

## REQUEST FOR TENDERS

RFT: 2021/052  
File: AP\_2/39  
Date: 7 October, 2021  
To: Interested Consultants  
From: Jamie Davies, By-catch and Integrated Ecosystem Management Initiative  
Manager

**Subject: Consultancy to undertake Marine Rapid Biological Assessments (BIORAPs) in Vanuatu**

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### 1. Background

- 1.1. The Secretariat of the Pacific Regional Environment Programme (SPREP) is an intergovernmental organization charged with promoting cooperation among Pacific islands countries and territories to protect and improve their environment and ensure sustainable development.
- 1.2. SPREP approaches the environmental challenges faced by the Pacific guided by four simple Values. These values guide all aspects of our work:
  - We value the Environment
  - We value our People
  - We value high quality and targeted Service Delivery
  - We value Integrity
- 1.3 For more information, see: [www.sprep.org](http://www.sprep.org)

### 2. Specifications: statement of requirement

- 2.1. SPREP is calling for tenders from qualified and experienced consultants to conduct marine BIORAPs and water quality sampling in four selected coastal areas and associated watersheds in Vanuatu (identified in Annex 1). Specifically, the following is required:
  - a. Undertake a literature review and identify survey methods to be used in each site in Vanuatu based on the *Guidelines for undertaking rapid biodiversity assessments in Terrestrial and Marine Environments in the Pacific*<sup>1</sup> (Guidelines), previous BIORAPs (details provided in Attachment 1), and in discussion with relevant community representatives across traditional hierarchical structures, Government officers and SPREP staff.
  - b. In line with Section 11 of the Guidelines, train women, men and youths from each of the four sites, national and local government officers, non-government organisation representatives and academic institutions students in the design, implementation and reporting of scientifically robust marine BIORAPs through theoretical and practical exercises.
  - c. Arrange and manage all in-country logistics including organising boats, land transport, food, accommodation for the survey work.

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<sup>1</sup> [https://www.sprep.org/attachments/Publications/BEM/Rapid\\_Biodiversity\\_Assessment\\_Guidelines.pdf](https://www.sprep.org/attachments/Publications/BEM/Rapid_Biodiversity_Assessment_Guidelines.pdf)



- d. Assemble and manage a team of marine biodiversity experts and those trained under provision (b) to complete the BIORAPs and water quality sampling using Departmental protocols where they exist as well as other methodologies that have been used successfully in the Pacific where necessary, ensuring that high value food-security species are included.
  - e. Take high-quality photographs and videos during the survey that showcase the survey work and the species and ecosystems surveyed. These will be presented in the full reports and synthesis reports, catalogued as an image database, and used for wider communication purposes.
  - f. A lead author and skilled editor to compile and deliver the four BIORAP reports and synthesis reports of publishable quality using the template provided by SPREP and ensure that all contributors adhere to input delivery deadlines.
  - g. Produce maps that identify recommended priority conservation areas based on the results of the BIORAP for inclusion in the four reports and synthesis reports.
  - h. Present the preliminary results/findings to women, men, youth and any marginalised groups within the communities in the selected sites prior to leaving each site surveyed and presentation the findings to the Malampa and Penema Province Officials before leaving the Malekula and Pentecost islands.
  - i. Present draft and final results of each BIORAP to women, men, youth and any marginalised groups within the communities in the selected sites and Malampa and Penema Province Officials providing recommendations on realistic options to manage threats and protect high value food-security species and biodiversity of local, national or international significance for inclusion in integrated ecosystem management plans.
  - j. Submit all the data and information collected through this contract to the Department of Environmental Protection and Conservation (DEPC) and SPREP for upload to the National or Regional Environment Portal established under SPREP's Inform Project and other relevant initiatives such as the Global Biodiversity Information Facility.
- 2.2. SPREP will manage the final design, translation and printing of report and synthesis.
  - 2.3. In addition to the primary objective of completing a full assessment of the status of marine habitats and species a secondary objective of the consultancy is to build the capacity and engage women, men and youth in the planning, implementation and reporting of scientifically robust BIORAPs to strengthen their understanding of the status of biodiversity and the ecosystems that they rely upon and empowering them to make informed conservation management and planning decisions to ensure the long-term conservation of biodiversity and the essential ecological services it provides. These decisions will be reflected in the integrated ecosystem management plans for each site.
  - 2.4. The successful applicant will need to provide a response to the attached Terms of Reference, their organisational profile, key personnel curriculum vitae and details of similar projects undertaken.
  - 2.5. The consultant will follow the PEUMP Programme Communications and Visibility Strategy and BIEM Initiative Communications and Visibility Guidance in the development and approval of all external documents and publications.
  - 2.6. Full details of the scope of the BIORAP can be found in the attached Terms of Reference (refer to Annex 1).
  - 2.7. The successful consultant must supply the services to the extent applicable, in compliance with SPREP's Values and Code of Conduct.  
[https://www.sprep.org/attachments/Publications/Corporate\\_Documents/sprep-organisational-values-code-of-conduct.pdf](https://www.sprep.org/attachments/Publications/Corporate_Documents/sprep-organisational-values-code-of-conduct.pdf)

### **3. Conditions: information for applicants**

- 3.1. To be considered for this tender, interested suppliers must meet the following conditions:

- a. Currently reside in Vanuatu and be able to demonstrate that he/she is legally entitled to work in Vanuatu or be able to demonstrate that the team members that will conduct the survey work currently reside in Vanuatu and are able to demonstrate that he/she is legally entitled to work in Vanuatu.
- b. Have recent experience in managing and undertaking marine biodiversity surveys and water quality sampling including designing, organising and participating in field surveys in remote areas.
- c. Team members must have proven expertise in their specialist fields and commensurate detailed knowledge of Pacific marine biota and ecosystems.
- d. Be prepared to conduct substantive fieldwork in remote areas of Vanuatu with local communities.
- e. Ability to meet the time frame of the consultancy as indicated in the Terms of Reference.
- f. Completed tender application form provided. *(Please note you are required to complete in full all areas requested in the Form, particularly the Statements to demonstrate you meet the selection criteria – DO NOT refer us to your CV or your Technical Proposal. Failure to do this will mean your application will **not** be considered) and*
- g. Signed conflict of interest form.

#### **4. Submission guidelines**

- 4.1. Tender documentation should demonstrate that the interested supplier satisfies the conditions stated above and is capable of meeting the specifications and timeframes. Documentation must also include supporting examples to address the evaluation criteria.
- 4.2. Tender documentation should outline the interested supplier's complete proposal and include:
  - a. A CV to demonstrate that they have the requisite skills and experience to carry out this contract successfully.
  - b. Provide three references relevant to this tender submission, including the most recent work completed;
  - c. Completed tender application form provided. *(Please note you are required to complete in full all areas requested in the Form, particularly the Statements to demonstrate you meet the selection criteria – DO NOT refer us to your CV or your Technical Proposal. Failure to do this will mean your application will **not** be considered).*
  - d. Signed conflict of interest form.
- 4.3. Tender submission must be in US dollars, up to a maximum of USD 35,000. United States Dollars (USD), including all international and domestic air travel and out of pocket expenses for the consultancy team.
- 4.4. The Proposal must remain valid for 90 days from date of submission.
- 4.5. Tenderers must insist on an acknowledgement of receipt of tender.

#### **5. Tender Clarification**

- 5.1. Any clarification questions from applicants must be submitted by email to [procurement@sprep.org](mailto:procurement@sprep.org) before 19 October 2021. A summary of all questions received with an associated response will be posted on the SPREP website <http://www.sprep.org/tender> by 21 October 2021.

## 6. Evaluation criteria

- 6.1. SPREP and Government of Vanuatu Officers will select a preferred supplier on the basis of SPREP's evaluation of the extent to which the documentation demonstrates that the tenderer offers the best value for money, and that the tenderer satisfies the following criteria:
- a. Overall understanding of what the tender requires. (5%)
  - b. Knowledge of current theory and application of conservation biology in relation to the establishment and maintenance of protected marine areas that conserve ecosystems and habitats, together with associated cultural values and traditional natural resource management systems. (5%)
  - c. Experience in monitoring and evaluation, data storage and information handling, and being able to capture high quality photographic images and video. (5%)
  - d. Proven experience in report writing, including ability to analyse data, present key findings and recommendations of priority actions in accessible, easily understood language. (10%)
  - e. Access to other services including GIS expertise. (5%)
  - f. Previous work undertaking rapid marine biodiversity assessments in Vanuatu, including mapping marine biodiversity and ecosystems, and identifying options to manage threats and protect biodiversity in remote areas. (15%)
  - g. Disciplines covered and the skill set and experience within the assembled team, including degree of partnership with international and local organisation(s). (20%)
  - h. Methodology and costed workplan setting out the activities to be undertaken and timings of activities. (15%)
  - i. Strong track record in gender sensitive and human rights-based approach to positive collaboration with a range of people including customary/community/ village level groups, government, and local NGOs, accessible communication and project management and facilitation. (15%)
  - j. Detailed Financial proposal in US dollars. (5%)
- 6.2. Assessment of proposals will be based on the evaluation of the Technical Proposal (95%) and Financial Proposal (5%).

## 7. Deadline

- 7.1. **The due date for submission of the tender is: 28 October 2021, midnight (Apia, Samoa local time).**
- 7.2. Late submissions will be returned unopened to the sender.
- 7.3. Please send all tenders clearly marked '**RFT 2021/052: Consultancy to undertake Marine Rapid Biological Assessments (BIORAPs) in Vanuatu**' through one of the following methods:
- Mail: SPREP  
Attention: Procurement Officer  
PO Box 240  
Apia, SAMOA
- Email: [tenders@sprep.org](mailto:tenders@sprep.org) (MOST PREFERRED OPTION)
- Fax: 685 20231
- Person: Submit by hand in the tender's box at SPREP reception, Vailima, Samoa.



Note: Submissions made to the incorrect portal will not be considered by SPREP. If SPREP is made aware of the error in submission prior to the deadline, the applicant will be advised to resubmit their application to the correct portal. However, if SPREP is not made aware of the error in submission until after the deadline, then the application is considered late and will be returned unopened to the sender.

SPREP reserves the right to reject any or all tenders and the lowest or any tender will not necessarily be accepted.

**For any complaints regarding the Secretariat's tenders please refer to the Complaints section on the SPREP website**

<http://www.sprep.org/accountability/complaints>

## **ANNEX 1**

### **TERMS OF REFERENCE**

#### **CONSULTANCY TO UNDERTAKE MARINE RAPID BIOLOGICAL ASSESSMENTS IN VANUATU**

##### **1. The need for Rapid Biological Assessments (BIORAPs)**

Pacific Countries are extremely vulnerable to the impacts of global warming, sea level rise and climate change as well as direct, non-climate related pressures. Vulnerability stems from a number of interconnected factors that relate to the biogeography and socio-economic profile of island countries. Key amongst these are i) concentration of settlement in the coastal zone, ii) high reliance on coastal and marine resources for livelihoods, iii) exposure to oceanic influenced hydro-meteorological hazards such as cyclones and storm surges, iv) limited freshwater availability due to small watersheds, v) fragility of ecosystems to disturbance, vi) modification of coastal and terrestrial habitats, vii) small economies, viii) geographic and biological isolation from mainlands.

Pacific islands do however have certain characteristics that promote resilience of their people and environment to the impacts of climate change and direct anthropogenic impacts. These include: high levels of marine, coastal and terrestrial biodiversity, ii) a diversity of coastal landforms, iii) fringing and barrier reefs that provide physical protection; iv) relatively low population densities and growth rates (although this varies between Countries); v) local knowledge of environmental processes and conditions; vi) a history of coping with adverse physical conditions and environmental change. Such coping mechanisms can be strongly influenced by traditional gender roles and other social factors across population groups.

Because of the small size and high land-to-boundary ratios of Pacific islands, there is strong topographical connectivity between ecosystems on volcanic islands with the general pattern being one of forested watersheds connecting directly to the coastal zone and inshore marine environment through riparian waterways. It follows that the health of marine ecosystems is often directly linked to the health of riparian and forest ecosystems. This recognition has led more organisations to adopt a 'ridge-to- reef' approach in addressing environmental issues, such as sedimentation of coral reefs. In a similar vein, there is connectivity between freshwater lenses and saltwater. The application of a 'ridge to reef' approach further allows a better understanding of the interconnectivity of human behaviour along the access and usage of various ecosystem services, which can be looked at from a gendered lens.

Funded through the Eleventh Round of the European Development Fund (EDF 11), SPREP is the executing agency for Key Result Area 5, the Bycatch and Integrated Ecosystem Management (BIEM) Initiative (see Annex 3 for further details). Recognising that healthy ecosystems contribute positively to the resilience of societies and biodiversity, the BIEM Initiative promotes the use of an Ecosystem-based Adaptation (EbA) approach to reduce vulnerability and build resilience in the face of climate change and direct anthropogenic impacts in the Pacific island region.

Through the BIEM Initiative SPREP is working with the Government of Vanuatu to deliver its priorities to halt the decline of biodiversity and strengthen the sustainable management of coastal and marine ecosystems through an integrated ridge to reef management approach.

Specifically, two Key Result Areas are focused on working with, and increasing the capacity of women, men and youth in coastal communities, Government authorities and partners to develop gender and human rights sensitive integrated ecosystem management plans for four coastal areas and associated watersheds that identify realistic activities to help promote the natural adaptive capacity of coastal habitats to support sustainable fisheries, conserve coastal and marine biodiversity and reduce poverty. Further detail is provided in Annex 4.

The combined objective of the two KRAs is to work with, and increase the capacity of women, men and the youth in coastal communities, Government authorities and partner organisations to develop widely supported gender and human rights sensitive integrated ecosystem management (IEM) plans for four

coastal areas and associated watersheds that identify realistic activities to help promote the natural adaptive capacity of coastal habitats to support sustainable livelihoods and reduce poverty.

Understanding the current status of biodiversity and the ecosystems that communities rely upon and realistic options to manage threats and protect high value food-security species and biodiversity is a fundamental part of empowering local decision makers make informed conservation management and planning decisions for inclusion in their integrated ecosystem management plans.

In order to develop robust integrated ecosystem management plans, baseline data identifying the biodiversity within marine ecosystems are required for each site. This data will be obtained through the implementation of Rapid Biological Assessments (BIORAPs), which are biological inventory programmes designed to rapidly identify and assess the biodiversity within marine habitats, including high value food-security species, for each site. Water quality sampling of rivers and streams will also be included in the assessments. An integral part of the BIORAP process will be to work with community members and other stakeholders to undertake the surveys with the aim of strengthening their understanding about the status and threats to the ecosystems that coastal communities rely upon and empower them to make informed conservation management and planning decisions to ensure the long-term conservation of biodiversity and the essential ecological services it provides. Engagement with communities and other stakeholders will also enable input of local and traditional knowledge to the BIORAP assessment where relevant and permitted.

## 2. BIORAP requirements

Four marine BIORAPs will be undertaken in total, one for each of the following sites:

- 3 sites on Malekula island, Malampa Province:
  - South West Bay, up to Dixon Reef, (west coast).
  - Wiawi, (north west coast).
  - Tenmaru, (north west coast).
- 1 site on Pentecost island, Penama Province:
  - Laone – Loltong (north west coast).

Maps detailing potential site boundaries are provided in Annex 2.

The scope of the work across the four sites will be to:

- Train women, men and youth from each of the four sites, national and local government officers, academic institutions, non-government organisation representatives in the design, implementation and reporting of scientifically robust marine BIORAPs, including water quality sampling. The number of people to be trained from each site will vary. However, it is expected that training is offered to a total of 20 people as it is envisaged that trainees will form a key component of the teams involved in undertaking the BIORAPs.

Recognising the BIEM's commitment to build local capacity, the scope of the work in each site will be:

- To design a process that actively engages trained community members, Government officers, academic students and non-government organisation representatives in the design, implementation and reporting of marine BIORAPs;
- To map and sample the range of representative marine habitats and their condition. Survey locations and methods are to be proposed based on the *Guidelines for undertaking rapid biodiversity assessments in terrestrial and marine environments in the Pacific*, previous BIORAPs, and discussions with relevant community members, Government Officers and SPREP staff;
- To cover the following flora and fauna groups:
  - marine resources including:
    - coral reef health, coral taxonomy, marine invertebrates and targeted invertebrates, fish biodiversity, targeted fish and threatened, endangered or protected (TEP) species, and sea birds.
    - mangrove, seagrass, and marine algae health and taxonomy;
    - high value food-security species and other species identified as being of local, national or international importance or able to be opportunistically sampled;



- marine invasive species including plants, animals (ants, rats etc.), and aquatic algae invasive species.
- to engage with communities and other stakeholders to enable input of local and traditional knowledge to the BIORAP assessment where relevant and permitted.
- To sample water quality in representative streams and rivers flowing through local communities and into coastal waters in the focal areas.

### 3. Services Required

SPREP and the Vanuatu Government is seeking the services of a consortium, or consulting company, to conduct marine BIORAPs in Vanuatu in 2021. This will involve undertaking marine BIORAPs and water quality samples in the four coastal areas and associated watersheds.

Specifically, a qualified service provider is sought to:

- a. Undertake a literature review, propose survey locations and survey methods in each site in Vanuatu based on the *Guidelines for undertaking rapid biodiversity assessments in Terrestrial and Marine Environments in the Pacific<sup>2</sup> (Guidelines)*, previous BIORAPs (details provided in Attachment 1), and in discussion with relevant community representatives across traditional hierarchical structures, Government officers and SPREP staff.
- b. In line with Section 11 of the *Guidelines*, train women, men and youths from each of the four sites, national and local government officers, non-government organisation representatives and academic institutions in the design, implementation and reporting of scientifically robust marine and terrestrial BIORAPs through theoretical and practical exercises.
- c. Arrange and manage all in-country logistics including organising boats, land transport, food, accommodation, and provision of dive tanks for the survey work.
- d. Assemble and manage a team of marine and terrestrial biodiversity experts and those trained under provision (b) to complete the BIORAPs in each site, ensuring that high value food-security species are included.
- e. Take high-quality photographs and videos during the survey that showcase the survey work and the species and ecosystems surveyed. These will be presented in the full reports and synthesis reports, catalogued as an image database, and used for wider communication purposes.
- f. A lead author and skilled editor to compile and deliver the four BIORAP reports and synthesis reports of publishable quality using the template provided by SPREP and ensure that all contributors adhere to input delivery deadlines.
- g. Produce maps that identify recommended priority conservation areas based on the results of the BIORAP for inclusion in the four reports and synthesis reports.
- h. Present the preliminary results/findings to women, men, youth and any marginalised groups within the communities in the selected sites prior to leaving each site surveyed and presentation the findings to the Malampa and Penema Province Officials before leaving the Malekula and Pentecost islands.
- i. Present draft and final results of each BIORAP to women, men, youth and any marginalised groups within the communities in the selected sites and Malampa and Penema Province Officials providing recommendations on realistic options to manage threats and protect high value food-security species and biodiversity of local, national or international significance for inclusion in integrated ecosystem management plans.

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<sup>2</sup> [https://www.sprep.org/attachments/Publications/BEM/Rapid\\_Biodiversity\\_Assessment\\_Guidelines.pdf](https://www.sprep.org/attachments/Publications/BEM/Rapid_Biodiversity_Assessment_Guidelines.pdf)



- j. Submit all the data and information collected through this contract to DEPC and SPREP for upload to the National or Regional Environment Portal established under SPREP's Inform Project.

#### **4. Scope of Consultancy**

- The project will include initial desktop analyses of existing literature and field-based studies undertaken in the study areas.
- The consultants will meet and consult with key community, local and national government, NGO stakeholders and SPREP staff to determine the final scope and design of the work.
- The consultants will train women, men and the youth from coastal communities, Government authorities, academic organisations and partner organisations to plan and undertake scientifically robust BIORAP surveys and identify recommended priority conservation areas based on the results.
- The consultants will undertake surveys in each site and actively engage trainees when conducting the work to map the location and status of marine and terrestrial biodiversity and ecosystems.
- The sites are ridge to reef in nature and the study area will extend from the stream and rivers flowing from coastal communities to the seaward extent of the fringing reefs, including riparian and coastal zones.
- The consultant is expected to lead and facilitate trainings and stakeholder community meetings in the process of undertaking the BIORAPs. In doing so, the consultant is required to undertake his/her work in a culturally sensitive and respectful manner, taking into account gender sensitive approaches and child protection measures. SPREP will provide support (logistical, technical and financial) to facilitate stakeholder engagement processes relating to the above activities.
- The consultants are expected to provide their own equipment such as computers, cameras, GPS and any other equipment required by the experts to undertake the tasks. SPREP will provide equipment to the trainees to enable them to undertake their tasks.

#### **5. Methodology**

The overall approach needs to be developed and presented by the consultant in their response to the terms of reference. The final methodology will be confirmed with SPREP and Government officers' prior to initiation of field work.

Special note must be taken of the following factors:

- The design, implementation and reporting of the BIORAP and water sampling process must:
  - involve and build capacity of women, men and youth from the four sites, national and local government, academic and non-government organisation stakeholders to build their capacity to repeat such exercises;
  - reflect the need for gender and social inclusion and human rights-based approaches to be a central part of each step of the process; and
  - employ approved Departmental marine and terrestrial survey protocols where they exist as well as other methodologies that have been used successfully in the Pacific where necessary. I.e.:
    - Marine: national survey protocols developed by the Vanuatu Fisheries Department should be used for the following surveys: coral reef, invertebrate, mangrove and sea grass. For fin fish, the SPC finfish resource survey methodology should be used (see Annex 3).
    - Other methodologies identified through the desk-based study.

- Refer to:
  - SPC 2014 – [The Pacific Gender and Climate Change Toolkit – Tools for practitioners](#)
  - The MACBIO Project Vanuatu Resources page for information about Vanuatu and SUMAs in the proposed project sites: <http://macbio-pacific.info/categories/vanuatu/>
  - SPC 2002 - [Underwater fish visual census surveys: proper use and implementation](#)

## **6. Expertise**

The Consultant is expected to have the following expertise:

- Inclusion of multiple relevant disciplines<sup>3</sup> within the team;
- Experience in the use of participatory/consultative research approaches;
- Experience in training and capacity building; and
- Experience working in the Pacific islands. Experience in Vanuatu will be an advantage.

## **7. Deliverables**

The Consultant is expected to deliver the following:

1. Project Inception Report providing the initial desktop and literature assessment for the BIORAP and water quality sampling, including methodologies, lists of stakeholders to be included in the study, and a fully budgeted work plan.
2. All training materials and training and survey report, to include the names of the individuals trained and involved in the surveys, disaggregated by age, gender, community/organisation and occupation(s).
3. A draft BIORAP report in MS Word for each site including summary of key findings and recommendations to be shared with SPREP and Government Departments for comment.
4. Community focused, easily digestible BIORAP synthesis reports for each site including key findings and recommendations to manage threats and protect biodiversity that account for cultural values and traditional natural resource management systems.
5. Presentation to stakeholders in each of the sites setting out the BIORAP results and providing them with an opportunity to provide feedback.
6. A final BIORAP report in MS Word, the raw data and a data dictionary of all spatial and non-spatial data utilised and developed during the BIORAP study, all supporting materials, worksheets, photographs and reports organised into clearly labelled folders and presented to SPREP and the Vanuatu Government to be uploaded in the National or Regional Environment Portal established under SPREP's Inform Project and other relevant initiatives such as the Global Biodiversity Information Facility. Specifically, the contractor shall ensure that:
  - a. All information collected for the reports is available to the DEPC and SPREP.
  - b. All data are clearly labelled, tabulated and archived, and Excel tabulation worksheets and report PDFs are used as data sources.
  - c. All information is precise, cited, justified and obtained from national government sources, or regionally mandated authorities, followed by global data sources only when the others are not available.

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<sup>3</sup> It is also important that the team includes a local partner(s) from Vanuatu, one that speaks Bislama and preferably one or more of the languages spoken on each of the relevant islands.

## 8. Time Frame

The following is an indicative time frame for the various components of this consultancy.

Period/ Milestone	Activity
<b>2021</b>	
30 October	Project Inception Report providing the initial desktop and literature assessment for the BIORAP, including methodologies, lists of stakeholders to be included in the study, and a budgeted work plan.
November - December	BIORAP training and 4x BIORAP surveys conducted in Vanuatu and preliminary findings shared with communities and local government officials.
<b>2022</b>	
31 January	Draft chapters submitted to lead author by habitat/species specialists, including training and survey reports.
28 February	First draft of the report including summary of key findings and recommendations submitted to identified Government Departments and SPREP for review.
18 March	Key findings and recommendations presented to communities and provincial governments for discussion and feedback.
	Identified Government Departments and SPREP to provide feedback on draft report to lead author.
8 April	2 <sup>nd</sup> draft report submitted by lead author to identified Government Departments and SPREP. SPREP to have report professionally proofread.
22 April	Identified Government Departments and SPREP to provide feedback on 2 <sup>nd</sup> draft report to lead author.
6 May	Final report submitted to Government Departments and SPREP including package with labelled images, tables and maps. Survey data also submitted.

## 9. Project Budget

This budget presented by the applicants should cover:

- expert fees for the entire period of the contract including survey work and report writing
- all international and domestic travel for members of the consultancy team
- boat, vehicle and marine survey equipment purchase and hire for the duration of the contract
- associated communication and office costs.

SPREP will cover the cost:

- of domestic travel and per diems for trainees and government officials while they are away from their normal place of work/home to attend training, surveys and community meetings.
- food costs during the trainings, surveys, and community meetings.
- proofreading the final draft and the publication of the report.

## 10. Provision of Monitoring and Progress Control

The consultant will be working under the direct supervision of the BIEM Initiative Manager and in liaison with the BIEM Vanuatu in-country consultant, the Department of Environment, Conservation and Protection (DEPC) and Vanuatu Fisheries Department (VFD).



## 11. Recommended References

### GUIDELINES FOR BIORAPS IN THE PACIFIC

[Guidelines for undertaking rapid biodiversity assessments in terrestrial and marine Environments in the Pacific.](#)

### FULL BIORAP REPORTS

[Rapid biodiversity assessment of upland Savai'i, Samoa \(BIORAP\)](#)

[Rapid Biodiversity assessment of Vava'u, Tonga](#)

### SYNTHESIS BIORAP REPORTS OF KEY FINDINGS AND RECOMMENDATIONS

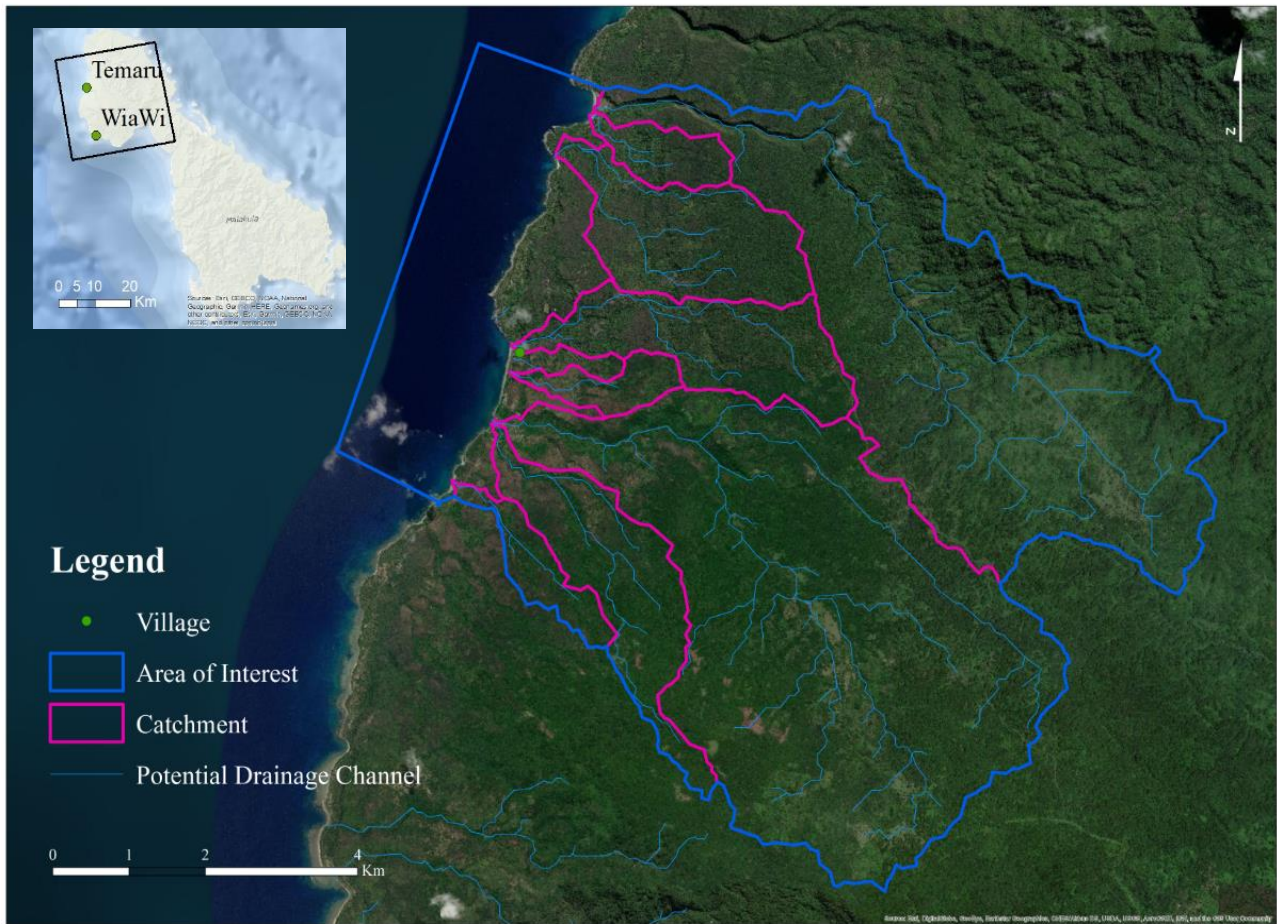
[Upland Savaii BIORAP synthesis report](#)

[Vava'u Tonga synthesis report](#)

[Nauru BIORAP synthesis report](#)

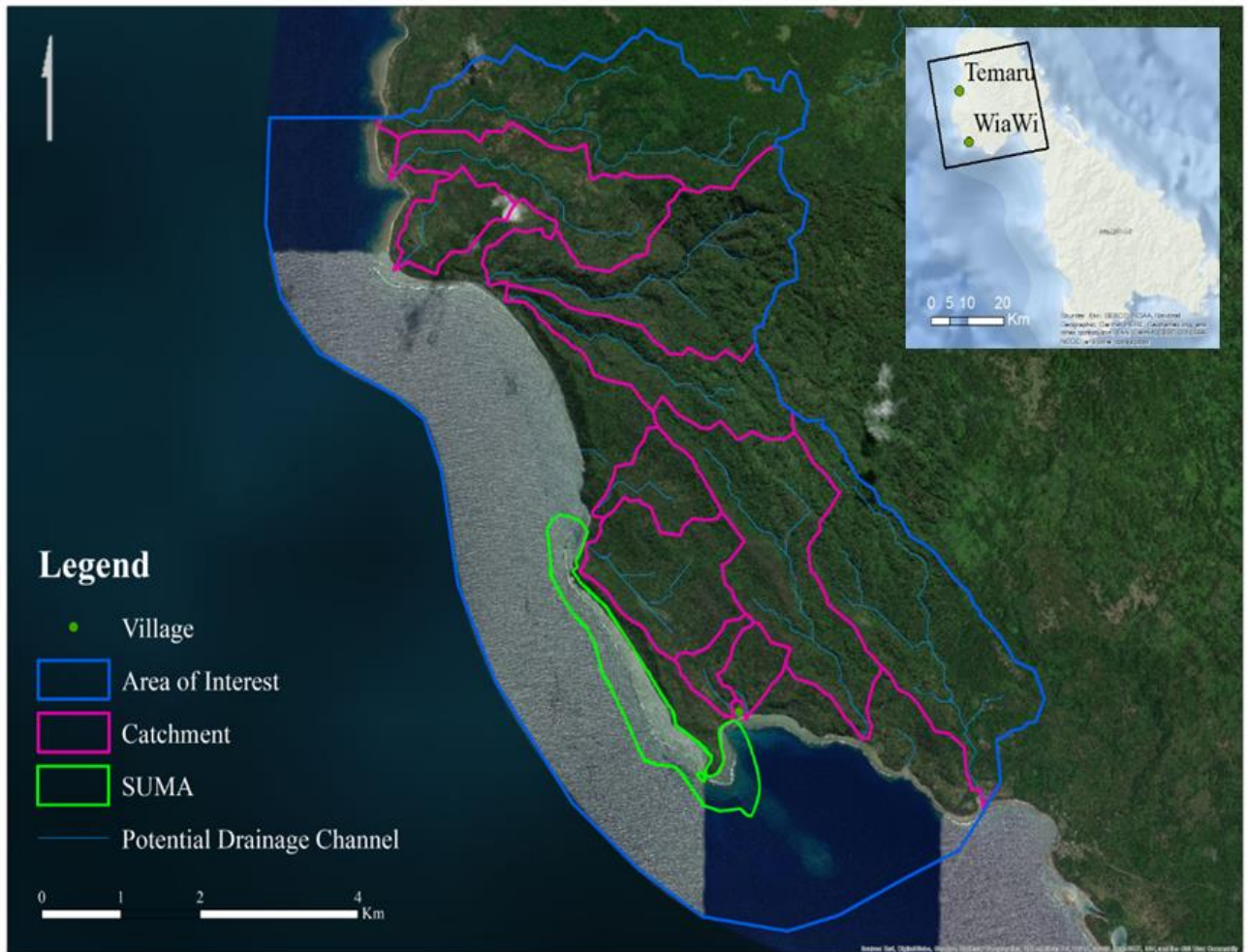
## Annex 2: Proposed BIEM Initiative coastal areas and associated catchments in Vanuatu

### 1. Tenmaru, (north west coast) Malekula island, Malampa Province



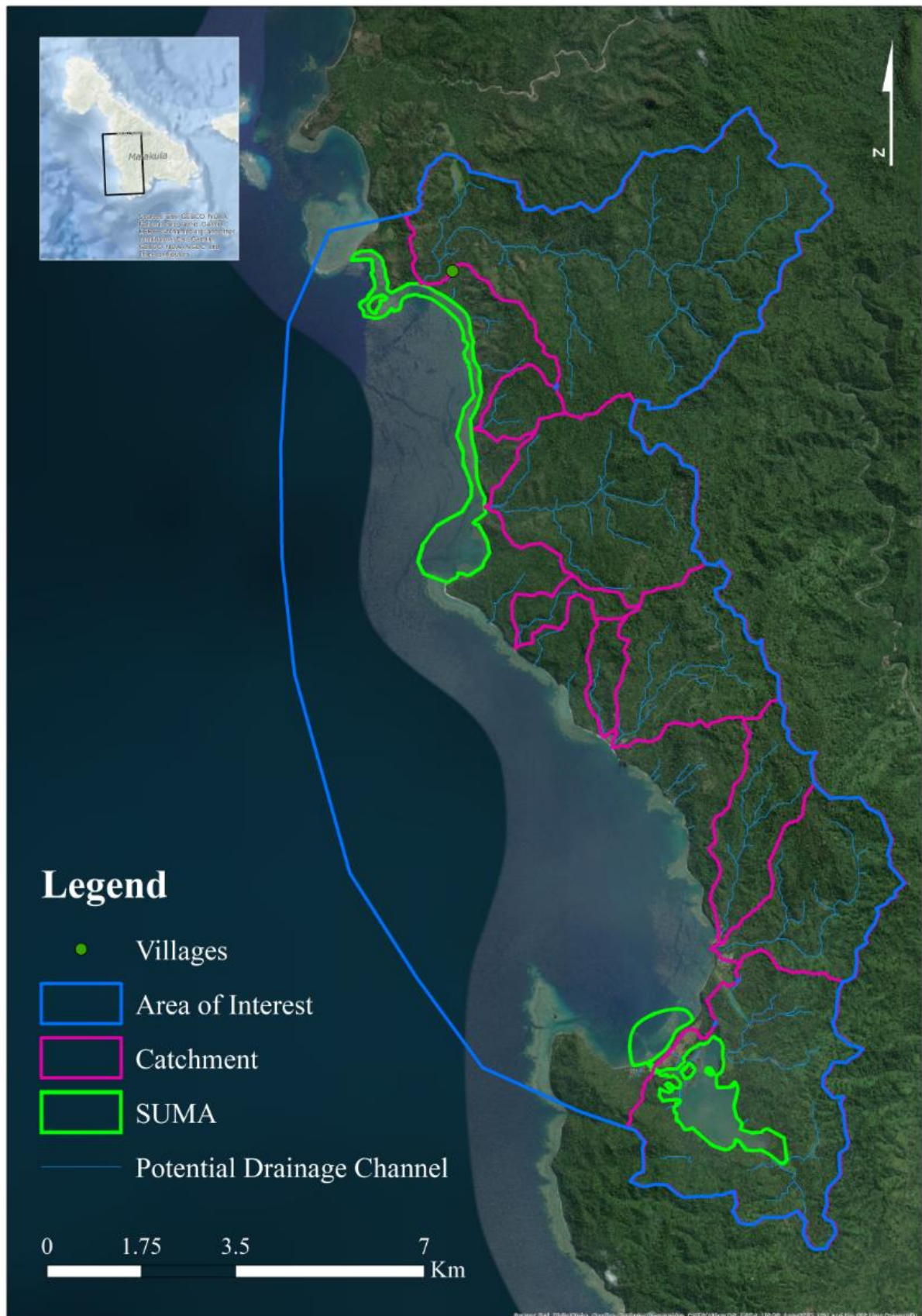


## 2. Wiawi, (north west coast) Malekula island, Malampa Province

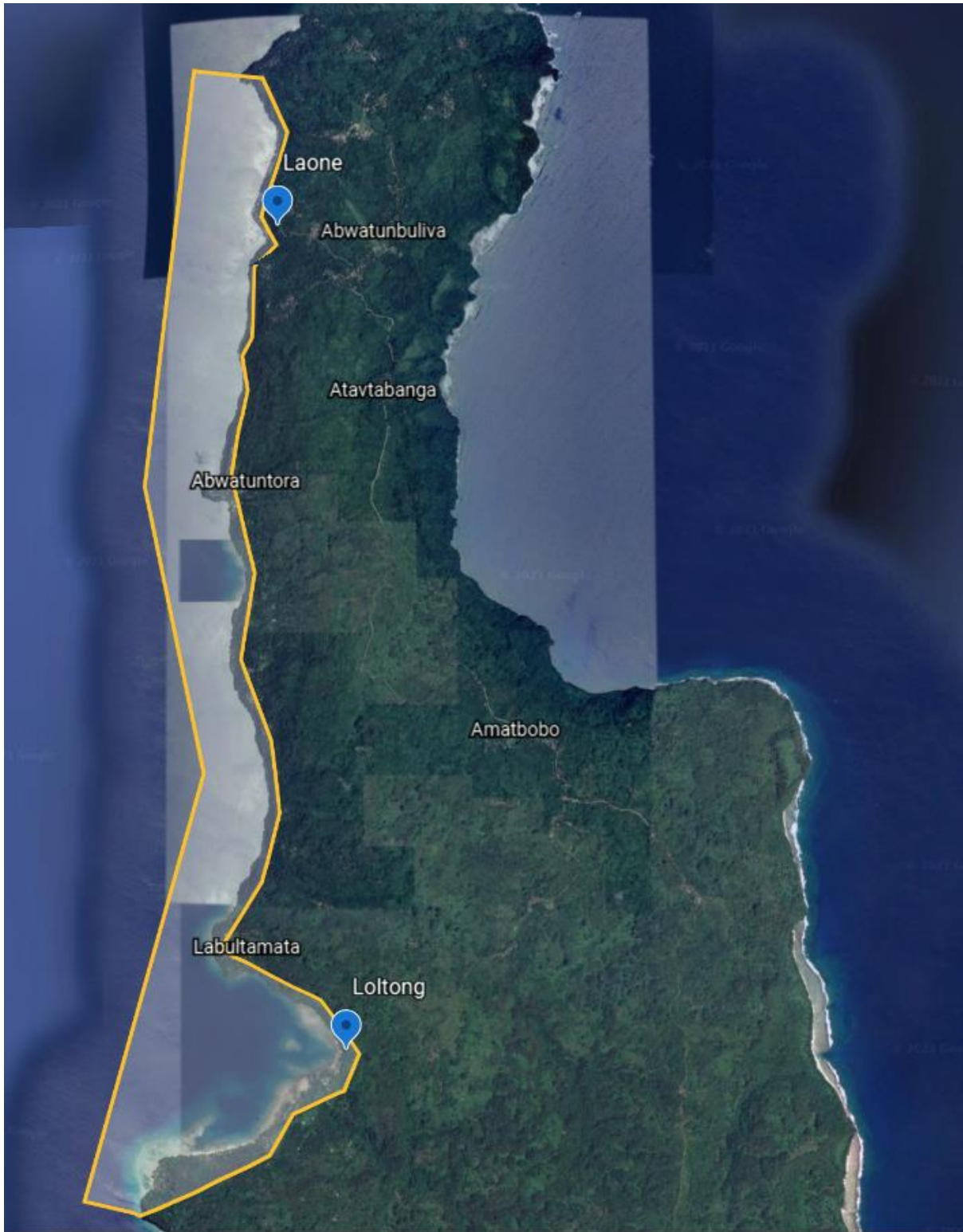




### 3. South West Bay, up to Dixon Reef, (west coast) Malakula island, Malampa Province



4. Loltong to Laone focal area, Pentecost Island, Panama Province



### **Annex 3: Marine Survey methodology to be used by contractors**

Vanuatu Fisheries Department had gone through a baseline survey standardisation program and have produced protocols for the following marine assessments that should be used in the implementation of this BIORAP to ensure consistency of results in Vanuatu. These protocols are outlined below.

#### **1. Coral Reef (Korel luk luk) methodology**

Prior to any field work sampling points were determined using GIS tool.

For each sampling point, sediment type and substratum coverage variables were estimated using a photographic method developed by the Institute de Recherche pour le Development (IRD), a research institute in Noumea, New Caledonia, to quickly and quantitatively describe contrasting reef habitats (Dumas et al. 2009). Pictures were taken from the surface along transects using a standard digital 10 Megapixels camera, oriented perpendicular to the substratum.

25 pictures were taken per transect (i.e. one shot every two meters) and subsequently imported into an image analysis software including efficient, user-friendly features for the estimation of sediment/substratum cover (CPCe "Coral Point Count with Excel extensions" software, Kohler & Gill 2006). Surface estimates expressed in percent cover were derived from random stratified point count techniques using nine points randomly generated by the software creating a m<sup>2</sup> ratio ensuring reliable habitat profiles with low bias and high precision counts.

#### **2. Invertebrate survey methodology**

For each sampling point, data were collected along standardized random transects of 50m x 4m (200m<sup>2</sup>). On each station, one transect belt was laid using a 50m colour-marked survey tape attached to the substratum. Data were collected by a pair of two snorkelers swimming simultaneously along the two sides of the transect line; each surveying a 2m-wide corridor. All individuals belonging to the target species which were detectable without disturbing the substratum were counted and measured. Individual sizes were recorded using simple, easy-to-use field tools developed for this study and suitable for participative monitoring. They consisted of underwater PVC callipers used to measure shell width (giant clams) or largest basal diameter (trochus / green snails) to the nearest 0.5 cm

#### **3. Mangrove survey methodology**

Ground truthing was conducted to verify the mangrove forest zones, determine species composition and assess the degree and type of damage. Sampling points were taken throughout the mangrove forest using a Garmin 64s hand-held GPS. The GPS was loaded with sampling points allocated proportional to the different mangrove forest types encountered. At each mapping point, the percent cover of individual species was recorded within a 5 metre radius. Canopy height was estimated to the nearest metre. Photos were taken of the species and damage present.

#### **4. Sea grass survey methodology**

Ground-truthing of seagrass habitats occurred during the lowest tide of the day. Sampling points on the intertidal meadow were taken perpendicular to the coastline, starting from the mangrove edge towards the seaward side, using a portable hand held GPS. Sampling points were generally taken in 50 m intervals or when a distinct change in community composition or percent cover was observed. Mapping of sub-tidal seagrass in the deeper lagoon area and the reef flat was conducted by spot-dives on snorkel from a boat. At each mapping point, total seagrass cover (in %) and the percent cover of individual seagrass species were recorded within a 5m radius. The dominant sediment type was recorded, and the cover of algae (in %) was estimated.

#### **5. Fin fish survey methodology**

SPC 2002 - [Underwater fish visual census surveys: proper use and implementation](#) should be used.



#### **Annex 4: The Pacific-European Union Marine Partnership Programme**

The Pacific-European Union Marine Partnership (PEUMP) Programme addresses some of the most serious challenges faced by the region. Among these are the increasing depletion of coastal fisheries resources; the threats to marine biodiversity, including negative impacts of climate change and disasters; the uneven contribution of oceanic fisheries to national economic development; the need for improved education and training in the sector; and the need to mainstream a rights-based approach and to promote greater recognition of gender issues within the sector.

This 5-year programme started in September 2018 and is funded by the European Union (EUR 35 million) with additional targeted support from the government of Sweden (EUR 10 million). The programme provides direct assistance through regional organisations to support regional and national level activities in the Pacific.

The PEUMP Programme combines a regional and national approach, paying specific attention to actions and services delivered at country level to promote and direct positive changes for target groups, in particular women, youth and the most vulnerable groups.

The PEUMP Programme's **overall objective** is to *'Improve the economic, social and environmental benefits for 15 PACPs arising from stronger regional economic integration and the sustainable management of natural resources and the environment'*.

The **specific objective (outcome)** is to *'support sustainable management and development of fisheries for food security and economic growth, while addressing climate change resilience and conservation of marine biodiversity'*.

To address the main priority areas identified in the formulation phase, a demand-driven approach, recognising the diversity of needs and opportunities across the 15 PACP countries, the Programme adopts an integrated approach, with inter-related components implemented by several agencies, revolving around six KRAs and the Programme Management Unit based in Suva, Fiji. Four main agencies are implementing / or have been implementing the KRAs through a multisectoral approach: 1) The Pacific Community (SPC), which is the lead agency for the programme and will be responsible for its overall management, 2) the Pacific Islands Forum Fisheries Agency (FFA), 3) SPREP and 4) The University of the South Pacific (USP). In addition, the PEUMP is also partnering with Non-Government Organisations (NGOs), which include the Locally Managed Marine Areas (LMMA), Pacific Islands Tuna Industry Association (PITIA), International Union for the Conservation of Nature (IUCN) and the World Wildlife Fund (WWF).

The six KRAs are aligned with the two focal sectors of the regional roadmap – oceanic and coastal fisheries and are as follows:

##### **Oceanic Fisheries**

- KRA 1 - High quality scientific and management advice for oceanic fisheries provided and utilised at regional and national levels (SPC).
- KRA 2 – Inclusive economic benefits from sustainable tuna fishing increased through supporting competent authorities and strengthening private sector capacities to create decent employment (FFA).

##### **Coastal Fisheries**

- KRA 3 – Sustainable management of coastal fisheries resources and ecosystems improved through better quality scientific information, legal advice, support, mentoring and empowerment at community level (SPC).

##### **Coastal and Oceanic fisheries**

- KRA 4 – IUU fishing reduced through enhanced monitoring control and surveillance of both oceanic and coastal fisheries, improved legislation, access to information, and effective marine area management (FFA).

- KRA 5 - Sustainable utilisation of the coastal and marine biodiversity promoted through improving marine special planning, increasing climate change resilience, enhancing conservation, mitigation and rehabilitation measures (SPREP).

#### ***Capacity development***

- KRA 6 - Capacity built through education, training and research and development for key stakeholder groups in fisheries and marine resources management (USP).

#### **Key Result Area 5: By-catch and Integrated Ecosystem Management**

SPREP has been awarded 6.3 million Euros to implement the By-catch and Integrated Ecosystem Management (BIEM) component of the PEUMP Programme and the work is due to be completed by December 2022. BIEM activities are designed to ensure they are relevant to all south Pacific countries. However, to maximise the positive impact of the work with the funding and time available, the BIEM team will focus the majority of activities in Fiji, PNG, Solomon Islands, Tonga and Vanuatu.

SPREP and its partners are dedicated to working to assist these Pacific countries meet their priorities in the sustainable management of their coastal resources and marine biodiversity, focusing on eight integrated key result areas (KRAs) identified in Table 1.

SPREP has sub-contracted the International Union for the Conservation of Nature (IUCN) and TierraMar Consulting Pty Ltd (TierraMar) to lead the delivery of some elements of the work. The organisational responsibilities are identified in Table 1.

**Table 1: The 8 integrated KRAs of the BIEM Initiative**

<b>KRA-5 Component</b>	<b>Geographical scope:</b>	<b>KRA Lead</b>
5.1 Marine Spatial Planning	Solomon Islands, Fiji	IUCN
5.2 Integrated 'ridge to reef' ecosystem strategies and coastal zone management planning	Fiji, Vanuatu	SPREP
5.3 Development and integration of climate change adaptation strategies into coastal community plans	Fiji, Vanuatu	
5.4 Assessment of by-catch of endangered species and extinction risk evaluated	Regional	SPREP
5.5 Development and implementation of by-catch mitigation strategies	Fiji, Solomon Islands, Papua New Guinea, Tonga, Vanuatu	
5.6 Capacity development through research grants to citizens of the Pacific Islands	Regional	
5.7 Support for community monitoring and protection of endangered species	Fiji, Solomon Islands and Vanuatu	
5.8 Capacity development on Non-Detrimental Findings process for CITES partners	Regional - CITES partner countries	

#### Management and Operations

The BIEM Management Unit (MU) has been established by SPREP in Suva to provide logistical, financial, and administrative and communication support and coordinate the delivery of the eight BIEM components.

The MU also has responsibility to ensure that BIEM activities are coordinated effectively as part of the wider PEUMP Programme. The MU will work collaboratively with Programme members, Countries and other partners under the guidance of the PEUMP Programme Management Unit to achieve this.