

CLARIFICATION QUESTIONS

EOI: 2025/WRPP/002
File: AP_3/39
Date: 17 October 2025
To: Interested Service Providers
Contact: Maraea S. Pogi (maraeap@sprep.org)

Expression of Interest (EOI): Weather Watch Radar System

Question 1:

Regarding the EOI reference “Respondents notified of shortlisting with a date noted as TBC”, do you have a date for when shortlisted vendors will be notified?

Response:

For this procurement, we aim to respond to all submissions no earlier than four weeks after the closing date, depending on the completion of the evaluation process. SPREP will also notify all non-shortlisted suppliers/bidders accordingly.

Following this, we plan to proceed to the next phase of the procurement process — the Request for Tender (RFT) — which will include the full specifications.

Question 2:

Given the possibility of installing additional Weather Watch Radars in the future, is there a way for suppliers who are not shortlisted at this stage to still be considered for future radar opportunities?

Response:

The suppliers shortlisted from this EOI will be invited to respond to the RFT. The preferred supplier list is formed with the outcomes of the RFT. It may be more than one supplier will be on the list. The preferred supplier agreements that are established can be accessed by the Pacific for new radars, support of existing radars and ongoing services such as maintenance, training, spares etc. The preferred suppliers list will be reviewed every two years and may be a closed process rather than open process, per SPREP’s procurement procedure. This will be at the discretion of SPREP

Question 3:

What would you define as 'relocatable'? And how quickly would you expect the relocation process to occur — within days, weeks, or another timeframe?

Response:

The requirement is for the ability to relocate the radar system within days or a couple of weeks, should land no longer be accessible for a particular reason,

Question 4:

Would SPREP accept proposals where bidders provide multiple solution options (e.g., 2–3 configurations) that meet the required specifications and performance criteria, to allow for flexibility in addressing different operational scenarios or budget considerations?

Response:

Yes, SPREP will consider all options.

Question 5:

Have the sites for the Weather Watch Radars been secured, or is land acquisition still in progress?

Response:

Samoa: The Government of Samoa is currently in the process of securing government-owned land for the installation of the Weather Watch Radar.

Papua New Guinea: Efforts are underway to secure privately-owned land for the radar installation. There remains a possibility that the site location may change, depending on the outcome of ongoing negotiations.

Question 6:

Will SPREP provide soil investigation data or a geotechnical report for the proposed radar sites, as this information is critical for structural calculations and foundation design?

Response:

Yes, these will be provided during the request for tender stage. We are seeking indicative costings only at the EOI stage, where fixed and variable costs (such as site-specific foundation design) are identified separately. You may break down the costings further into additional rows if needed.

Question 7:

Will vendors or suppliers be expected to provide a full turnkey solution, including the supply, installation, and all associated site works (e.g., civil works, foundations, power, and communications infrastructure)?

Response:

Yes, vendors or suppliers are expected to provide a full turnkey solution.

Question 8

Regarding EOI Page 19 - Does the frequency band (5.4–5.9 GHz) need to be fully covered, or is it sufficient if it covers a part of the specified frequency band (e.g. 5.6-5.8 GHz)?

Response:

It is sufficient to cover part of the specified frequency band, as long as the frequency chosen is within the range provided in the EOI. The frequency will be adjustable within the range to ensure no overlap or interference with other radars in the same vicinity.

Question 9

Regarding the specification on **EOI Page 19** "Gain and Sensitivity: Adequate to see very light rain (10 to 15 dBZ) at a range at least 250 km", can it be relaxed to "18 dBZ at a range at least 250km"? The sensitivity of 10-15 dBZ corresponds to drizzle or fog observation, and is not considered to be of much use for disaster prevention purposes in areas of the South Pacific where rainfall intensity is high (especially for monitoring tropical depression and cyclones). It is therefore considered more important to expand the observation range rather than very high sensitivity. Sensitivity of 18 dBZ corresponds to light rain of about 0.5 mm/h, and as with many weather radars, it is considered to be a reasonable value considering the purpose of rainfall observation in the South Pacific.

Response:

The requirement can be changed to "Gain and Sensitivity: Adequate to see precipitation of 18dBZ at 250km" for the purposes of the EOI. Where an offered solution exceeds the required minimum specification, respondents should state the actual capability. The EOI responses will inform the RFT requirements, but there is no guarantee that the RFT specifications will support a lower specification system.

Question 10

Regarding EOI Page 19 - Can the requirement on the Peak Transmission Power be reduced to minimum 400W, or can this requirement be removed? A Japanese C-band weather radar can make an observation up to 400km radius with 400W peak transmission power per polarisation with satisfying the minimum sensitivity of 18 dBZ. Lower peak transmission power does not necessarily mean high sensitivity, and it brings advantages to the MET offices such as less power consumption and higher safety.

Response:

The technical requirements in the EOI are intended to support the required observations by the radar. If the vendor believes they can offer a solution which can provide equivalent observations at lower technical specifications, then this can be submitted as an option. The EOI responses will inform the RFT requirements, but there is no guarantee that the RFT specifications will support a lower specification system.

Question 11

Tower Design for PNG Site

Appendix A specifies for Papua New Guinea an "Option – Relocatable Structure (PNG only)" with a "fully automated, self-deploying tower", while also noting that a "permanent structure is acceptable if not possible."

We would appreciate confirmation whether:

- the **self-deploying (relocatable)** tower is the **preferred primary option**, even if it implies a lower tower height (e.g. around 7 m), or
- SPREP requires **both** characteristics simultaneously – a self-deploying structure with a **20 m** height – which would constitute a significant engineering undertaking.

PO Box 240, Apia, Samoa T +685 21929 F +685 20231 sprep@sprep.org www.sprep.org

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Response:

A lower tower is acceptable for a relocatable option based on your existing engineered solution. Please indicate the tower height so an impact assessment can be subsequently done based on the specific site. Please provide a 20m compliant fixed solution also.

Question 12

Diesel Generator Requirement for PNG Site

Under Power Supply (PNG only), the specifications state: “Include solar and battery and diesel backup.”

Could SPREP please confirm whether the inclusion of a **diesel generator backup is mandatory**, or whether a **fully solar–battery autonomous system** would be considered acceptable?

From both an operational and environmental perspective, a **diesel-free system** would significantly reduce site complexity, fuel logistics, and greenhouse gas emissions—aligning strongly with SPREP’s sustainability and climate-resilience objectives under the Weather Ready Pacific Programme.

Response:

No mains power is available at the current proposed PNG site, and the radar should be designed to be fully off grid in its operations. It was envisaged that a diesel generator could be a reliable back-up power source, and we are seeking EOIs with this solution. We are open to additional alternative solutions that will provide sufficient redundancy and back up. Please indicate the autonomous time for the operations of the solar system, which will inform our RFT specifications.

Question 13

Battery Autonomy Duration

The tender mentions backup autonomy values of both 5 minutes (UPS) and 48 hours. Could SPREP please clarify the **required minimum energy storage duration** expected for the PNG installation?

Response:

The site power supply system should have adequate capacity to provide 48 hours of radar system operation. For example, this may be battery storage, or genset fuel capacity, or a combination of sources. It should be assumed that in extreme weather conditions, solar input to a power supply system may be negligible, either due to PV array damage or heavy overcast conditions.

Additionally, the intention of the (minimum 5-minute) UPS is to provide power conditioning to critical sensitive electronics – such as PCs, signal processors, communications equipment - and to enable those devices to ride through any interruption to supply while the site switches from primary to secondary power, should that be provided. The UPS is also intended to allow for graceful shutdown of those critical devices if power to site is lost for an extended period. The graceful shutdown is to be an automated function at a preset low-reserve condition.

If a critical-equipment UPS is not included in the design, respondents should explain how the system offered would achieve the intended functions.



Respondents should clearly state any assumptions made about which site equipment is considered essential, and which is considered discretionary for the purposes of power autonomy calculations (such as lighting, air-conditioning, communications, etc.) and any load-shedding required to achieve the 48 hours of autonomy.

The EOI responses will inform the RFT requirements, but there is no guarantee that the RFT specifications will support a lower specification system.

Question 14

Air Conditioning Requirement

The tender specifies “climate-controlled shelter to maintain internal temperatures below +30 °C.”

Our radar system is designed for full operation in tropical conditions without any need for air conditioning. We have successfully operated identical systems in similar or harsher environments without temperature-related issues.

Could SPREP please clarify whether **air conditioning must still be included** if the offered radar design **does not require it** for proper functioning?

Avoiding unnecessary HVAC systems would substantially lower installation and operational costs, reduce electricity consumption, and improve environmental sustainability.

Response:

Air conditioning with integrated dehumidification is a mandatory requirement for the shelter/building and radome. Given the coastal Pacific environment with high humidity, heat, and potential salt exposure, these measures are seen as essential for long-term integrity and operational continuity of the radar system. This includes long-term integrity of batteries, thermal performance of electronics, and condensation control.

The proposed HVAC solution needs to be appropriately sized to ensure that temperature and humidity levels in both the shelter and radome are controlled to:

- Handle peak thermal loads and maintain internal temperatures to less than 30 degrees (as specified in the EOI)
- Provide a non-condensing environment to prevent corrosion or mould buildup

Question 15

Energy Efficiency and Evaluation Scoring

Our radar systems have an exceptionally modest power consumption, allowing fully solar operation even for C-band systems. In comparable Pacific installations, competing systems have required extensive infrastructure.

We would appreciate clarification whether **energy efficiency, low power consumption, and the absence of auxiliary loads (e.g. air conditioning)** are **positively reflected in the evaluation process**, given their significant long-term sustainability and cost advantages for remote island operations.



Response:

Please see the answer to question 14 regarding the requirement for air conditioning. Sustainability assessments in the next phase of RFT will consider power consumption and whole-of-life cost. You are welcome to provide this information as part of the EOI, though it is not mandatory at this phase.

Question 16

Alternative or Enhanced Technical Proposals

Section 2 and the Response Form emphasize the need to “meet the requirements in Section 2,” while also inviting innovative and value-added approaches.

Could SPREP please confirm whether respondents may propose **alternative or improved configurations**—for example, higher-efficiency power systems, communications methods, or radar specifications—in **addition to** a compliant base offer, provided that all mandatory specifications are met?

Response:

Yes, please provide a compliant base offer and provide commentary where you have different recommendations or would like to offer alternatives for consideration. The EOI responses will inform the RFT requirements, but there is no guarantee that the RFT specifications will support a lower specification system.

Question 17

Power and Connectivity Assumptions for PNG Site

Appendix A notes that “Mains power and Ethernet link not available. Assume Starlink communications are not available.”

We would like to confirm our understanding that **no grid power will be available** at the PNG site. In that case, should the radar be designed for **fully off-grid operation**, powered solely by a solar–battery system (and optionally diesel backup)?

The specifications also refer to an “UPS equipment necessary to keep their equipment safe for brief power outages of up to 5 minutes.”

We would appreciate clarification whether this **UPS requirement still applies** under a **fully off-grid configuration**, since the solar–battery power management system already ensures seamless operation without grid interruptions. In such a case, an additional UPS would appear functionally redundant.

Response:

As per the response to Questions 13 and 14, the site power supply system should have adequate storage capacity to provide 48 hours of radar operation. For example, this may be battery storage, or genset fuel capacity, or a combination of sources. It should be assumed that in extreme weather conditions, solar input to a power supply system may be negligible, either due to PV array damage or heavy overcast conditions.

Additionally, the intention of the (minimum 5-minute) UPS is to provide power conditioning to critical sensitive electronics – such as PCs, signal processors, communications equipment - and to enable those devices to operate through any interruption to supply while the site switches from the primary power supply to a secondary power supply, should one be provided. The UPS is also intended to allow



for graceful shutdown of those critical devices if power to site is lost for an extended period. The graceful shutdown is to be an automated function at a preset low-reserve condition.

If a critical-equipment UPS is not included in the design, respondents should explain how the system offered would achieve the intended functions.

Respondents should clearly state any assumptions made about which site equipment is considered essential, and which is considered discretionary for the purposes of power autonomy calculations (such as lighting, air-conditioning, communications, etc.) and any load-shedding required to achieve the 48 hours of autonomy.

Question 18

Samoa location has "Mains power and Ethernet link available within 75 meters of radar site". However PNG "Mains power and Ethernet link not available. Assume Starlink communications are not available". Is the system at PNG to run exclusively on solar power? How about connectivity?

Response:

The PNG site will be fully off grid, with solar power and additional back up from a diesel generator (or alternative backup solutions). We anticipate that Starlink connectivity is not available at the PNG site, and your proposed communication connectivity solution will need to consider this as part of the off-grid solution.

Question 19

- a) Can we provide high capacity line of sight radio relays to a point up to 20Km away from which the connectivity can be established?

Response:

For the EOI please do not consider this solution technology. We may still consider this in the RFT specifications.

- b) Alternately, should we contract alternate satellite services such as ARGOS / IRIDIUM / ONE-WEB or other upcoming services?

Response:

We consider alternate satellite services such as those listed are reasonable options for connectivity in lieu of Starlink in PNG. For Samoa, please provide a Starlink-based solution as per the EOI requirements.



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c) Will this cost be borne by the customer?

Response:

The RFT will be a full turn-key solution from the successful supplier(s), including establishment of connectivity to enable raw data and product delivery to and storage at local meteorological offices for use. The EOI is framed in this way also.

The ongoing operating costs of the system and data communications will be borne by the owner of the asset.

It should be noted that it is required for the raw and processed radar data to be available for use by the customer. Delivery of data to the customers' systems in a recognized standard format shall be included as part of the solution.