**Summary:**

The paper presents a working draft on the guidelines for implementing R2R science to policy framework, which was considered and approved by the RSC-4 last year. 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 IW R2R project outcomes 1.1, 1.2 and 3.1. Moreover, the guidelines are useful reference when planning for upscaling future R2R investments and planning. With a central focus on theory of change, the R2R guidelines on science-policy are subject to changes as circumstances change and therefore the work is adjusted and customized. The guidelines set out clear steps that start from R2R mainstreaming and scoping to effective ministerial approval of strategic action plans or framework and legislations.

**Recommendations:**

The R2R Technical Consultation is invited to:-

(i) Consider and discuss the draft guidelines for implementing R2R science to policy strategic framework; and

(ii) Provide clear advice on the practical use and application, suggesting improvements if any, on the guidelines particularly on the six-step approach adopted under the IW R2R science-policy approach.
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.**”

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.

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)

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

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1 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.
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.
**Introduction:**

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 interventions or actions. This approach maximises existing data and stakeholder input, and reduces the amount of time and resources needed to characterise priority areas.

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.

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2 Integrated coastal management (ICM), and integrated water resource management (IWRM)
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 will utilise 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 (km²), 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 Lan-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.

<table>
<thead>
<tr>
<th>Output National-scale</th>
<th>Expected time</th>
</tr>
</thead>
<tbody>
<tr>
<td>• 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</td>
<td>• Data collection (included in Step 2) – 1 month</td>
</tr>
<tr>
<td>• national-scale conservation prioritization map to inform selection of sites for management interventions</td>
<td>• Model preparation – 1 month</td>
</tr>
<tr>
<td>• Maps and decision support tools – 1 month</td>
<td>• Reporting – 1 month</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Output Local-scale</th>
<th>Expected time</th>
</tr>
</thead>
<tbody>
<tr>
<td>• 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)</td>
<td>• Data collection (included in Step 2) – 1 month</td>
</tr>
<tr>
<td>• Coral-reef model results showing relationships between marine indicators and terrestrial and marine drivers, including human-mediated drivers (e.g., suspended</td>
<td>• Model preparation – 1 month</td>
</tr>
<tr>
<td>• Maps and decision support tools – 1 month</td>
<td>• Reporting – 1 month</td>
</tr>
</tbody>
</table>
| 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. 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.

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:-

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Details</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Criteria 1</td>
<td>site/ country support and willingness to participate in full science to policy continuum, steps 1-6</td>
<td>None</td>
</tr>
<tr>
<td>Criteria 2</td>
<td>site/ country support and willingness, with active partnerships, to participate in development and sustaining of SoC</td>
<td>Fiji, Solomon Islands, Vanuatu, Samoa, Cook Islands, FSM, Tonga, Niue, Kiribati</td>
</tr>
<tr>
<td>Criteria 3</td>
<td>national project IW logframe &amp; MYCWP revised, finalised and approved by PSC; and showing clear milestone targets and reflecting the above steps</td>
<td>All project countries as required for no-cost extension (slowly progressing)</td>
</tr>
<tr>
<td>Criteria 4</td>
<td>Project is financially sound and receives co-financing from partners</td>
<td>All project countries equal allocation of US$200,000; co-financing details as set out in project document.</td>
</tr>
<tr>
<td>Criteria 4</td>
<td>capacity in-country to support roll out of and implement the full science to policy continuum</td>
<td>most countries have capacity in-country; outsource for those countries lacking capacity</td>
</tr>
<tr>
<td>Criteria 5</td>
<td>PMU performance – communication, timely reporting with supporting documents</td>
<td>All project countries recognising some remains poorly performed</td>
</tr>
<tr>
<td>Criteria 6</td>
<td>Levels of human induced pressures on ridge to reef ecosystems</td>
<td>Extent of severity of anthropogenic influences on ridge-reef ecosystems vary between locations; nonetheless remain domestic priorities and need actions</td>
</tr>
<tr>
<td>Criteria 7</td>
<td>Extent of available data on such ecosystems and socio-economics incl. key SoC indicators</td>
<td>All project countries</td>
</tr>
</tbody>
</table>
### Attachment 1: Agreed list of governance, socio-economic & environmental indicators for State of the Coasts Report and Rapid Coastal Assessment

<table>
<thead>
<tr>
<th>Code</th>
<th>Indicator</th>
<th>Measurement</th>
<th>Type/Focus</th>
<th>Collection Techniques</th>
<th>Existing Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>G1</td>
<td>Legislation</td>
<td>Existence of legislation for R2R</td>
<td>D P S I R</td>
<td>Document review</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Adequacy (matrix) of legislation (ncl. gender assessment)</td>
<td></td>
<td>Interviews with NRM managers &amp; other experts</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ratification of MEA’s and regional policies &amp; frameworks</td>
<td></td>
<td>surveys</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Protected areas – Tier 1</td>
<td></td>
<td>none</td>
<td></td>
</tr>
<tr>
<td>G2</td>
<td>Traditional Governance</td>
<td>Land tenure type</td>
<td></td>
<td>Document &amp; record review</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Presence of traditional governance mechanisms</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>G3</td>
<td>Coordinating Mechanism</td>
<td>Existence of coordinating mechanisms for various sectors (or cross-sectoral) and legal basis</td>
<td>D P S I R</td>
<td>Document review (meeting records, etc.)</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Participation</td>
<td></td>
<td>Interviews with NRM managers and members</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Stakeholder representation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>G4</td>
<td>Management plans</td>
<td>Existence, characteristics, and status of NRM plans</td>
<td>D P S I R</td>
<td>Document review</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Extent (%) area covered by NRM plans</td>
<td></td>
<td>interviews</td>
<td></td>
</tr>
<tr>
<td>G5</td>
<td>Active management</td>
<td>Level of implementation of plans</td>
<td>D P S I R</td>
<td>Document review</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Procedures, legal tools, and monitoring &amp; sanctioning applied for enforcement of NRM plans/ actions</td>
<td></td>
<td>Interviews</td>
<td></td>
</tr>
<tr>
<td>Tier</td>
<td>Domain</td>
<td>Description</td>
<td>Methodologies</td>
<td></td>
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<tr>
<td>G6</td>
<td>Monitoring &amp; Evaluation</td>
<td>Level of enforcement of, or compliance with NRM plans</td>
<td>surveys</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Monitoring programs at sites</td>
<td>Document and record review</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Existence of an operational monitoring and evaluation system with related indicators within NRM plans</td>
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<tr>
<td></td>
<td></td>
<td>Consideration of results and adjustments in NRM initiatives</td>
<td></td>
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<tr>
<td>G7</td>
<td>Stakeholder participation</td>
<td>Community practice in landcare, coastal care &amp; marine care groups (e.g. LMMA)</td>
<td>Interviews, surveys, document review</td>
<td></td>
<td></td>
</tr>
<tr>
<td>G8</td>
<td>NGO &amp; CBO activity</td>
<td>Existence and characteristics of NGOs and community organisations active in land, coastal, marine and biodiversity conservation</td>
<td>Document and record review</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Level of activity of NGOs and community organisation</td>
<td>Surveys, interviews</td>
<td></td>
<td></td>
</tr>
<tr>
<td>G9</td>
<td>Knowledge &amp; training</td>
<td>Education &amp; training programmes that incorporating ICM/IWRM/NRM</td>
<td>Document and record review</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Number of community receiving relevant information</td>
<td>Surveys, interviews</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Number and % of community practices informed by information and evidence</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>G10</td>
<td>Risk management</td>
<td>Availability of hazard maps – Tier 1</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Availability and coverage of emergency response plans</td>
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<tr>
<td></td>
<td></td>
<td>Institutional mechanism for emergency response</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>SE1</td>
<td>Demographics</td>
<td>Population size, distribution</td>
<td>Database</td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>Levels of education (sex disaggregated)</td>
<td>Document review</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Levels of employment (sex disaggregated)</td>
<td>Database</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Site specific total income</td>
<td>Database</td>
<td></td>
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</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SE2</th>
<th>Human pressures on habitats</th>
<th>Population density – Tier 1</th>
<th>Monitoring programs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Land use/land cover patterns – Tier 1</td>
<td>Databases</td>
<td>Ministry of Agriculture and Forestry</td>
</tr>
<tr>
<td></td>
<td>High impact fishing gear practices</td>
<td>Interviews</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Number and location of ports – Tier 1</td>
<td>Surveys</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Extractive resource use (sand mining, dredging, mangrove harvesting)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Number and location of waterways extraction (dredging, mining)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Tourism areas and numbers</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SE3</th>
<th>Pollutants &amp; introduction</th>
<th>Population % access to improved functioning sanitation</th>
<th>Monitoring programs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number, location and estimate volume of point source discharges (coastal &amp; surface water) – Tier 1</td>
<td>Databases</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Non-point source nutrient loading (fertiliser imports)</td>
<td>Document review</td>
<td></td>
</tr>
<tr>
<td>SE4</td>
<td>Exploitation of living resources</td>
<td>Number and location of informal settlements</td>
<td>Surveys, interviews</td>
</tr>
<tr>
<td>-----</td>
<td>---------------------------------</td>
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<td></td>
<td>Consumption patterns (marine and terrestrial resources)</td>
<td>Document reviews</td>
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<td>Economic value</td>
<td>Databases</td>
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<tr>
<td></td>
<td></td>
<td>Targeted species (fauna &amp; flora)</td>
<td>Interviews, surveys</td>
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<td></td>
<td></td>
<td>Harvest and fishing areas – Tier 1</td>
<td>Interviews, creel surveys, participatory mapping</td>
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<td></td>
<td></td>
<td>Frequency of harvest/ fishing</td>
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<td></td>
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<td>Methods of harvest/ fishing – Tier 1</td>
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</tr>
<tr>
<td>SE5</td>
<td>Coastal protection</td>
<td>% of shoreline with natural protection</td>
<td>Surveys</td>
</tr>
<tr>
<td></td>
<td></td>
<td>% of shoreline with human-made protection (proportion adhoc or engineered)</td>
<td>Document review</td>
</tr>
<tr>
<td>E1</td>
<td>Diversity</td>
<td>Occurrence of special species (marine and terrestrial)</td>
<td>Species inventory</td>
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<td>Occurrence of invasive species (marine and terrestrial)</td>
<td>Sampling</td>
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<tr>
<td></td>
<td></td>
<td>Richness of fish communities</td>
<td>Monitoring programs</td>
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<tr>
<td></td>
<td></td>
<td>Richness of coral communities</td>
<td></td>
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<tr>
<td>E2</td>
<td>Abundance</td>
<td>Juvenile coral</td>
<td>Monitoring program and surveys</td>
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<td>Marine flora</td>
<td>Procfish-SPC</td>
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<td>Biomass (key fisheries)</td>
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<td>E3</td>
<td>Habitat quality</td>
<td>Coral health</td>
<td>Monitoring programs and surveys</td>
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<tr>
<td></td>
<td>Habitat type (coast and catchment)</td>
<td>Remote sensing</td>
<td>Art Whister (book)</td>
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<td>Habitat cover (coast and catchment)</td>
<td>databases</td>
<td>Seagrass Watch</td>
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<td>E4</td>
<td>Species health</td>
<td>Richness of threatened and vulnerable fisheries species</td>
<td>Monitoring programs and surveys</td>
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<td>Biodiversity hotspots (coast &amp; catchment)</td>
<td>Key biodiversity areas</td>
<td>Document review</td>
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<td>Important bird areas</td>
<td>Interviews</td>
<td>Birdlife International</td>
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<td>Protected areas</td>
<td>Databases</td>
<td>BIOPAMA – SPREP</td>
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<td>Biodiversity hotspots &amp; (coast catchment)</td>
<td>Recently identified priority areas (BIORAPs)</td>
<td>surveys</td>
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<td>Nationally threatened and endemic species</td>
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<td>E6</td>
<td>Water quality (coast &amp;</td>
<td>Physico-chemical parameters</td>
<td>Monitoring programs</td>
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<td>Nutrient concentration (phosphate &amp;</td>
<td>sampling</td>
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<td>E7</td>
<td>Shoreline stabilisation</td>
<td>Shoreline erosion</td>
<td>Monitoring programs</td>
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<tr>
<td>catchment)</td>
<td>nitrates/nitrites)</td>
<td>Faecalcoliform</td>
<td>Chlorophyll a concentration</td>
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### Attachment 2: Schedule for preparation and conduct of RapCA in Q1 2020
*(to be completed)*

<table>
<thead>
<tr>
<th>Task Name</th>
<th>January 2020</th>
<th>February 2020</th>
<th>March 2020</th>
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<tr>
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<td>Wk1 Wk2 Wk3 Wk4</td>
<td>Wk1 Wk2 Wk3 Wk4</td>
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<td><strong>TONGA</strong></td>
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<tr>
<td>Site diagnostic analysis workshop</td>
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<tr>
<td>RapCA recon</td>
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<td>Field work for RapCA</td>
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<td>Data processing &amp; analyses</td>
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<td>Site diagnostic report</td>
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<tr>
<td><strong>COOK ISLANDS</strong></td>
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<td>Site diagnostic analysis workshop</td>
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<td>RapCA recon</td>
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<td><strong>KIRIBATI</strong></td>
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<td><strong>FIJI ISLANDS</strong></td>
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<td>Data processing &amp; analyses</td>
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<td>Site diagnostic report</td>
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<td><strong>NIUE</strong></td>
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<td>Site diagnostic analysis workshop</td>
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<td>Data processing &amp; analyses</td>
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<td>Site diagnostic report</td>
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<tr>
<td><strong>Marshall Islands</strong></td>
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<td>Site diagnostic analysis workshop</td>
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<tr>
<td>RapCA recon</td>
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<tr>
<td>Field work for RapCA</td>
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**Attachment 3: Monitoring various activities in the R2R National Pilot Projects**  
 *(to be further revised)*

<table>
<thead>
<tr>
<th>Activity</th>
<th>Required time (mths) to complete outputs (indicative)</th>
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<tbody>
<tr>
<td>Revegetation program</td>
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<tr>
<td>Constructed program</td>
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<tr>
<td>Constructed wetland feasibility studies</td>
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<tr>
<td>Septic System Upgrade</td>
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<tr>
<td>Eco-sanitation Toilets</td>
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<tr>
<td>Pig Waste Management</td>
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<tr>
<td>Solid Waste Feasibility Studies</td>
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<tr>
<td>Water Use Efficiency Plan</td>
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<tr>
<td>Guidelines for infrastructure Development etc.</td>
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<tr>
<td>Guidelines for Public Partnerships (tourism)</td>
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<tr>
<td>Sustainable Land Use Management</td>
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<tr>
<td>Integrated Coastal Management Plan</td>
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<tr>
<td>Integrated Catchment Management Plan</td>
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<tr>
<td>Integrated Freshwater Management Plan</td>
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<tr>
<td>Mangrove management plan</td>
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<tr>
<td>Revised Sector Plans, SOEs, National Development Strategies or Plans</td>
<td></td>
</tr>
<tr>
<td>New Regulations related to Water, Waste/Pollution and General Environment</td>
<td></td>
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<tr>
<td>Amendments to current Regulations related to Water, Waste, Pollution and General Environment</td>
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<tr>
<td>Amendments to principle Acts on Water, Pollution, and General Environment</td>
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<tr>
<td>Community bye-laws (MPAs, etc.)</td>
<td></td>
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<tr>
<td>Baselines</td>
<td></td>
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<tr>
<td>RapCA</td>
<td></td>
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<tr>
<td>Site Diagnostic Analyses report</td>
<td></td>
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<tr>
<td>National Diagnostic Analyses report</td>
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<tr>
<td>Procedures for identification &amp; prioritization of coastal areas</td>
<td></td>
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<tr>
<td>State of Coast report (Country or State level)</td>
<td></td>
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<tr>
<td>Strategic Action Framework</td>
<td></td>
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<tr>
<td>Strategic Action Plan</td>
<td></td>
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<tr>
<td>Lessons Learned/ Knowledge Products</td>
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<tr>
<td>Revised Logframe</td>
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<tr>
<td>Revised MYCWP</td>
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<tr>
<td>Quarterly &amp; Annual reports</td>
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<tr>
<td>Cash Advance request</td>
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<td>Consultancy - EIA</td>
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<td>Consultancy - Integrated Catchment Manag. Plan</td>
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<td>Consultancy - Integrated Coastal Manag. Plan</td>
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<td>Consultancy - RapCA</td>
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<td>Consultancy - Diagnostic</td>
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<tr>
<td>Consultancy - SOC</td>
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<tr>
<td>PSC/ Board meeting Updates</td>
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</table>
Attachment 4: Details on Steps for Implementing R2R Science to Policy

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
<th>Outputs</th>
<th>Stakeholder Engagement</th>
<th>Which countries?</th>
</tr>
</thead>
</table>
| 1    | R2R Mainstreaming Team and Scoping³ | • 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 team⁴ 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 | Confirmed for trial in Vanuatu& maybe Solomon Islands?  
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. |
| 5    | State of the Coast 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 Action Framework | • 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, |

³ Use the opportunity during scoping to identify, on the basis of 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.

⁴ 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.
Kosrae State govt pledged $20,000 for upscaling dry litter piggery.
Tuvalu cabinet considering AU$million worth commercial dry litter piggery for use by the Funafuti population.

**Attachment 5: Action Plan for Implementing R2R Science to Policy**

<table>
<thead>
<tr>
<th>Tasks</th>
<th>Tentative Target Dates</th>
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</thead>
<tbody>
<tr>
<td><strong>DIAGNOSTIC</strong></td>
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<tr>
<td><strong>Step 1</strong> - Scoping, drafting of TOR and Recruit/ Mobilise National Teams</td>
<td>Qtr 1 2020</td>
</tr>
<tr>
<td><strong>Step 2</strong> - Baseline and Data Collection</td>
<td>Qtr 1 2020</td>
</tr>
<tr>
<td><strong>Step 3</strong> - Conduct of diagnostic analyses workshops; writing of report</td>
<td>Qtr 1 2020?</td>
</tr>
</tbody>
</table>
  - Presentation of diagnostic at PSC, RSTC, RSC, Agencies | Qtr 2 2020 |
  - Circulation of diagnostic report to PSC, RSTC, RSC, Agencies | Qtr 3 2020 |
  - Review of diagnostic reports Report | Qtr 3 2020 |
  - Finalization of diagnostic reports; circulation | December 2020 |
| **Step 4** - Spatial Prioritisation Procedure | Qtr 1 2020 |
| **STRATEGIC PLANS & POLICIES** | |
| **Step 5** - State of the Coast Report (SoC or SoE) | Qtr 2 and ongoing 2020 |
| **Step 6** - Strategic Action Framework (Revision of SAF/SAP) | Qtr 2 and ongoing 2020-21 |
  - Drafting of SAP | ongoing |
  - Presentation of SAP to PSC, RSTC, RSC, Agencies | August 2021 |
  - Circulation of SAP to Countries | ongoing |
  - Review of SAP by Countries | September 2020 |
  - Finalization and Ministerial Endorsement | October 2021 |
| **LEGISLATIONS & REGULATIONS** | |
| **Step 7** - Drafting new or reviewing current legislations | Qtr 1 2020-21 |
  - Presentation of legislative framework PSC, RSTC, RSC, Agencies | ongoing |
  - Revision of legislative framework | ongoing |
  - Circulation of legislative framework to Countries | ongoing |
  - Review of legislative framework by Countries | ongoing |
  - Finalization and Ministerial Endorsement | December 2021 |