REQUEST FOR TENDERS

RFT: ClimSA_2024_007
File: AP_3/35
Date: 5 September 2024
To: Interested consultants/firms
From: Naheed Hussein, Project Manager - Climate Services and Related Application (ClimSA)

Subject: **Request for tenders (RFT): Design Samoa Meteorology Early Warning Services (MEWS) Mobile Application.**

1. Background

1.1. The Secretariat of the Pacific Regional Environment Programme (SPREP) is an intergovernmental organisation 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.

2. Specifications: statement of requirement

2.1. SPREP wishes to call for tenders from qualified and experienced firms/consultants who can offer their services to design the Samoa Meteorology Early Warning Services (MEWS) Mobile Application as set out in the Terms of Reference.

2.2. The Terms of Reference is set out in Annex A.

2.3. The successful Tenderer must supply the services to the extent applicable, in compliance with SPREP's Values and Code of Conduct: https://library.sprep.org/sites/default/files/sprep-organisational-values-code-of-conduct.pdf. Including SPREP's policy on Child Protection, Environmental Social Safeguards, Fraud Prevention & Whistleblower Protection and Gender and Social Inclusion.

2.4. SPREP Standard Contract Terms and Conditions are non-negotiable

3. Conditions: information for applicants

3.1. To be considered for this tender, interested firms/consultants must meet the following conditions:

i. Submit a detailed Curriculum vitae detailing qualification and previous relevant experience for each proposed personnel;
ii. Provide three referees relevant to this tender submission, including the most recent work completed;
iii. Complete the **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. Failure to do this will mean your application will **not** be considered).*
Provide examples of past related work outputs
For the Technical and Financial proposals you may attach these separately.

iv. Must meet local registration requirements where the firm/consultant is based.

3.2 Tenderers must declare any areas that may constitute conflict of interest related to this tender and sign the **conflict of interest form** provided.

3.3 **Tenderer is deemed ineligible due to association with exclusion criteria, including** bankruptcy, insolvency or winding up procedures, breach of obligations relating to the payment of taxes or social security contributions, fraudulent or negligent practice, violation of intellectual property rights, under a judgment by the court, grave professional misconduct including misrepresentation, corruption, participation in a criminal organisation, money laundering or terrorist financing, child labour and other trafficking in human beings, deficiency in capability in complying main obligations, creating a shell company, and being a shell company.

3.4 Tenderer must sign a declaration of **honour form** together with their application, certifying that they do not fall **into** any of the exclusion situations cited in 3.3 above and where applicable, that they have taken adequate measures to remedy the situation.

4. Submission guidelines

4.1. Tender documentation should demonstrate that the interested Tenderer satisfies the conditions stated above and in the Terms of Reference 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 be submitted in English and outline the interested consultant's complete proposal:

a) **SPREP Tender Application form and conflict of interest form.** *(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. Failure to do this will mean your application will **not** be considered).*
Provide examples of past related work outputs
For the Technical and Financial proposals you may attach these separately.

b) **Honor form**

c) **Curriculum Vitae** of the proposed personnel to demonstrate that they have the requisite skills and experience to carry out this contract successfully.

d) **Technical Proposal** which contains the details to achieve the tasks outlined in the Terms of Reference.

e) **Financial Proposal** – provide a detailed outline of the costs involved in successfully delivering the tasks set out in the ToRs submitted in United States Dollars (USD) and inclusive of all associated taxes.

f) Where relevant provide:

i. Business registration/license (For Entities/ Individual consultant's as per relevant national legislations)

ii. Tax Identification Number (TIN) Letter (If applicable for Individual consultant's as per relevant national legislations)

4.3. Provide three referees relevant to this tender submission, including the most recent work completed.

4.4. Tenderers/bidders shall bear all costs associated with preparing and submitting a proposal, including cost relating to contract award; SPREP will, in no case, be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.

4.5. The tenderer/bidder might be requested to provide additional information relating to their submitted proposal, if the Tender Evaluation Committee requests further information for the purposes of tender evaluation. SPREP may shortlist one or more Tenderers and seek further information from them.

4.6. The submitted tender proposal must be for the entirety of the Terms of Reference and not divided into portions which a potential tenderer/bidder can provide services for.

4.7 The Proposal must remain valid for 90 days from date of submission.

4.8 Tenderers must insist on an acknowledgement of receipt of tender.

5. Tender Clarification

5.1. a. Any clarification questions from applicants must be submitted by email to procurement@sprep.org before 13 September 2024. A summary of all questions received complete with an associated response posted on the SPREP website www.sprep.org/tender by 20 September 2024.

b. The only point of contact for all matters relating to the RFT and the RFT process is the SPREP Procurement Officer.

c. SPREP will determine what, if any, response should be given to a Tenderer question. SPREP will circulate Tenderer questions and SPREP's response to those questions to all other Tenderers using the SPREP Tenders page (**https://www.sprep.org/tenders**) without disclosing the source of the questions or revealing any confidential information of a Tenderer.

d. Tenderers should identify in their question what, if any, information in the question the Tenderer considers is confidential.

e. If a Tenderer believes they have found a discrepancy, error, ambiguity, inconsistency or omission in this RFT or any other information given or made available by SPREP, the Tenderer should promptly notify the Procurement Officer setting out the error in sufficient detail so that SPREP may take the corrective action, if any, it considers appropriate.

6. Evaluation criteria

6.1. SPREP will select a preferred consultant 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 tender satisfies the following criteria:

6.2. A proposal will be rejected if it fails to achieve 70% or more in the technical criteria and its accompanying financial proposal shall not be evaluated.

I. Technical Score – 80%

Qualification	Master's degree in computer science is desirable, bachelor's degree in computer science with demonstrated experience acceptable	10%

Experience	Professional portfolio and relevance of previous experience in the field of mobile app development: ➢ Experience with Drupal 9 or 10 or other popular backend open-source frameworks or later for Headless/Hybrid use (implemented at least 1 project within past 2 years. Provide details and link or screenshots) ➢ Experience with Quasar/Vuejs Framework or other popular open-source cross-platform frameworks (implemented at least 1 project within last 2 years. Provide details and link or screenshots) ➢ Experience deploying apps to the Android Play Store or Apple Store (deployed at least 1 app within last 2 years. Provide details and link or screenshots) ➢ list of design and development services performed over the past 3 years	20%
	Familiar with the following tools and concepts o Agile Development, User stories, Scrums, Sprints o Git, Gitlab (pipelines), Github (flows) o CI/ CD o Docker, Containers o AWS E3, Lightsail, S3 o Unit Testing, E2E testing	10%
	Experience in Meteorological or DRR/DRM fields and working in the Pacific.	10%
	Experience with UX (User Experience) design and implementing accessible apps (deployed at least 1 app within last 3 years) o Empathy Map, User Journey Map	10%
Technical Proposal / Methodology	Detailing activities to be conducted over the term of the engagement, including detail on which team members will undertake each activity, resources available for this engagement in terms of hardware and software, workplan and timeline allocation, quality control and assurance methodology. (6) The solution must use the latest Drupal content management system (currently at version 10)	20%

II. Financial Score – 20%

The following formula shall be used to calculate the financial score for ONLY the proposals which score 70% or more in the technical criteria:

$$\text{Financial Score} = a \times \frac{b}{c}$$

Where:
a = maximum number of points allocated for the Financial Score
b = Lowest bid amount
c = Total bidding amount of the proposal

7. Variation or Termination of the Request for Tender

7.1 a. SPREP may amend, suspend or terminate the RFT process at any time.

b. In the event that SPREP amends the RFT or the conditions of tender, it will inform potential Tenderers using the SPREP Tenders page (https://www.sprep.org/tenders).

c. Tenderers are responsible to regularly check the SPREP website Tenders page for any updates and downloading the relevant RFT documentation and addendum for the RFT if it is interested in providing a Tender Response.

d. If SPREP determines that none of the Tenders submitted represents value for money, that it is otherwise in the public interest or SPREP's interest to do so, SPREP may terminate this RFT process at any time. In such cases SPREP will cancel the tender, issue a cancellation notice and inform unsuccessful bidders accordingly.

8. Deadline

8.1. The due date for submission of the tender is: 27 September 2024, midnight (Apia, Samoa local time).

8.2. Late submissions will be returned unopened to the sender.

8.3 Please send all tenders clearly marked **'RFT ClimSA_2024_007: Design Samoa Meteorology Early Warning Services (MEWS) Mobile Application'**

Mail: SPREP
Attention: Procurement Officer
PO Box 240
Apia, SAMOA

Email: tenders@sprep.org (MOST PREFERRED OPTION)
Fax: 685 20231
Person: Submit by hand in the tenders' 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.

SPREP reserves the right to enter into negotiation with respect to one or more proposals prior to the award of a contract, split an award/awards and to consider localised award/awards between any proposers in any combination, as it may deem appropriate without prior written acceptance of the proposers.

A binding contract is in effect, once signed by both SPREP and the successful tenderer. Any contractual discussion/work carried out/goods supplied prior to a contract being signed does not constitute a binding contract.

For any complaints regarding the Secretariat's tenders please refer to the Complaints section on the SPREP website http://www.sprep.org/accountability/complaints

SPREP
Secretariat of the Pacific Regional Environment Programme

Annex A: Terms of Reference

Design Samoa Meteorology Early Warning Services (MEWS) Mobile Application

For

Samoa Meteorology Division (SMD)

Project – Climate Services and Related Application

(ClimSA)

(September 2024)

1. BACKGROUND

Funded by the European Union, the Intra-ACP Climate Services and Related Applications (ClimSA) project aims to support the climate information services value chain with technical and financial assistance, infrastructure, and capacity building. This will ultimately result in improved access and use of climate information and enable and encourage the generation and use of climate services and applications for decision-making at all levels in the Pacific region. For the Pacific, this Action is timely and necessary since climate variability and change are already having and will continue to have severe impacts on national economies and key socio-economic sectors in the absence of this type of large scale, resilience intervention.

One of the initiatives under ClimSA is to support national activities in Samoa through Samoa Meteorology Division. Samoa is exposed to natural hazards including floods, droughts, tropical cyclones, storm surges, earthquakes, and tsunami. In 2009, it was hit by a devastating tsunami, causing damage valued at 20 percent of their GDP. In December 2012 Samoa was hit by Tropical Cyclone (TC) Evan which reached wind speeds of 185 km/h, causing extensive damages and losses. In more recent times, Samoa has faced health-related natural disasters, notably the measles outbreak in 2019 and the COVID-19 outbreak in 2022. The healthcare systems were severely tested by these incidents, resulting in significant health and socio-economic repercussions and essential support was mandated of Samoa's emergency operation systems.

The Government of Samoa (GoS) is undertaking a series of measures to improve its management of climate and disaster risks, these include taking steps to strengthen its multi-hazard early warning systems. The Samoa Meteorology Division (SMD) plays a vital role in protecting life, property, and economic development in Samoa by providing effective weather, climate, geoscience, and ozone advisory services including to support the sustainable development of natural resources in Samoa. The SMD also provides round-the-clock weather monitoring and delivers multi-hazard early warnings for Samoa by offering observation, forecasting, and early warning services encompassing meteorology, extreme weather events, tsunamis, storm surges, and coastal flooding. The mobile application that SMD previously managed to disseminate its warnings and advisories has been decommissioned, as it faced some operational challenges. In response to this situation, the GoS is delving into the innovation of a new mobile application that incorporates the latest technological developments

The Secretariat of the Pacific Regional Environment Programme (SPREP) through the ClimSA Project seeks to hire a firm/consultant to support SMD with the development of a new mobile application for its Multi-Hazard Early Warning Systems (MHEWS). The approved action is called the Samoa Meteorology Early Warning Service Application (Samoa MEWS App). It is a system looking to vastly improve early warning and early response to hazard and disaster events.

The Samoa MEWS App will be established so that most smartphones can be used. Alerts/sirens and warning messages or flashing screens will attract users' attention. It is also for two-way communication of reports from communities connected to a database to allow the SMD and DMO to evaluate hazard, damage information, and respond accordingly.

Samoa’s mobile telephone geographical coverage is about 98.5%. The action will help disseminate and enable all smartphone users to have direct access to warnings. Applications’ features will work with majority of smartphones in the Samoan market, and the UX design will be inclusive with a sound alert to indicate warning messages to visually impaired users and flashing screen for users with impaired hearing ability, as long as it is supported by the smartphone device and OS. It will also enable users to prepare and send reports of disasters happening around the users with text and pictures to SMD and DMO.

2. OBJECTIVE

This assignment is for a Consultancy firm to support the ClimSA Project to advise SMD with the provision of technical advisory services to:

- Assess, analyse and design a mobile app that will assist Samoa MHEW and Response systems.
- Develop a mobile early warning app, that supports the requirement of the project.
- Provide trainings for SMD and SPREP IT on the administration of the mobile app system.

Samoa's mobile telephone geographical coverage is about 98.5%. The action will help disseminate and enable all smartphone users to have direct access to warnings. Applications' features will work with majority of smartphones in the Samoan market, and the UX design will be inclusive with a sound alert to indicate warning messages to visually impaired users and flashing screen for users with impaired hearing ability, as long as it is supported by the smartphone device and OS. It will also enable users to prepare and send reports of disasters happening around the users with text and

Technology Platform
While no specific platforms are nominated, free open-source technologies will receive preference. Proprietary technology platforms and tools will be evaluated based on their ability to deliver significant long-term cost savings and benefits. However, it is anticipated that the app will use Vue.js/Quasar framework, flutter, react and Drupal or other backend frameworks for content storage and reporting. The mobile app will be designed with consideration for future extension to accommodate alert notification via Cell Broadcasting Service (CBS), such that alert messages will also be received by users without the Internet data. The application needs to be versatile enough to work with the upcoming changes on the redesigned website.

Development Approach
The development of the Mobile App is intended to be delivered in a pragmatic Agile Approach, where development and deployment of components is managed in several sprints. Development of a detailed work plan will be focus of the initial sprint. In keeping the agile principles, this will serve as an overall guide while sprint goals will be reviewed and refined at the commencement of each sprint.

SPREP IT is the appointed counterpart who will be responsible for providing technical oversight of the implementation against the original requirements and design. This may include assisting with user acceptance testing and representing SMD in agile processes.

The use of prototypes to verify requirements, to test certain processes in operation and to aid review by users, is encouraged.

3. SCOPE OF WORK

I. In consultation with SMD and SPREP, identify priority requirements, develop the inception report and workplan for the overall project.
II. Propose and obtain approval on the technology platforms, tools and overall system architecture.
III. Plan the next 2-3 sprints in detail, based on agreed priorities, this will include at a minimum: production of the initial mobile app prototype.
IV. Review outputs with stakeholders at the end of each iteration of work (sprint) and propose actions, including changes based on the outcome.
V. Participate in scheduled short update sessions (scrum) with the frequency to be confirmed with SMD focal point and SPREP focal point.
VI. Develop system and user documentation alongside the relevant components during a sprint, to be included in sprint review (video and pictorial presentation may be proposed where appropriate, instead of written material);
VII. Raise risks and issues encountered during the implementation with SMD and SPREP representative during the scrum sessions.
VIII. Maintain all source code developed and deployed for this project in a SMD/SPREP code repository
IX. Work with SMD/SPREP focal points to install and deploy the mobile app developed.
X. Provide training for the different user groups as identified during the scoping or design of the app as required

XI. Provide technical handover of support to SMD/SPREP focal personnel including all necessary data and information.

XII. Develop user-friendly app for Samoa Met with following features for both Android and iOS versions and the Dashboard where the SMD / SPREP staff enters the information and alert notification to be disseminated and check the user-generated reports on disaster events.

Functionality

The app needs to provide the following information:

Features	Details
Supported OS	• Android and iOS
Alert Notification	• Alert updates • Advisory notification • Push notifications on important updates such as advisories, news, announcements and EW messages • Push notifications on lock screen, on app icon • Alert details with the affected area map.
Information Provisioning	• Weather Updates & Outlook display • Weather Warning & Advisory currently in effect or cancelled recently. • Weather Observation from Weather Stations and Tide-Gauge. • Satellite Image and Surface Maps • Climate information (e.g. Drought index, forest fire index.) • Air Temperature • ENSO Status • Weather hazard impact (mainly target our end-user, for them to be able to interact and utilize the app • Links to SDM and DMO web pages • ENSO status • Agrometeorology bulletin • Fisheries bulletin • Seasonal Outlook
Accessibility	• For people with disabilities (hearing impairment, visual disability, locomotive disability) as far as it is supported by the devices.
Data Usage	• Suppress data usage
Sub-menu of advisory videos	• Have a sub-menu with a link pointing to advisory videos
Language	• Available in English language
Contact List	• List of emergency contacts
Brief Information about Application	• Include name of departments • Include logos • Include application description
Disaster event reporting by users	• Let the app users report disaster events occurring in their villages/communities (evidence based) with text, pictures and a short video.

Dashboard

The key features of the Dashboard:

Features	Details
Operating System	• Linux

User management	• User registration • Authentication and authorization • Role-based access control
Alert Notification	• Compose alert messages and submit it for mobile app notification • Revise submitted alert messages • Cancel submitted alert messages
Information Provisioning	• Compose information and publish
Message management	• Review the submitted alerts and published information • Search for submitted alerts and published information by keywords
Disaster report management	• Notification on the screen upon arrival of a user report. • Manage the received user report.

Service	Detail
UX Design	Unique design Clean and neat interface Customized layout Flexible device compatibility Design for mobile devices Design for tablets and phablets UI design of the previous smartphone app is shown in Annex 1 for reference.
Technical Support	Bug fixes Ensure quality, security and performance testing User training Call and e-mail support to SMD App store submission management
App Release Service	Google Play Store Upload Available free download in Google play store Google analytics setup Apple store submission Collection of feedback from the users Support SMD in promotion of the app
Hosting	Dashboard to provision information to be published in the app and to disseminate alert messages. Sufficient storage to store uploaded pictures describing disastrous situations from 10% of app users per year.
Social Media Integration	Social media (Facebook, Twitter, Instagram, WhatsApp, Viber share button integration)

Cost Responsibility

Cost	Responsible
Google Play Developer Account	Consultant (one time)
Apple Store annual registration fee	Consultant (for 5 years). SMD afterwards
Hosting service for the Dashboard	Consultant (for 5 years). SMD afterwards
Any other cloud services	Consultant (for 5 years). SMD afterwards. Use of cloud services must be approved by SMD.

4. NATURE OF ASSIGNMENT

- The consulting engagement will be contingent upon the accomplishment of the projected outputs. The time anticipated for each sprint will be estimated and agreed with SMD/SPREP at the commencement of the sprint.

- The assignment will be undertaken either by: (1) an individual independent consultant or (2) a team of experts (firm) or (3) consortium (team of experts) their technical experience in the field of software development and applications. They will be subject to verification and technical screening by SPREP/SMD IT team.
- The Focal Points are Dr. Luteru Tauvale, Director Samoa Meteorological Service (SMD), Mr. Silipa Art Mulitalo, National Technical Support Officer (NTSO – SMD/SPREP), Mr. Christian Slaven, IT Manager for SPREP. The Focal Points will provide day-to-day oversight and facilitate engagement with relevant stakeholders.
- The consultant will seek input from the SMD and SPREP IT Team through their focal points.
- The work conducted by the consultant will be supported by SMD and SPREP in the consultation and review of the deliverables and facilitate the final product approval.
- All international travel will be managed by SPREP and SMD will facilitate local travel logistics.
- All training workshop and consultations will be managed by SMD.

5. QUALIFICATIONS AND REQUIREMENTS

- Master's degree in computer science is desirable, bachelor's degree in computer science with demonstrated experience acceptable.
- Experience with Drupal 9 or other popular backend open-source frameworks or later for Headless/Hybrid use (implemented at least 1 project within past 2 years. Provide details and link or screenshots).
- Experience with Quasar/Vuejs Framework or other popular open-source cross-platform frameworks (implemented at least 1 project within last 2 years. Provide details and link or screenshots).
- Experience deploying apps to the Android Play Store or Apple Store (deployed at least 1 app within last 2 years. Provide details and link or screenshots).
- Familiar with the following tools and concepts:
  - Agile Development, User stories, Scrums, Sprints
  - Git, Gitlab (pipelines), Github (flows)
  - CI/ CD
  - Docker, Containers
  - AWS E3, Lightsail, S3
  - Unit Testing, E2E testing
- Demonstrated experience in the Meteorological or DRR/DRM fields
- Experience working in Samoa or the Pacific Islands
- Experience with UX (User Experience) design and implementing accessible apps (deployed at least 1 app within last 2 years)
  - Empathy Map, User Journey Map

6. DELIVERABLES AND PAYMENT

The payments will be structured according to the table 1 below;

Table 1: Outputs/Deliverables and Payment Terms.

Deliverables	Payment Terms
Developed work plan, methodology and Inception Report	20% of the fee paid upon SMD and SPREP approval of first deliverable.
Submission and approval of Assessment and Review report including Initial App Development Plan	
Mobile App design and development (wireframe, app structure, app information architecture, tech stack etc.)	
Review and approval of the Mobile App design and functionalities	
Submission and approval of the Beta version	

(Ver 1.0) of the Mobile App (Android and iOS) and issuance of comments. Recommendations from SMD and stakeholders	
Pilot launches the improved mobile app with all bug resolution and appropriate security and performance optimization. Incorporating comments/recommendations from SMD and stakeholders	50% of fee paid at this deliverable
Conduct Training for administrators and relevant stakeholders identified by SMD	
Final Report with mobile app sustainability plan	20% fee paid at this deliverable
The final version of the source code of the mobile app and the Dashboard.	10% fee paid at this deliverable

7. DURATION OF THE ASSIGNMENT

The consultancy will commence as soon as practicable, with all deliverables successfully completed by February 28th, 2025.