2018 of the Republic of Palau.

Government of the Republic of Palau. (2010). Ngardok nature reserve management plan 2010-2014. Retrieved from <<http://www.palaupanfund.org/pdf/managementplan/melekeok/Ngardok%20Management%20Plan.pdf>>.

Government of the Republic of Palau. (2010). The Republic of Palau statewide assessment of forest resources and resource strategy: A comprehensive analysis of forest-related conditions, trends, threats, and opportunities. Retrieved from <<https://palau-data.sprep.org/dataset/palau-forest-resources/resource/bb07a43e-cb76-44f1-8dfc-ed170800eda5>>.

Government of the Republic of Palau. (2015). Achieving resilient agriculture and aquaculture: A national policy for strengthening food security in Palau as a priority climate change adaptation measure. Retrieved from <[https://www.pacificclimatechange.net/sites/default/files/documents/Policy%20-%20Achieving%20Resilient%20Agriculture%20and%20Aquaculture%20FINAL\\_July%20%202015.pdf](https://www.pacificclimatechange.net/sites/default/files/documents/Policy%20-%20Achieving%20Resilient%20Agriculture%20and%20Aquaculture%20FINAL_July%20%202015.pdf)>.

Government of the Republic of Palau. (2015). Palau climate change policy for climate and disaster resilient low emissions development. Retrieved from <[https://www.pacificclimatechange.net/sites/default/files/documents/PalauCCPolicy\\_WebVersion-FinanceCorrections\\_HighQualityUPDATED%2011182015Compressed.pdf](https://www.pacificclimatechange.net/sites/default/files/documents/PalauCCPolicy_WebVersion-FinanceCorrections_HighQualityUPDATED%2011182015Compressed.pdf)>.

Government of the Republic of Palau. (2017). Palau environment statistics and system of environment-economic accounting - National assessment report. Retrieved from <<https://www.palaugov.pw/wp-content/uploads/2017/08/Palau-National-Assessment-Report.pdf>>.

Government of the Republic of Palau. (n.d.). Bureau of budget & planning. Retrieved from <<https://www.palaugov.pw/budgetandplanning>>.

Government of the Republic of Palau. (n.d.). National disaster & risk management framework 2010 (Amended 2016). Retrieved from <<https://www.refworld.org/pdfid/5b42f19f4.pdf>>.

Government of the Republic of Palau. (n.d.). Protected Areas Network: Status report 2003-2015. Retrieved from <[https://chm.cbd.int/api/v2013/documents/8460F3DC-D7CE-71B9-1649-F28A1139C4A3/attachments/PAN2015\\_StatusReport\\_Final\\_LowResolution-2%20\(1\).pdf](https://chm.cbd.int/api/v2013/documents/8460F3DC-D7CE-71B9-1649-F28A1139C4A3/attachments/PAN2015_StatusReport_Final_LowResolution-2%20(1).pdf)>.

IW R2R Logical Framework: Palau (n.d.).

IW R2R Logical Framework: Palau (revised, n.d.)

IW R2R Logical Framework: Palau (revised, n.d.).

L. Mueller and G. Sisior (virtual FGD, December 16, 2020)

Lucero, M.S.J. (2019). 'IW R2R Mid-Term Evaluation Notes'. Unpublished.

Ministry of Community & Cultural Affairs of the Republic of Palau. (2018). National gender mainstreaming policy: Republic of Palau.'

Ministry of Natural Resources, Environment & Tourism of the Government of the Republic of Palau. (2018). Sustainable forest management policy. Retrieved from <<https://chm.cbd.int/api/v2013/documents/863D1F62-8A10-1396-DEBC-ECF566BE0EF0/attachments/Sustainable%20Forest%20Management%20SFM%20Policy.pdf>>.



Ministry of Natural Resources, Environment and Tourism of the Government of the Republic of Palau. (2016). Palau responsible tourism policy framework: Ensuring a pristine paradise. Palau for everyone 2017-2021. Retrieved from <[https://www.palau.gov.pw/wp-content/uploads/2017/04/Final\\_Palau-Responsible-Tourism-Framework1.pdf](https://www.palau.gov.pw/wp-content/uploads/2017/04/Final_Palau-Responsible-Tourism-Framework1.pdf)>.

Ministry of Natural Resources, Environment and Tourism of the Government of the Republic of Palau. (n.d.). Integrating biodiversity safeguards and conservation into development. Retrieved from <<https://sites.google.com/view/gef6palau/home?authuser=0>>.

National environmental Protection Council of the Government of the Republic of Palau. (2019). 2019 State of the environment report. Retrieved from <<https://palau-data.sprep.org/system/files/2019%20SOE%20Palau.pdf>>.

Pacific Ridge to Reef. (2014). Ngerikiil watershed restoration for improved water quality. Retrieved from <<https://www.pacific-r2r.org/sites/default/files/2020-03/GEF-Pacific-IWRM-Final%20Report-Palau.pdf>>.

Palau Water Safety Plan National Steering Committee. (2008). Drinking water safety plan Koror-Airai water supply. Retrieved from <[https://www.pacificwater.org/\\_resources/article/files/Palau%20Koror-Airai%20DWSP.pdf](https://www.pacificwater.org/_resources/article/files/Palau%20Koror-Airai%20DWSP.pdf)>.

PAN-Fund. (n.d.). Ngardok lake reserve. Retrieved from <<https://www.palaupanfund.org/ngardok.html>>.

Pulea, M. (1994). Environmental legislation review - Republic of Palau. Retrieved from <<https://www.sprep.org/att/IRC/eCOPIES/Countries/Palau/8.pdf>>.

## **Samoa**

Agriculture and Fisheries Ordinance of 1959 of the Independent State of Samoa.

Commonwealth Local Government Forum. (n.d.). Country Profile 2017-2018: The local government system in Samoa. Retrieved from <[http://www.clgf.org.uk/default/assets/File/Country\\_profiles/Samoa.pdf](http://www.clgf.org.uk/default/assets/File/Country_profiles/Samoa.pdf)>.

Fisheries Management Act of 2016 of the Independent State of Samoa.

Government of Samoa. (2006). Samoa's national disaster management plan 2006-2009. Retrieved from <<https://www.sprep.org/att/IRC/eCOPIES/Countries/Samoa/210.pdf>>.

Government of Samoa. (2010). Samoa: National infrastructure strategic plan draft overview. Retrieved from <[https://www.preventionweb.net/files/27077\\_samoanationalinfrastructurestrategi.pdf](https://www.preventionweb.net/files/27077_samoanationalinfrastructurestrategi.pdf)>.

Government of Samoa. (2016). Apia waterfront development project. Retrieved from <[https://samoa-data.sprep.org/system/files/Final-Waterfront-Plan\\_opt.pdf%20-%20samoa.pdf](https://samoa-data.sprep.org/system/files/Final-Waterfront-Plan_opt.pdf%20-%20samoa.pdf)>.

Government of Samoa. (2019). Agriculture sector plan 2016-2020. Retrieved from <<https://www.mof.gov.ws/wp-content/uploads/2019/09/Agriculture-Sector-Plan-2016-2020-Vol-1.pdf>>.

Government of Samoa. (2019). Strategy for the development of Samoa 2016/17 - 2019/20. Retrieved from <[https://www.mof.gov.ws/wp-content/uploads/2019/08/SDS-1617-1920\\_Eng.pdf](https://www.mof.gov.ws/wp-content/uploads/2019/08/SDS-1617-1920_Eng.pdf)>.



- Iakopo, A.M., and Malolo, F.E. (virtual Iakopo and Malolo, FGD, 2020, January 21, 2020)
- IW R2R Logical Framework: Samoa (n.d.).
- Lucero, M.S.J. (2019). 'IW R2R Mid-Term Evaluation Notes'. Unpublished.
- Ministry of Commerce, Industry & Labor of the Government of Samoa. (2019). Samoa investment guide. Retrieved from <<https://www.mcil.gov.ws/storage/2019/02/Samoa-Investment-Guide-2018-FINAL-2.pdf>>.
- Ministry of Natural Resources & Environment of the Government of Samoa. (2015). Samoa's aligned national action program to combat land degradation and mitigate the effects of drought 2015-2020. Retrieved from <<https://knowledge.unccd.int/sites/default/files/naps/Samoa.pdf>>.
- Ministry of Natural Resources & Environment of the Government of Samoa. (2020). National environment sector communications strategy 2022-2026. Retrieved from <<https://www.mnre.gov.ws/wp-content/uploads/2020/11/National-Environment-Sector-Printed-v4.pdf>>.
- Ministry of Natural Resources & Environment of the Government of Samoa. (n.d.). Samoa's national biodiversity strategy and action plan 2015-2020. Retrieved from <<https://www.cbd.int/doc/world/ws/ws-nbsap-v2-en.pdf>>.
- Ministry of Natural Resources & Environment of the Government of Samoa. (2007). National integrated water resource management diagnostic report. Retrieved from <[https://www.pacificwater.org/userfiles/file/GEF%20IWRM%20Final%20Docs/SOPAC%20Samoa%20IWRM%20Diagnostic%20Report%2022\\_10\\_07.pdf](https://www.pacificwater.org/userfiles/file/GEF%20IWRM%20Final%20Docs/SOPAC%20Samoa%20IWRM%20Diagnostic%20Report%2022_10_07.pdf)>.
- Ministry of Works, Transport, and Infrastructure of the Government of the Independent State of Samoa. (2020). Corporate plan 2019/20-2022/2023. Retrieved from <<https://www.mwti.gov.ws/wp-content/uploads/2020/01/Corporate-Plan-1.pdf>>.
- Overseas Development Institute. (n.d.). Samoa: Climate public expenditure and institutional review. Retrieved from <<https://www.forumsec.org/wp-content/uploads/2018/09/Samoa-CPEIR-Report.pdf>>.
- Pacific Islands Forum Secretariat. (2014). Samoa: Forum compact peer review report. Retrieved from <[https://www.forumsec.org/wp-content/uploads/2017/10/PIF-Peer-Review-Samoa\\_25082014\\_FINAL.pdf](https://www.forumsec.org/wp-content/uploads/2017/10/PIF-Peer-Review-Samoa_25082014_FINAL.pdf)>.
- Planning and Urban Management Act of 2004 of the Independent State of Samoa.
- Planning and Urban Management Agency & Ministry of Natural Resources and Environment of the Government of Samoa. (2015). The Samoa-city development strategy: "Planning for resilience". Retrieved from <[http://www.fukuoka.unhabitat.org/projects/samoa/pdf/Samoa\\_Apia\\_City\\_Development\\_Strategy.pdf](http://www.fukuoka.unhabitat.org/projects/samoa/pdf/Samoa_Apia_City_Development_Strategy.pdf)>.
- Powell, Graham B. (2004). Review of natural resources and environmental related legislation - Phases 1 and 2. Independent State of Samoa: Secretariat of the Pacific Regional Environment Programme. Retrieved from <[https://www.sprep.org/att/publication/000461\\_IWP\\_PTR10.pdf](https://www.sprep.org/att/publication/000461_IWP_PTR10.pdf)>.

Village Fono Act of 1990 of the Independent State of Samoa.

Waste Management Act of 2010 of the Independent State of Samoa.

Water Resources Management Act of 2008 of the Independent State of Samoa

## **Tuvalu**

Antoniou, A., Loco, A., Kumar, A., and Sinclair, P. (2019). *The Tuvalu Ridge to Reef Project: Groundwater investigations on Nanumea and Nukufetau atolls*. Suva, Fiji: Geoscience, Energy and Maritime Division of the Pacific Community

Commonwealth Local Government Forum. (n.d.). *The local government system in Tuvalu*. Retrieved from <[http://www.clgf.org.uk/default/assets/File/Country\\_profiles/Tuvalu.pdf](http://www.clgf.org.uk/default/assets/File/Country_profiles/Tuvalu.pdf)>.

Department of Environment of the Government of Tuvalu. (2006). *National action plan to combat land degradation and drought*. Retrieved from <[https://www.preventionweb.net/files/60554\\_tuvalueng2006\[1\].pdf](https://www.preventionweb.net/files/60554_tuvalueng2006[1].pdf)>.

GEF Pacific Ridge to Reef Programme. (n.d.). *Tuvalu*. Retrieved from <[https://www.pacific-r2r.org/sites/default/files/2020-03/Tuvalu\\_0.pdf](https://www.pacific-r2r.org/sites/default/files/2020-03/Tuvalu_0.pdf)>.

Government of the Republic of Tuvalu. (2016). *Te kakeega III national strategy for sustainable development 2016-2020*. Private Mail Bag, Funafuti, Tuvalu. Retrieved from <<https://www.adb.org/sites/default/files/linked-documents/cobp-tuv-2017-2019-ld-02.pdf>>.

Government of the Republic of Tuvalu. (2016). *Tuvalu agriculture strategic marketing plan 2016-2025*. Retrieved from <<http://ccprojects.gsd.spc.int/wp-content/uploads/2016/07/5.-Tuvalu-Agriculture-Strategic-Marketing-Plan-2016.pdf>>.

Government of the Republic of Tuvalu. (2017). *Tuvalu infrastructure strategy and investment plan*. Retrieved from <<https://www.theprif.org/sites/default/files/documents/Tuvalu%20Report.pdf>>.

Government of the Republic of Tuvalu. (2020). *Integrated environment and natural resources policy (2021-2023)*. UNPUBLISHED DRAFT

Government of the Republic of Tuvalu. (n.d.). *Tuvalu national biodiversity strategy and action plan 2012-2016*. Retrieved from <<https://www.cbd.int/doc/world/tv/tv-nbsap-01-en.pdf>>.

Government of the Republic of Tuvalu. (n.d.). *Tuvalu national strategic action plan for climate change and disaster risk management 2012-2016*. Retrieved from <[https://www.sprep.org/attachments/Climate\\_Change/Tuvalu\\_National\\_Strategic\\_Action\\_Plan\\_for\\_Climate\\_Change\\_and\\_Disaster\\_Risk\\_Management\\_2012\\_-\\_2016\\_Eng\\_Translation.pdf](https://www.sprep.org/attachments/Climate_Change/Tuvalu_National_Strategic_Action_Plan_for_Climate_Change_and_Disaster_Risk_Management_2012_-_2016_Eng_Translation.pdf)>.

IW R2R Logical Framework: Tuvalu (n.d.).

Lifuka, P., and Tumua, I. (FGD, December 9, 2020).

Lucero, M.S.J. (2019). 'IW R2R Mid-Term Evaluation Notes'. Unpublished.

Pacific Ridge to Reef. (2018). *Ridge to reef - testing the integration of water, land, forest & coastal management to preserve ecosystem services, store carbon, improve climate resilience and sustain livelihoods in Tuvalu*. Retrieved from <[https://www.pacific-r2r.org/sites/default/files/2020-03/Project\\_Progress\\_Tuvalu.pdf](https://www.pacific-r2r.org/sites/default/files/2020-03/Project_Progress_Tuvalu.pdf)>.

Secretariat of the Pacific Community (2013). *Review of mainstreaming of climate change into national plans and policies: Tuvalu*. Retrieved from <[https://www.cakex.org/sites/default/files/documents/mainstreaming\\_profile\\_final-tuvalu.pdf](https://www.cakex.org/sites/default/files/documents/mainstreaming_profile_final-tuvalu.pdf)>.

The Tuvalu Peer Review Team with Pacific Islands Forum Secretariat. (2011). *Tuvalu peer review report*. Retrieved from <[https://tgp-g-isb.org/sites/default/files/international\\_articles/2011\\_Peer\\_Review\\_Tuvalu\\_Report.pdf](https://tgp-g-isb.org/sites/default/files/international_articles/2011_Peer_Review_Tuvalu_Report.pdf)>.

United Nations Development Programme. (n.d.). *Implementing a 'ridge to reef' approach to protect biodiversity and ecosystem functions in Tuvalu*. Retrieved from <https://www.pacific-r2r.org/resource-library/tuvalu-r2r-star-project-document>

## **Vanuatu**

Department of Strategic Policy, Planning and Aid Coordination of the Government of the Republic of Vanuatu. (2017). National sustainable development plan 2016-2030. Retrieved from <<https://www.gov.vu/images/publications/NSDP%20M&E%20Framework.pdf>>.

Department of Strategic Policy, Planning and Aid Coordination of the Government of the Republic of Vanuatu. (2018). Vanuatu 2030 | the people's plan. Retrieved from <[https://www.unescap.org/sites/default/files/Session%203.2\\_John%20Ezra\\_Vanuatu.pdf](https://www.unescap.org/sites/default/files/Session%203.2_John%20Ezra_Vanuatu.pdf)>.

Department of Water Resources & Department of Environmental Protection & Conservation. (n.d.). Tagabe River catchment management plan 2017-2030. Retrieved from <<https://www.pacific-r2r.org/sites/default/files/2020-03/Tagabe%20River%20Management%20Plan%20%282017-2030%29.pdf>>.

E. Packett and E. Samie (virtual FGD, December 9, 2020).

Environmental Management and Conservation (Amendment) Act of 2010 of the Republic of Vanuatu.

Government of the Republic of Vanuatu. 2015. Vanuatu climate change and disaster risk reduction policy 2016-2030. Retrieved from <[https://www.preventionweb.net/files/46449\\_vanuatuccdrpolicy2015.pdf](https://www.preventionweb.net/files/46449_vanuatuccdrpolicy2015.pdf)>.

Government of the Republic of Vanuatu. (n.d.). Vanuatu infrastructure strategic investment plan 2015-2024. Retrieved from <<https://www.gov.vu/images/publications/VISIP%202015-2024%20Report.pdf>>.

Government of the Republic Vanuatu. 2016. National waste management and pollution control strategy and implementation plan 2016-2020. Retrieved from <<https://www.cbd.int/doc/meetings/mar/soiws-2016-05/other/soiws-2016-05-vanuatu-14-en.pdf>>.

Government of Vanuatu. (n.d.). National gender equality policy 2015-2019. Retrieved from <<https://dwa.gov.vu/images/policies/NationalGenderEqualityPolicyJuly2015.pdf>>.

IW R2R Logical Framework: Vanuatu (20 October 2016).

Lucero, M.S.J. (2019). 'IW R2R Mid-Term Evaluation Notes'. Unpublished.

Ministry of Lands & Natural Resources of the Government of the Republic of Vanuatu. 2009. Land sector framework 2009-2018). Retrieved from <<http://extwprlegs1.fao.org/docs/pdf/van168258.pdf>>.

Ministry of Lands & Natural Resources of the Government of the Republic of Vanuatu. 2009. Land sector framework 2009-2018). Retrieved from <<http://extwprlegs1.fao.org/docs/pdf/van168258.pdf>>.

National Disaster Management Office of the Government of the Republic of Vanuatu. 2016. Tsunami response plans for Shefa and Port Vila communities. Retrieved from <<https://ndmo.gov.vu/fr/news/138-tsunami-response-plans>>.

Tawney E.J. 2006. Watershed management and planning in the Tagabe River watershed catchment area in and around Port Vila, Vanuatu. Retrieved from <<http://cee.eng.usf.edu/PeaceCorps/5%20-%20Resources/Theses/Water/2006Tawney.pdf>>.

**For References on Spatial Data and Maps:**

Please see [Annex E. Spatial Data and Maps References](#)

## ANNEXES

The following annexes are stored in respective online repository. Please click the item to access the file.

- a. [Compendium of References](#)
- b. [KII/FGD Guide \(Power Point Presentations\)](#)
- c. [KII/FGD Documentation](#)
- d. [R2R Mainstreaming in Pacific Consultancy Update PPT](#)
- e. [Spatial Data and Maps References](#)
- f. [Sample Spatial Analysis \(FIJI\)](#)
- g. [Chart of R2R-relevant Policies of the 6 Case Study Sites](#)
- h. [Governance Review of 6 PICs](#)
- i. [Status of Documents Requested](#)
- j. [List of Meetings Attended and Key Persons Met](#)

