



# Regional Guidelines for Implementing the (modified) R2R Science to Policy Strategic Framework





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



Suva, Fiji, 2021

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Transect at the Intertidal area at Fo'ui Village. Photo credit: Pacific R2R Programme  
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[www.spc.int](http://www.spc.int) | [spc@spc.int](mailto:spc@spc.int)

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The **Pacific Ridge to Reef (R2R) Programme** is a multi-country, multi-GEF agency programmatic initiative guiding the coordinated investment of US\$90 million in GEF grant funding across multiple focal areas of biodiversity conservation, land degradation, climate change adaptation and mitigation, sustainable land management, sustainable forest management, and international waters in Pacific Small Island Developing States (SIDS).

Operating across 14 Pacific Island countries, the programme aims to deliver tangible and quantifiable local and global environmental benefits by focusing on cross-cutting approaches to water, land and coastal management with linkages across GEF focal areas including: biodiversity, land degradation, international waters, sustainable forest management, climate mitigation and adaptation and capacity development.

The programme is implemented by United Nations Development Programme (UNDP), the United Nations Food & Agriculture Organization (FAO) & the United Nations Environment Programme (UNEP).

Executed regionally by the Pacific Community through the **Regional Ridge to Reef International Waters Project (Regional IW R2R)**, the R2R programme is supported by the Regional Programme Coordination Unit (RPCU) in areas of science-based planning, human capital development, policy and strategic planning, results-based management, and knowledge sharing. The Regional IW R2R Project is one of 15 child projects under the Programme and provides the primary programme coordination vehicle for the 14 other child projects – the national R2R System for Transparent Allocation of Resources (STAR) Projects under the Pacific R2R Programme.

The Regional Project aims to test the mainstreaming of ‘ridge-to-reef’ (R2R), climate resilient approaches to integrated land, water, forest and coastal management in the Pacific Island countries (PICs) through strategic planning, capacity building and piloted local actions to sustain livelihoods and preserve ecosystem services.

The Regional IW R2R Project has 14 demonstration projects in participating Pacific Islands - Cook Islands, Federated States of Micronesia, Fiji, Kiribati, Nauru, Niue, Palau, Papua New Guinea, Republic of the Marshall Islands, Samoa, Solomon Islands, Tonga, Tuvalu and Vanuatu.

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

The GEF Pacific R2R programme was developed to provide an opportunity for Pacific small island developing states (SIDS) to develop and implement integrated approaches for the sustainable development of island economies and communities. Partnerships are key to realizing benefits at the local, regional, and global levels.

## GEF Implementing Agencies

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

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

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

## Executing Agency

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

GEF Pacific Regional International Waters Ridge to Reef Project & Programme Coordination Unit  
Geoscience, Energy and Maritime Division  
Pacific Community  
SPC - Private Mail Bag - Suva, Fiji  
pacific-r2r@spc.int  
Tel: (679) 3249257 | Ext: 36257



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## ABBREVIATIONS

BIOPAMA	Biodiversity and Protected Areas Management
BIORAP	Biological Rapid Assessment
DEM	Digital Elevation Model
DPSIR	Drivers Pressure State Impact Response
EIA	Environmental Impact Assessment
FAME	Fisheries Aquaculture and Maritime Ecosystems
FSM	Federated States of Micronesia
GEF	Global Environment Facility
GSD	GeoScience Division
ICM	Integrated Coastal Management
IDA	Island Diagnostic Analysis
IMC	Inter-ministerial Committee
IW	International Waters
IWRM	Integrated Water Resource Management
KBA	Key Biodiversity Areas
MPA	Marine Protected Area
MYCWP	Multi-year costed workpan
NBSAP	National Biodiversity Strategy and Action Plans
PIC	Pacific Island Countries
PNG	Papua New Guinea
PSC	Program Steering Committee
R2R	Ridge-to-Reef
RapCA	Rapid Assessment of Coastal Priority Areas
RPCU	Regional Programme Coordination Unit
RSC	Regional Steering Committee
RSC	Regional Steering Committee
RSTC	Regional Science and Technical Committee
SAF	Strategic Action Framework
SAP	Strategic Action Plan
SoC	State of the Coast
SoE	State of Environment
SPC	Pacific Community
SPREP	Secretariat of the Pacific Regional Environmental Programme



# Guidelines<sup>1</sup> for implementing the International Waters (IW) Ridge to Reef (R2R)

## Science to Policy Interface

### EXECUTIVE SUMMARY

The R2R Science to Policy Strategic Framework was approved by last year at the RSC-4 formal session. Since that time, the framework provided guidance to project implementation particularly in the collection of baselines and conduct of rapid assessments, preparation and conduct of diagnostic analysis, state of the coast and strategic actions plans and policy frameworks.

The regional guidelines to implement the science-policy technological interface or framework set out clear steps that start from R2R mainstreaming and scoping to effective ministerial approval of strategic action plans or framework and legislations. The guidelines were prepared as “one-stop shop” for stakeholders to consult and used to further the understanding of the R2R science-policy interface particularly in delivering on the Regional IW R2R project outcomes 1.1, 1.2 and 3.1.

The guidelines also present a ‘modified’ framework taking into consideration evolving circumstances amongst PICs and to adapt such framework as best see fit by respective countries.

### PURPOSE & INTENT

1. The Guidelines provide general guidance in carrying out the required steps that implement the theory of change of R2R IW Science to Policy continuum. The guidelines are intended to be user friendly and easy to follow by all stakeholders who may be involved in mainstreaming the ridge to reef approach in natural resource management and planning.
2. If successfully and correctly used, the guidelines would support collective efforts to deliver on the GEF Pacific Ridge to Reef Program initiative, which is to:-

“maintain and enhance Pacific Island countries and territories’ ecosystem goods and services through integrated approaches to land, water, forest, biodiversity and coastal resource management, which in turn contribute to poverty reduction, sustainable livelihoods and climate resilience.”

### RATIONALE

3. The GEF Pacific Ridge to Reef (R2R) Program Initiative is working with projects’ countries in the Pacific region to test and mainstream innovative solutions, integrated and climate resilient approaches to land, water, forest, biodiversity and coastal resource management. The R2R approach requires commitments and support at the subnational and national levels because people and resource users play a central role in ensuring that the provisioning, regulating, supporting and cultural functions and roles of ecosystem goods and services are maintained and enhanced.

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<sup>1</sup> The guidelines were prepared in consultation with and reference to all IW R2R project documentations on science to policy interface, which were presented and considered at various past RSTC and RSC meetings.

4. The IW R2R Project document specifies the outcomes required to effect mainstreaming of the R2R concept, as follows:
  - i. Outcomes 1.1 Successful pilot projects testing innovative solutions involving linking ICM, IWRM and climate change adaptation
  - ii. Outcome 1.2 National diagnostic analyses for ICM conducted for prioritizing and scaling-up key ICM/IWRM reforms and investments
  - iii. Outcome 3.1 National and regional strategic action frameworks for ICM/IWRM endorsed nationally and regionally
5. In order to achieve the above outcomes, several scientific and technical processes need to be carried out, and these are:
  - i. Rapid Assessment of Priority Coastal Areas (RapCA)
  - ii. Island Diagnostic Analysis (IDA)
  - iii. State of the Coast Report (SoC Report)
  - iv. Strategic Action Framework and Planning (SAF, SAP)

## SCOPE

6. The guidelines are for everyone to use during planning for upscaling future R2R investments and planning particularly those who are directly responsible for managing and coordinating project activities in the field and supervision of Consultants. The guidelines are expected to evolve over time particularly with the improvement and successful implementation of alternative steps to achieving the Regional IW funded Pacific R2R project goals and objectives.
7. The guidelines are based on the theory of change underpinning the R2R science-policy interface. In setting out this theory of change, there was an underlying premise that this work is customisable. Project countries can choose to participate in all, some or none of the activities described below. All activities can be completed only through the national IW R2R Project Manager and lead agency in close consultation and with the support of the R2R Regional Programme Coordination Unit (RPCU). Equally, a set of criteria were developed to support countries decide who may be eligible to participate in each steps of the Action Plan for the IW Science to Policy Approach (see details in later sections).

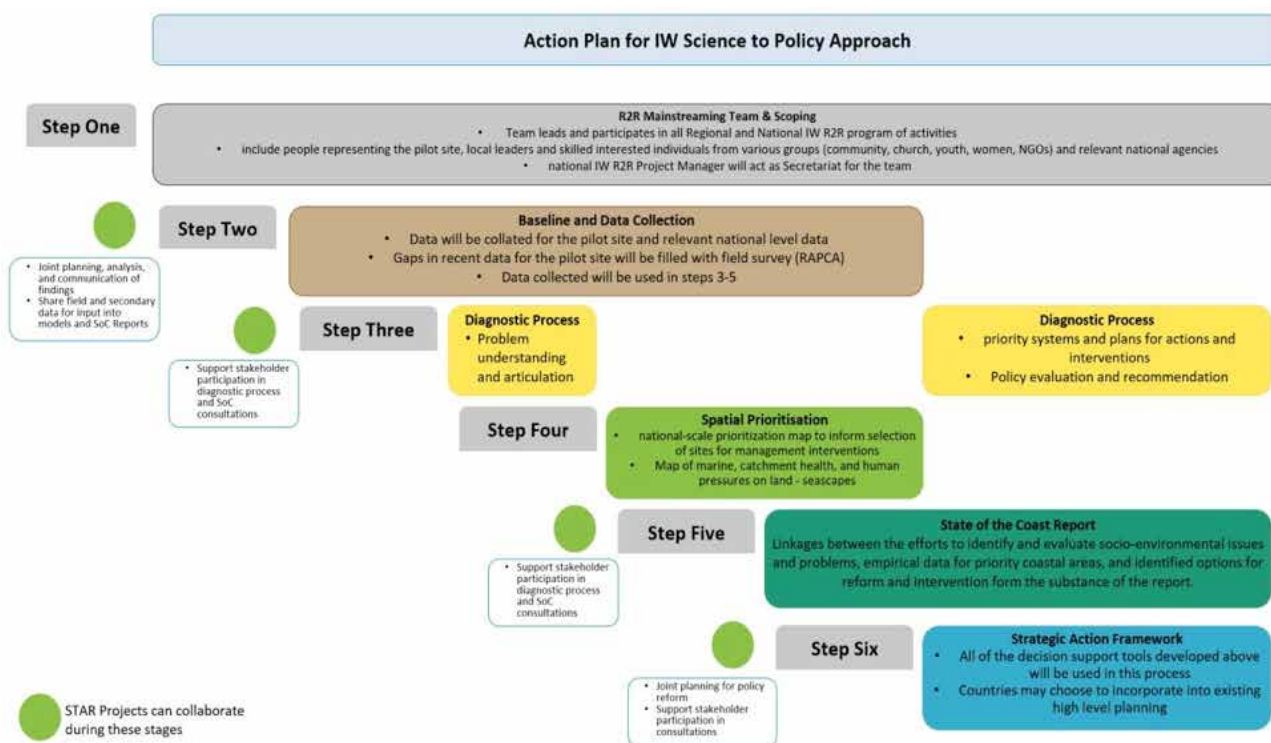


Figure 1. Schematic illustration of R2R Science to Policy Approach, depicting clear Steps 1 to 6 and where STAR Projects and IW Projects can collaborate

8. Pacific Island Countries and Territories face similar threats to their fresh and coastal water systems and biodiversity, covering land, forest, agriculture and coastal/ marine sectors. The assessment and prioritisation of these threats, and priority management responses, are often based on conjecture and sometimes speculations – not science or evidence based. However, such assessment recognises the importance of traditional and cultural knowledge; as well, practical and relevant experiences from prominent resource users in communities residing within those ecosystems, thereby informing policy discussions.
9. The IW R2R Science to Policy approach contains six steps as set out in Figure 1 above. It also appears in later sections of this document. The approach generally covers the collection of baseline data and information, performing diagnostic analyses, and identification and prioritization of areas for ICM/ IWRM interventions for future R2R investments and planning. The scientific and technical information and knowledge products will then be used for the preparation of policy and legislative frameworks such as State of the Coast Report, State of the Environment Report, sub-national or national management plans and policies, and revised or new legislations. The production of integrated catchment management plans, and integrated coastal management plans are examples of standalone policies that can be developed through the R2R science-policy continuum.
10. In support of an evidence-based and inclusive process, the Regional IW R2R Project has developed, in Step 4, a spatial prioritization model identifying national priority areas for ICM/ IWRM<sup>2</sup> interventions or actions. This approach maximises existing data and stakeholder input and reduces the amount of time and resources needed to characterise priority areas.

<sup>2</sup> Integrated coastal management (ICM), and integrated water resource management (IWRM)

11. The identified priority areas are characterised based on socio-political and environmental factors, and further informed by spatial modelling that identifies priority areas or “hot-spots” nationally, locally, or at site level, noting that the latter may not be useful in small atoll countries where priority areas are known and documented. The guideline for implementing the R2R spatial prioritization and planning procedures is available for reference.
12. The information gathered produces a detailed assessment of the ecological state of an area, human activities and the main risks, and generate policy options for interventions based on collated data and stakeholder input. Thematic maps are generated to assist national stakeholders in decision-making. These maps and analysed data will be compiled into a national State of the Coast Report that provides communities and decision makers a snapshot view of environmental health and management options. All the above knowledge is used to support formulation of national ICM/ IWRM reforms and investment plans. Figure 2 depicts the process flow in the data requirements or indicator sets for the R2R science deliverables along the science-policy continuum.

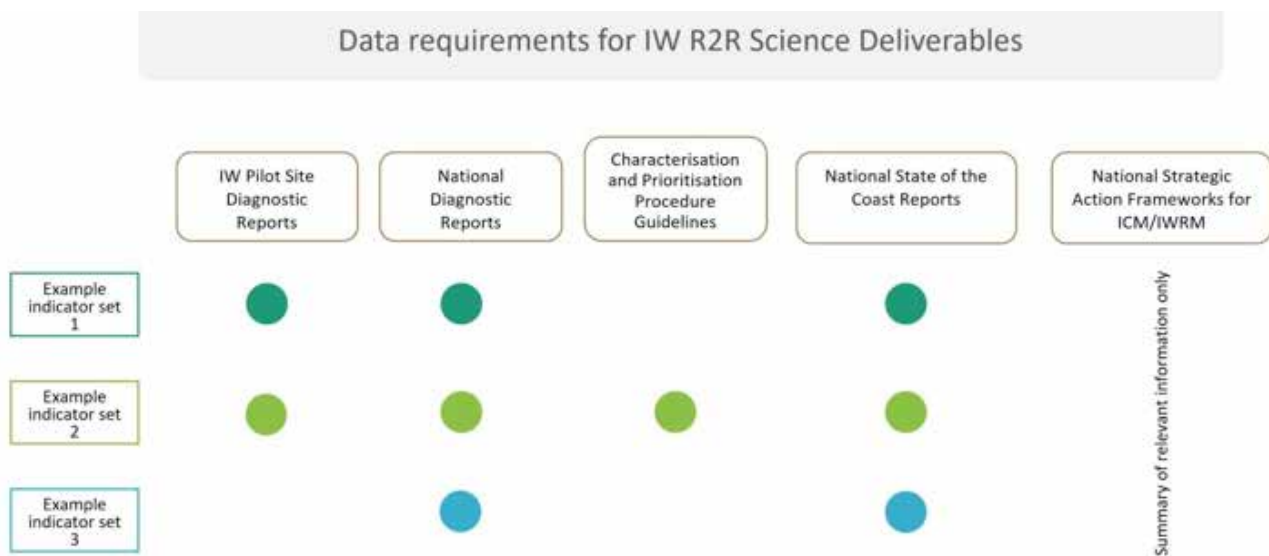


Figure 2. Schematic illustration for R2R Science Deliverables, and with indicator sets representing governance, socio-economic and environmental (see details in Attachment 1).

## NATIONAL RIDGE TO REEF (R2R) DIAGNOSTIC AND SYSTEMS ANALYSIS REPORT

13. Community led systems analysis is conducted at the identified priority site to articulate the most pressing environmental problems. Outcomes of this analysis, and data collected through the identification and characterisation stage are used to identify the most feasible ICM/IWRM policy or intervention options. Focused group discussions and policy identification forums are central under the diagnostic process.

Output	Agreed on the scope, objectives and responsibilities
	Identified Issues or Problems & impacts
	Agreed on list of prioritised Issues or problems & impacts. For instance, causal loop diagrams of interconnecting problems for catchment area
	Data processing and reporting i.e. scaling the relative importance of sources and causes (from the 'immediate' to the 'root') of the problems within ridge to reef system or catchment area,
	Priority systems and plans for actions and interventions
	R2R Diagnostic Reports (where desired)
	Policy evaluation: recommendations for policy or reform.
Expected time	Problem articulation – 5 days stakeholder workshop (assuming different groups) Problem understanding – 5 days stakeholder workshop (assuming different groups)
	Data processing & reporting – 2 weeks including data input and modelling
	Policy evaluation – 5 days stakeholder workshop (assuming different groups and one plenary)
	Total time including training ~ 3 months

## SPATIAL PRIORITISATION PROCEDURE

14. The national level prioritisation procedure utilises a rapid assessment methodology, integrating all existing and available biophysical and human activity information. Indicator sets and/ or groups of indicators will be used to characterise the state of terrestrial and marine, social and ecological systems. Collection of data will follow a standard process for all countries, and where gaps exist, these will be addressed in the rapid field survey assessments of the sites.
15. The decision support framework will be applied, utilizing these datasets to model current and potential future land-based sediment exports to the marine environment under land-use change scenarios to identify where terrestrial conservation initiatives may have the greatest impact on marine conservation.
16. The local or catchment-scale linked land-sea model will spatially prioritise upland and coastal conservation efforts across a selected priority watershed and/or predict outcomes of proposed management actions. This is a spatially explicit model to quantify the effect of land-use change on coral reef ecosystems through sediment export. Spatial patterns in water quality are linked to coral reef ecosystem health using benthic indicators known to respond to land-based runoff. Model inputs include fish indicators that represent important local resources, identified in consultation with decision makers and local communities, and ecological resilience.
17. Using a spatial analysis, coral reef areas vulnerable to existing land-use runoff based on selected benthic and fish indicators will be determined and traced back to upland areas within the watershed to identify priority areas for management actions. Alternatively, or in additional, the effect of proposed terrestrial and marine management actions will be modelled to assess the potential impacts or benefits to inform decision-making.

18. The main outputs of the spatial prioritisation model will be:-

A. National Prioritization

- i. Marine impact assessment– habitat area (km<sup>2</sup>), coral cover (%), fish biomass (kg or tons);
- ii. watershed prioritization maps – rank based on potential impact of sediment runoff on coral reefs;
- iii. forest area prioritization maps – erosion prone areas in priority watersheds; and
- iv. social & economic drivers in the prioritization – e.g. watershed(s) providing essential ecosystem goods and services (e.g., drinking water) to nearby cities and towns.

B. Local-scale linked Land-Sea Model

- i. Land-use scenarios in terms of land-use change, sediment export from watersheds, and suspended sediments into the marine environment;
- ii. Marine management scenarios in terms of fishing pressure and marine closure; and
- iii. Marine impact assessment– marine indicator changes under present conditions and each land-use scenario alone and combined with marine management scenarios.

Output National scale	maps of a) present and projected land use/cover under deforestation scenarios, b) present and projected sediment export by watershed for each scenario, c) present and projected suspended sediment in the marine environment for each scenario, and d) coral reef habitats exposed to suspended sediments for each scenario
	national-scale conservation prioritization map to inform selection of sites for management interventions
Expected time	Data collection (included in Step 2) – 1-month Model preparation – 1 month
	Maps and decision support tools – 1 month
	Reporting – 1 month
Output Local scale	maps of a) Land-use/cover and sediment export under present conditions and each management scenario; b) suspended sediments, fishing, and/or other marine human drivers under each scenario; c) marine habitat and environmental drivers (e.g., currents)
	Coral-reef model results showing relationships between marine indicators and terrestrial and marine drivers, including human-mediated drivers (e.g., suspended sediment and fishing pressure)
	Predicted distribution maps for marine indicators under present conditions and under each management scenario
Expected time	Data collection (included in Step 2) – 1-month Model preparation – 1 month
	Maps and decision support tools – 1 month
	Reporting – 1 month

## NATIONAL STATE OF THE COAST REPORT (SOCS)

19. National State of the Coast Reports are compiled from information collected through the identification and characterisation stage, and include stakeholder identified policy or intervention options from the diagnostic and systems analysis stage. The report may be divided into five (5)-sections: pressures affecting the coast, catchment environment, coastal environment, governance of the coast and, looking forward. Additionally, the report may include guidelines for conducting the above process, thematic maps and summary of indicators and status. The feedback discussion forums on all data collected and compiled, and the draft reports circulated are central elements under this stage of preparing SoC reports.

Output	National State of the Coast report
Expected time	Draft report preparation – 6 weeks
	National consultations – 6 weeks
	Final report endorsed – 4 weeks

## STRATEGIC ACTION FRAMEWORKS (SAFS) FOR ICM/IWRM

20. Community led ICM/IWRM reform options are identified and debated through organised and facilitated open forums. Assessment is supported through model analysis of influence of alternative reform options on a system over time. The Action Framework includes statement of vision, goals, and guiding principles; priority areas of action and a costed 5-year action plan. These will be approved at the inter-ministerial level. At this stage the approach would be mainly open policy assessment forums, and with feedback on framework development.

Output	National Strategic Action Framework (SAF) for R2R
Expected time	National dialogue and debate – 6 weeks
	Draft framework preparation – 4 weeks
	National consultation and revisions – 6 weeks
	Final framework endorsed – 4 weeks

## PROCESS FOR PREPARING RAPID ASSESSMENT OF PRIORITY COASTAL AREAS (RAPCA)

21. The preparatory stages of the RAPCA will be done concurrently with a diagnostic analysis workshop. The demonstration site will be visited and data available locally will be collated. Meetings should be held with the different but relevant agencies that could assist in the RAPCA – e.g. Fisheries, Forestry, Agriculture, Water, and Infrastructure, Planning, academic institutions, regional agencies and NGOs. Local communities should be consulted. Meetings should be also organised with personnel of projects with potential synergies with the R2R project. The diagnostic analysis will help identify at least two other priority sites for assessment.



22. The national IW Project Manager should do some groundwork before the first trip of the RapCA team. The Project Manager assists as follows:
- i. Organise meetings with project stakeholders
  - ii. Collate all data that is available locally or know where it can be stored
  - iii. Organise a reconnaissance trip to the demonstration site
  - iv. Organise community consultations
  - v. Identify local experts who could assist as team leader – send out advertisement for a local consultant
  - vi. Mobilise national teams from across interested persons in various groups in the communities, Project Steering Committee or Boards, traditional leaders etc.
23. Once the first trip is done, the Science team at the RPCU will be able to decide the data gaps that exist, and the fieldwork required to provide the data. Survey dates need to be confirmed well in advance, and a survey team assembled and logistical arrangements for the field surveys organised.

Output	Raw datasets, datasheets, questionnaires (filled), imageries, photos, video clips, etc.
	Dbase (MS Xcel, Access, or equivalent)
	Reports – progress, technical, analytical
	Rapid Assessment of Priority Coastal Areas (RapCA) report
Expected time	RapCA contract drafted, negotiated & signed (1 week)
	Planning, briefing, training & resources mobilization (2 weeks)
	Pre-visits to demonstration site, community consultation (1 week)
	RapCA field work (3 weeks)
	Data and information management (1 week)
	Draft report preparation – 3 weeks
	Draft report submitted – 2 weeks
Final report endorsed – 3 weeks	

## PROCESS FOR DEVELOPING NATIONAL SOC DIAGNOSTIC REPORTS

24. The process of developing of SoCs will be facilitated via a coordinated programme of activities focusing on national and regional consultation combined with targeted technical and coordination support. The whole methodology is highly participatory with national stakeholders and is intended to be conducted by national expert consultants and national project managers with support from RPCU where required<sup>3</sup>. Each iteration will bring adjustments and improvements before being scheduled to remaining countries. Below is a diagram of the development process and brief schematic of steps taken to date.

<sup>3</sup> Note that some countries opt to support the SOE review and development process led through SPREP

25. The preparation of the national Diagnostic Reports will be conducted by national expert consultants and national Project Managers with support from the RPCU where required. Each country will establish a Diagnostic Analysis Development Team, it is intended that the IMC will make the bulk of the development team. Further guidance will be provided in the Diagnostic Analysis guidelines.

## SELECTION CRITERIA FOR IW R2R SCIENCE TO POLICY APPROACH

26. The rationale pertaining to the IW R2R project science to policy approach is enshrined in the IW R2R project document as set out in paragraphs 4 and 5 above. Generally, the IW R2R project document requires specific outcomes to effect mainstreaming the R2R concept in order to deliver on testing innovative solutions, diagnostic analyses and strategic action frameworks. This further requires progressing scientific and technical processes to deliver on those outcomes, namely: - RapCA, IDA, SoC, SAF/SAP.

27. Therefore, it is wrong to assume and relate the selection criteria to what a project country can and cannot deliver relative to the science-policy continuum. Rather the criteria must provide basis, because of limited resources, to prioritise project countries that may be eligible to take on one or several steps in such continuum. Technically, the more countries opt to follow the R2R science-policy approach, irrespective of limited resources, the better and stronger empirical evidence supporting the successful achievements of the project's intended goals and objectives.

28. Below are the selection criteria, in no order priority, for IW R2R Science-Policy Continuum:-

Details		Status
Criteria 1	site/ country support and willingness to participate in full science to policy continuum, steps 1-6	None
Criteria 2	site/ country support and willingness, with active partnerships, to participate in development and sustaining of SoC	Fiji, Solomon Islands, Vanuatu, Samoa, Cook Islands, FSM, Tonga, Niue, Kiribati
Criteria 3	national project IW logframe & MYCWP revised, finalised and approved by PSC; and showing clear milestone targets and reflecting the above steps	All project countries as required for no-cost extension (slowly progressing)
Criteria 4	Project is financially sound and receives co-financing from partners	All project countries equal allocation of US\$200,000; co-financing details as set out in project document.
Criteria 4	capacity in-country to support roll out of and implement the full science to policy continuum	most countries have capacity in country; outsource for those countries lacking capacity
Criteria 5	PMU performance – communication, timely reporting with supporting documents	All project countries recognising some remains poorly performed

	Details	Status
Criteria 6	Levels of human induced pressures on ridge to reef ecosystems	Extent of severity of anthropogenic influences on ridge-reef ecosystems vary between locations; nonetheless remain domestic priorities and need actions
Criteria 7	Extent of available data on such ecosystems and socio-economics incl. key SoC indicators	All project countries

## ATTACHMENT 1:

Agreed list of governance, socio-economic & environmental indicators for State of the Coasts Report and Rapid Coastal Assessment

Code	Indicator	Measurement	Type/Focus					Collection Techniques	Existing Data
			D	P	S	I	R		
G1	Legislation	Existence of legislation for R2R						Document review	None
		Adequacy (matrix) of legislation (incl. gender assessment)						Interviews with NRM managers & other experts	None
		Ratification of MEA's and regional policies & frameworks						surveys	None
		Protected areas – Tier 1							none
G2	Traditional Governance	Land tenure type						Document & record review	
		Presence of traditional governance mechanisms							
G3	Coordinating Mechanism	Existence of coordinating mechanisms for various sectors (or cross-sectoral) and legal basis						Document review (meeting records, etc.)	
		Participation						Interviews with NRM managers and members	
		Stakeholder representation							
G4	Management plans	Existence, characteristics, and status of NRM plans						Document review	
		Extent (%) area covered by NRM plans						interviews	

Code	Indicator	Measurement	Type/Focus					Collection Techniques	Existing Data
			D	P	S	I	R		
G5	Active management	Level of implementation of plans						Document review	
		Procedures, legal tools, and monitoring & sanctioning applied for enforcement of NRM plans/ actions						Interviews	
		Level of enforcement of, or compliance with NRM plans						surveys	
G6	Monitoring & Evaluation	Monitoring programs at sites						Document and record review	
		Existence of an operational monitoring and evaluation system with related indicators within NRM plans							
		Consideration of results and adjustments in NRM initiatives							
G7	Stakeholder participation	Community practice in landcare, coastal care & marine care groups (e.g. LMMA)						Interviews, surveys, document review	
G8	NGO & CBO activity	Existence and characteristics of NGOs and community organisations active in land, coastal, marine and biodiversity conservation						Document and record review	
		Level of activity of NGOs and community organisation						Surveys, interviews	

Code	Indicator	Measurement	Type/Focus					Collection Techniques	Existing Data
			D	P	S	I	R		
G9	Knowledge & training	Education & training programmes that incorporating ICM/IWRM/NRM						Document and record review	
		Number of community receiving relevant information						Surveys, interviews	
		Number and % of community practices informed by information and evidence							
G10	Risk management	Availability of hazard maps – Tier 1							
		Availability and coverage of emergency response plans							
		Institutional mechanism for emergency response							
		Availability and coverage of risk based urban planning							
SE1	Demographics	Population size, distribution						Database	
		Levels of education (sex disaggregated)						Document review	
		Levels of employment (sex disaggregated)							
		Site specific total income							

Code	Indicator	Measurement	Type/Focus					Collection Techniques	Existing Data
			D	P	S	I	R		
SE2	Human pressures on habitats	Population density – Tier 1						Monitoring programs	DEM and land use – Ministry of Agriculture and Forestry
		Land use/ land cover patterns – Tier 1						Databases	
		High impact fishing gear practices						Interviews	
		Number and location of ports – Tier 1						Surveys	
		Extractive resource use (sand mining, dredging, mangrove harvesting)							
		Number and location of waterways extraction (dredging, mining)							
		Tourism areas and numbers							
SE3	Pollutants & introduction	Population % access to improved functioning sanitation						Monitoring programs	
		Number, location and estimate volume of point source discharges (coastal & surface water) – Tier 1						Databases	
		Non-point source nutrient loading (fertiliser imports)						Document review	
		Number and location of informal settlements						Surveys, interviews	



Code	Indicator	Measurement	Type/Focus					Collection Techniques	Existing Data
			D	P	S	I	R		
SE4	Exploitation of living resources	Consumption patterns (marine and terrestrial resources)						Document reviews	
		Economic value						Databases	
		Targeted species (fauna & flora)						Interviews, surveys	
		Harvest and fishing areas – Tier 1						Interviews, creel surveys, participatory mapping	
		Frequency of harvest/ fishing							
		Methods of harvest/ fishing – Tier 1							
SE5	Coastal protection	% of shoreline with natural protection						Surveys	
		% of shoreline with human-made protection (proportion adhoc or engineered)						Document review	
E1	Diversity	Occurrence of special species (marine and terrestrial)						Species inventory	Birdlife International for Atolls
		Occurrence of invasive species (marine and terrestrial)						Sampling	Pacific Invasive Learning Network
		Richness of fish communities						Monitoring programs	Procfish-SPC
		Richness of coral communities							
E2	Abundance	Juvenile coral						Monitoring program and Surveys	Turtle Database – SPREP
		Marine flora							Procfish-SPC
		Biomass (key fisheries)							
		Number of individuals (marine mammals)							

Code	Indicator	Measurement	Type/Focus					Collection Techniques	Existing Data
			D	P	S	I	R		
E3	Habitat quality	Coral health						Monitoring and programs surveys	Vegetation of Tropical Island Pacific (book)
		Habitat type (coast and catchment)						Remote sensing	Art Whistler (book)
		Habitat cover (coast and catchment)						databases	Seagrass Watch
		Mangrove and seagrass health							FAME-SPC developing a methodology for seagrass
E4	Species health	Richness of threatened and vulnerable fisheries species						Monitoring and programs surveys	Procfish-SPC
E5	Biodiversity hotspots (coast & catchment)	Key biodiversity areas						Document review	National & Regional KBA
		Important bird areas						Interviews	Birdlife International
		Protected areas						Databases	BIOPAMA – SPREP
		Recently identified priority areas (BIORAPs)						Surveys	BIORAP – SPREP
		Nationally threatened and endemic species							Review of surveys, list of species (not in IUCN, NBSAP)
E6	Water quality (coast & catchment)	Physico-chemical parameters						Monitoring programs	
		Nutrient concentration (phosphate & nitrates/nitrites)						Sampling	
		Faecal coliform							
		Chlorophyll a concentration							
		Incidence and duration of harmful algal bloom (coast)							
		Defined and enforced riparian zones (catchment)							
E7	Shoreline stabilisation	Shoreline erosion						Monitoring programs	GSD
		Shoreline accretion							

## ATTACHMENT 2:

### Schedule for preparation and conduct of RapCA

Task Name	MONTH 1				MONTH 2				MONTH 3			
	Wk1	Wk2	Wk3	Wk4	Wk1	Wk2	Wk3	Wk4	Wk1	Wk2	Wk3	Wk4
<b>COUNTRY 1</b>												
Site diagnostic analysis workshop												
RapCA recon												
Field work for RapCA												
Data processing & analyses												
Site diagnostic report												
<b>COUNTRY 2</b>												
Site diagnostic analysis workshop												
RapCA recon												
Field work for RapCA												
Data processing & analyses												
Site diagnostic report												

Task Name	MONTH 1				MONTH 2				MONTH 3			
	Wk1	Wk2	Wk3	Wk4	Wk1	Wk2	Wk3	Wk4	Wk1	Wk2	Wk3	Wk4
<b>COUNTRY 3</b>												
Site diagnostic analysis workshop												
RapCA recon												
Field work for RapCA												
Data processing & analyses												
Site diagnostic report												
<b>COUNTRY 4</b>												
Site diagnostic analysis workshop												
RapCA recon												
Field work for RapCA												
Data processing & analyses												
Site diagnostic report												

Task Name	MONTH 1				MONTH 2				MONTH 3			
	Wk1	Wk2	Wk3	Wk4	Wk1	Wk2	Wk3	Wk4	Wk1	Wk2	Wk3	Wk4
<b>COUNTRY 5</b>												
Site diagnostic analysis workshop												
RapCA recon												
Field work for RapCA												
Data processing & analyses												
Site diagnostic report												
<b>COUNTRY 6</b>												
Site diagnostic analysis workshop												
RapCA recon												
Field work for RapCA												

# ATTACHMENT 3:

## Monitoring various activities in the R2R National

### Pilot Projects

	Vanuatu	Tuvalu	Tonga	Solomon Islands	Samoa	BMF	PNG	Palau	Niue	Nauru	Kiribati	Fiji	FSM	Cook Islands	
18	9	18	12	18	18	12	12	18	18	18	18	12	2		Required time (mths) to complete outputs (indicative)
															Revegetation program
															Constructed program
															Constructed wetland feasibility studies
															Septic System Upgrade
															Eco-sanitation Toilets
															Pig Waste Management
															Solid Waste Feasibility Studies
															Water Use Efficiency Plan
															Guidelines for Infrastructure Development etc.
															Guidelines for Public Partnerships (tourism)
															Sustainable Land Use Management
															Integrated Coastal Management Plan
															Integrated Catchment Management Plan
															Integrated Freshwater Management Plan
															Mangrove management plan
															Revised Sector Plans, SoEs, National Development Strategies or Plans
															New Regulations related to Water, Waste/Pollution and General Environment
															Amendments to current Regulations related to Water, Waste, Pollution and General Environment
															Amendments to principle Acts on Water, Pollution, and General Environment
															Community bye-laws (MPAs, etc.)
															Baselines
															RapCA
															Site Diagnostic Analyses report
															National Diagnostic Analyses report
															Procedures for identification & prioritization of coastal areas
															State of Coast report (Country or State level)
															Strategic Action Framework
															Strategic Action Plan
															Lessons Learned/ Knowledge Products
															Revised Logframe
															Revised MYCWP
															Quarterly & Annual reports
															Cash Advance request
															Consultancy - EIA
															Consultancy - Integrated Catchment Manag. Plan
															Consultancy - Integrated Coastal Manag. Plan
															Consultancy - RapCA
															Consultancy - Diagnostic
															Consultancy - SOC
															PSC/ Board meeting Updates

## ATTACHMENT 4:

### Details on Steps for Implementing R2R Science to Policy Continuum

Step	Description	Outputs	Stakeholder Engagement	Which countries?
1	R2R Mainstreaming Team and Scoping <sup>4</sup>	Functional Mainstreaming team  Review and opportunities for mainstreaming R2R	National and community stakeholder participation in process	Expected in all 14-countries
2	Baseline and Data Collection	Primary and secondary data collected & collated into central database RapCA reports (some countries 1o and 2o data are presented in RapCA reports) Pilot Site Diagnostic Report	National team <sup>5</sup> to collect & collate data RapCA national team for field work  National team to conduct site diagnostic analyses workshops	Expected in all 14 countries  Vanuatu, Solomon Islands, PNG, Samoa Fiji, Kiribati, Niue, Tonga, Cook Islands? Nauru?
3	Diagnostic analysis workshop	National Island Diagnostic Analysis Report	National teams	Cook Islands, PNG, Palau, FSM
4	Spatial Prioritisation Procedure	National scale thematic maps (urban pressures, marine vulnerability, fisheries) Catchment scale thematic maps (catchment health index, coastal health index, marine health index)	Community group and national level participation	Successfully trialed in Vanuatu. The rest of atoll countries pretty much know the priority hotspots and spatial areas for current and future R2R investments, therefore don't need this step.

4 Use the opportunity during scoping to identify, based on available information and government priorities, possible candidates for pilot sites, and establish a process for reviewing that selection. For instance, initiate consultations with all relevant stakeholders, groups and communities, in a participatory manner, about R2R investments and planning and discuss candidate sites, and why they were selected.

5 include local Consultant as team leader, community participation in field surveys, Steering Committee or Board members, people representing the pilot site, local leaders and skilled interested individuals from various groups



Step	Description		Outputs	Stakeholder Engagement	Which countries?
5	State of the Coast (SoC) or State of the Environment (SoE) Report		National State of the Coast Report; or  National State of the Environment Report	National stakeholder participation	Tuvalu, Palau, PNG(?), FSM, Samoa, Fiji (?) opt for SoE instead but using R2R outputs/ outcomes Others will attempt SoCs, and State of Kosrae Coast report
6	Strategic Framework	Action	National Strategic Framework for ICM/IWRM (e.g. R2R strategic action plan)  Mainstreaming R2R action plans into high level planning (e.g. National Development (Strategic) Plans, etc; or sectoral plans – climate change, ocean, forestry, agriculture, water, fisheries, tourism	National stakeholder participation	All countries will have some level of policy and legislative frameworks, noting that for some prefer mainstreaming R2R action plans in high level planning at subnational (e.g. site level) and not national level SAF or SAP or sector level
7	Legislative Framework	&	Bills to be debated in Parliaments	National stakeholder participation	Tonga Water Bill, Samoa Water Act,
	Impacts		Acts of Parliament gazetted		Kosrae State govt pledged \$20,000 for upscaling dry litter piggery Tuvalu cabinet considering AU\$ million worth commercial dry litter piggeries for use by the Funafuti population

## ATTACHMENT 5:

### Action Plan for Implementing R2R Science to Policy

Tasks	Tentative Target Dates
<b>DIAGNOSTIC</b>	
<b>Step 1</b> - Scoping, drafting of TOR and Recruit/ Mobilise National Teams	xx
<b>Step 2</b> - Baseline and Data Collection	
<b>Step 3</b> - Conduct of diagnostic analyses workshops; writing of report	
Presentation of diagnostic at PSC, RSTC, RSC, Agencies	
Circulation of diagnostic report to PSC, RSTC, RSC, Agencies	
Review of diagnostic reports Report	
Finalization of diagnostic reports; circulation	
<b>Step 4</b> - Spatial Prioritisation Procedure	
<b>STRATEGIC PLANS &amp; POLICIES</b>	
<b>Step 5</b> - State of the Coast Report (SoC or SoE)	xx
<b>Step 6</b> - Strategic Action Framework (Revision of SAF/SAP)	
Drafting of SAP	
Presentation of SAP to PSC, RSTC, RSC, Agencies	
Circulation of SAP to Countries	
Review of SAP by Countries	
Finalization and Ministerial Endorsement	
<b>LEGISLATIONS &amp; REGULATIONS</b>	
<b>Step 7</b> - Drafting new or reviewing current legislations	xx
Presentation of legislative framework PSC, RSTC, RSC, Agencies	
Revision of legislative framework	
Circulation of legislative framework to Countries	
Review of legislative framework by Countries	
Finalization and Ministerial Endorsement	





