

Seasonal Prediction Project (SPP)

Pacific Islands – Ocean and Climate Outlook Forum No. 193 Summary Report

Date: Thursday 19 October 2023 – was cancel because NMHS joining the ACCESS-S training and PICO-13

Time: Australian Eastern Standard Time at 11:00AM (01:00 UTC)

Host:

Chair:

Apologies:

Main purpose for the OCOF:

- To provide a regular forum for the 12 participating PIC NMSs to discuss the current ENSO status, recent one and three-month rainfall, drought (if present), their seasonal climate outlooks and stakeholders' engagement with other countries and the SPP (Bureau of Meteorology and SPREP) project team.
- In addition, it serves as an online training forum for recent ACCESS development and gives the project team and the NMSs an opportunity to discuss other project-related matters.

Agenda:

1. Brief introduction of PIC participants, SPREP, SPC and Bureau of Meteorology teams.
2. Report on current ENSO status.
3. Each NMS report on their past one and three-months' rainfall in relation to the current ENSO situation (include ranking and verification), their three-month outlooks and their stakeholders engagement. Wherever appropriate NMS to report on their drought status.
4. Round-table discussion: addressing general concerns/queries on outlooks and SCOPIC, CliKp and ACCESS-S
5. Feedback on COSPPac products and services.
6. Country statements with regards to drought or drought-like conditions, drought module issues/concerns.
7. The next OCOF will be held on **16 November 2023** and is to be chaired by **Samoa**.

Participants:

| | |
|---|--|
| Cook Islands: Fiji: FSM (Chuuk): FSM (Pohnpei): Kiribati: Niue: Papua New Guinea: Palau: Republic of Marshall Islands: Samoa: Solomon Islands: | |
|---|--|

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| | |
|-------------------|--|
| Tonga: | |
| Tuvalu: | |
| Vanuatu: | |
| Australia: | |
| NOAA: | |
| SPREP: | |
| SPC: | |

OCOF tables were received from 12 participating countries before the meeting.

Observations of July to September 2023:

Observed rainfall for the one and three-month periods ending September 2023 were discussed for each PIC. This month, several countries experienced extreme rainfall as shown in the following table:

| Station | Period | Rainfall Amount (mm) | Rainfall Rank | Years of record |
|-----------------------|-----------|----------------------|---------------|-----------------|
| Lautoka Mill, Fiji | September | 210.6 | 118 | 124 |
| Rotuma, Fiji | September | 78.6 | 6 | 107 |
| Nadi Airport, Fiji | July-Sept | 325.4 | 74 | 82 |
| Udu Point, Fiji | July-Sept | 503.8 | 67 | 73 |
| Beru, Kiribati | September | 185.6 | 60 | 67 |
| Butaritari, Kiribati | September | 288.0 | 78 | 86 |
| Kiritimati, Kiribati | September | 82.5 | 88 | 98 |
| Tarawa, Kiribati | September | 339.5 | 73 | 77 |
| Beru, Kiribati | July-Sept | 712.7 | 59 | 65 |
| Kirimati, Kiribati | July-Sept | 415.4 | 91 | 98 |
| Tarawa, Kiribati | July-Sept | 1080.1 | 75 | 77 |
| Majuro, RMI | September | 159.3 | 3 | 70 |
| Majuro, RMI | July-Sept | 640.4 | 3 | 70 |
| Kwajalein, RMI | July-Sept | 480.2 | 2 | 79 |
| Hanan Airport, Niue | July-Sept | 602.4 | 107 | 114 |
| Koror, Palau | July-Sept | 1560.0 | 68 | 73 |
| Pohnpei, FSM | September | 1867.9 | 72 | 74 |
| Apia, Samoa | September | 29.0 | 10 | 134 |
| Auki, Solomon Islands | July-Sept | 801.5 | 57 | 61 |
| Taro, Solomon Islands | July-Sept | 1254.3 | 44 | 45 |
| Niuafo'ou, Tonga | September | 6.7 | 1 | 50 |
| Fua'amotu, Tonga | September | 26.5 | 4 | 44 |
| Nuku'alofa, Tonga | September | 15.5 | 3 | 79 |
| Fua'amotu, Tonga | July-Sept | 164.8 | 5 | 44 |
| Nuku'alofa, Tonga | July-Sept | 144.5 | 6 | 79 |
| Vava'u, Tonga | September | 30.6 | 6 | 77 |
| Niulakita, Tuvalu | September | 339.8 | 65 | 71 |
| Sola, Vanuatu | September | 55.8 | 4 | 51 |
| Bauerfield, Vanuatu | September | 236.7 | 50 | 51 |
| Bauerfield, Vanuatu | July-Sept | 524.3 | 49 | 51 |

[Note: The above data may not have undergone quality control]

November 2023 to January 2024 Outlooks:

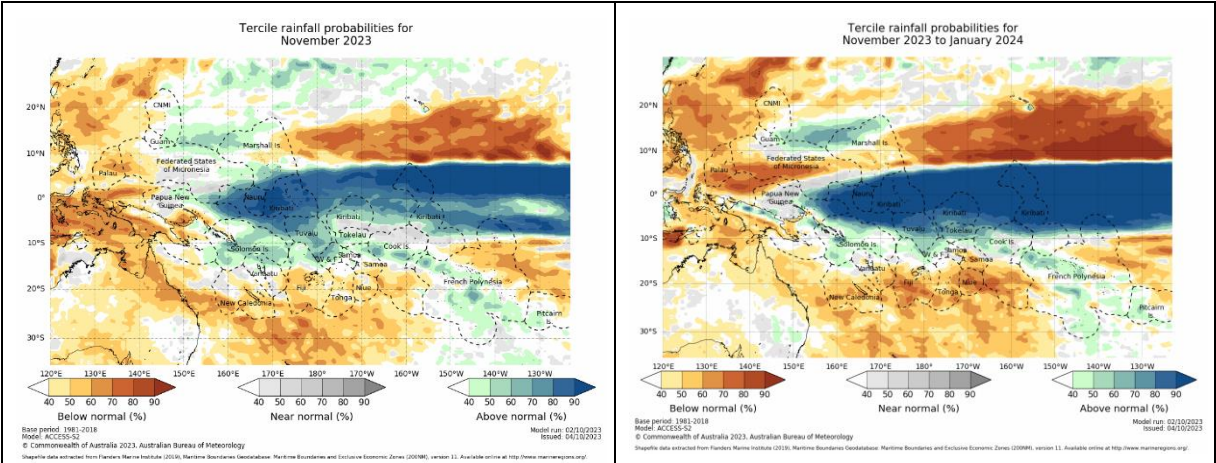
ACCESS-S outlooks:

An El Niño and a positive IOD are underway.

Oceanic indicators firmly exhibit an El Niño state. Central and eastern Pacific sea surface temperatures (SSTs) continue to exceed El Niño thresholds. Models indicate further warming of the central to eastern Pacific is likely.

The three-month ACCESS-S rainfall outlook for **November 2023-January 2024** shows rainfall anomalies consistent with a mature El Niño. A region where above normal is very likely affects equatorial regions stretching from far southern FSM in the west, across Nauru, the southern Marshall Islands, northeast PNG, northern Solomon Islands, Kiribati (Gilbert Is, Phoenix Is and much of the Line Is), Tuvalu, far northern Fiji, northern Wallis and Futuna, Tokelau, northern American Samoa, much of the northern Cook Is, and parts of French Polynesia. Above normal is also very likely in Guam, far northern FSM, plus parts of CNMI and RMI.

Wrapping around the equatorial wet zone are regions where above normal is likely or very likely, affecting all remaining COSPPac countries.



| | 41-50% | 51-60% | 61-70% | 71-80% | 81-90% | >90% |
|--------------|--------|--------|--------|--------|--------|------|
| Below normal | | | | | | |
| Near-normal | | | | | | |
| Above normal | | | | | | |

| November 23 to January 24 | | ACCESS-S | |
|---------------------------|--|----------|--|
| Cook Is North | | | |
| Cook Is South | | | |
| Fiji West | | | |
| Fiji Central | | | |
| Fiji East | | | |
| Fiji North | | | |
| Fiji Rotuma | | | |
| FSM West | | | |
| FSM Central | | | |
| FSM East | | | |
| Kiribati West | | | |
| Kiribati Central | | | |
| Kiribati East | | | |
| RMI North | | | |
| RMI Central | | | |
| RMI South | | | |
| Nauru | | | |
| Niue | | | |
| Palau | | | |
| PNG Momase | | | |
| PNG Is | | | |
| PNG South | | | |
| PNG Highlands | | | |
| Samoa | | | |
| Solomon Is West | | | |
| Solomon Is Central | | | |
| Solomon Is East | | | |
| Tonga North | | | |
| Tonga Central | | | |
| Tonga South | | | |
| Tuvalu North | | | |
| Tuvalu Central | | | |
| Tuvalu South | | | |
| Vanuatu North | | | |
| Vanuatu South | | | |

| ACCESS-S | |
|--------------------|---------------|
| Oct-Dec 2023 | Nov-Jan 23/24 |
| Cook Is North | |
| Cook Is South | |
| Fiji West | |
| Fiji Central | |
| Fiji East | |
| Fiji North | |
| Fiji Rotuma | |
| FSM West | |
| FSM Central | |
| FSM East | |
| Kiribati West | |
| Kiribati Central | |
| Kiribati East | |
| RMI North | |
| RMI Central | |
| RMI South | |
| Nauru | |
| Niue | |
| Palau | |
| PNG Momase | |
| PNG Is | |
| PNG South | |
| PNG Highlands | |
| Samoa | |
| Solomon Is West | |
| Solomon Is Central | |
| Solomon Is East | |
| Tonga North | |
| Tonga Central | |
| Tonga South | |
| Tuvalu North | |
| Tuvalu Central | |
| Tuvalu South | |
| Vanuatu North | |
| Vanuatu South | |

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Other matters Discussed:

- An El Niño and a positive IOD are underway.
- OCOF 194 will be hosted by SPREP via zoom on the 16 November 2023. Samoa to be the chair.
- NMHS were encouraged to document El Niño impacts.

Observed Rainfall

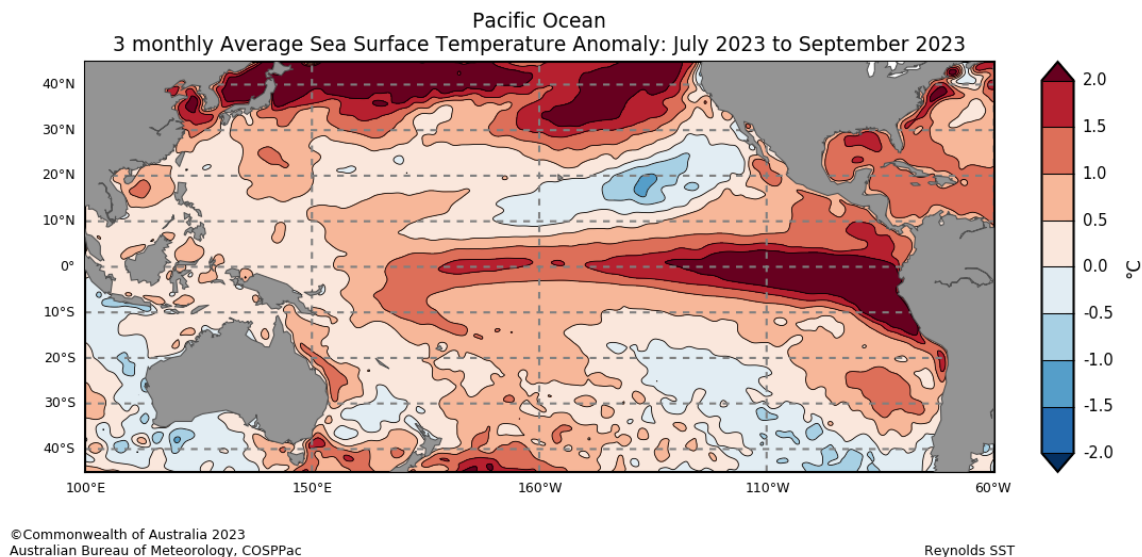
| Country | September 2023 | July to September 2023 |
|------------------|-------------------------------|--------------------------------|
| Cook Islands | Normal | Below normal and normal |
| Fiji | Below normal to above normal | Normal to above normal |
| FSM (Chuuk) | Normal | Above normal |
| FSM (Pohnpei) | Above normal | Above normal |
| Kiribati | Mostly above normal | Mostly above normal |
| RMI | Normal | Below normal |
| Nauru | <i>No report</i> | |
| Niue | Normal | Above normal |
| Palau | Above normal | Above normal |
| Papua New Guinea | Below normal to above normal | Below normal to above normal |
| Samoa | Below normal and normal | Mostly above normal |
| Solomon Islands | Below normal to above normal | Mostly normal and above normal |
| Tonga | Below normal | Below normal to above normal |
| Tuvalu | Below normal and above normal | Below normal to above normal |
| Vanuatu | Mostly above normal | Normal and above normal |

Ocean Conditions

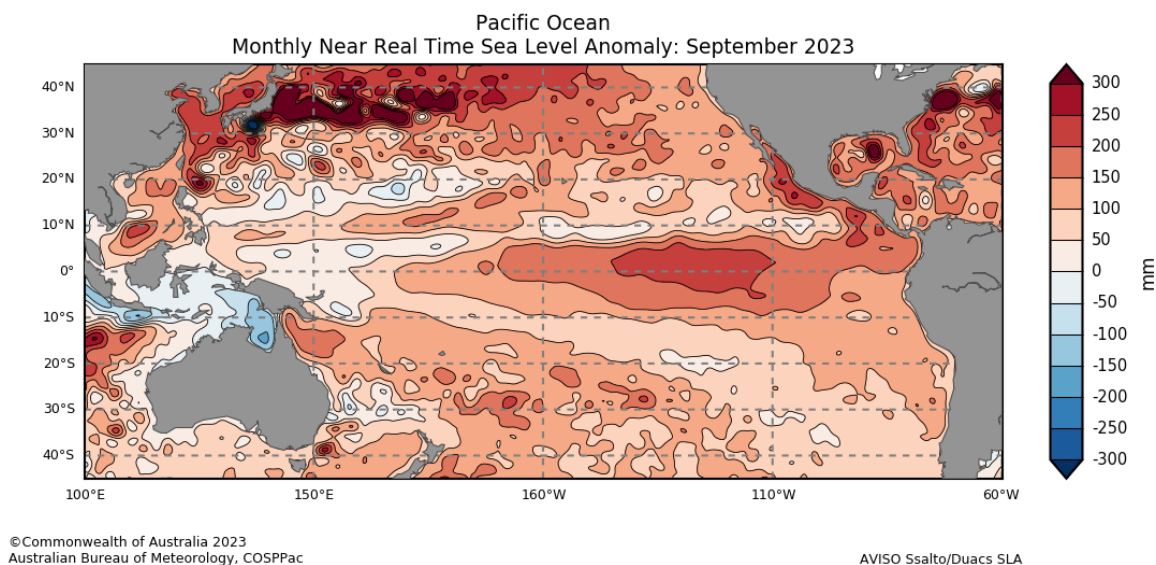
Observations of July to September 2023

Sea surface temperature:

Three-monthly SST anomalies show above normal temperature over most of COSPPac countries, except for near-normal temperatures in parts of FSM, Palau, northern PNG, southern Solomon Islands, Vanuatu, parts of Fiji, and parts of Tonga. Above normal temperatures up to 2.0°C persisted in Kiribati, Nauru, Tuvalu, Samoa, Niue, northeastern Solomon Islands, northern Fiji, northern Tonga, and Cook Islands. Compared with the June to August 2023 SST anomaly pattern, near-equatorial SSTs up to 2.0°C above normal were observed in the central Pacific Ocean.



August sea level was generally 50mm to 200mm above normal over three regions of the Pacific Ocean. The first region is along the 10° North latitude stretching over northern Palau, FSM and RMI. The second region is along the near-equatorial region spanning from Nauru to central Line Islands of Kiribati. The third region spans southeastward from southern PNG to Cook Islands. Anomalies above +150mm were observed in parts of RMI, southern PNG, southern Solomon Islands, central Line Islands of Kiribati, Niue, and southern Cook Islands. Patches of +200mm were also observed in southern Fiji, and southern Tonga. Sea levels close to normal were observed in eastern Palau, southern FSM, southern RMI, northern PNG and northwestern Solomon Islands.

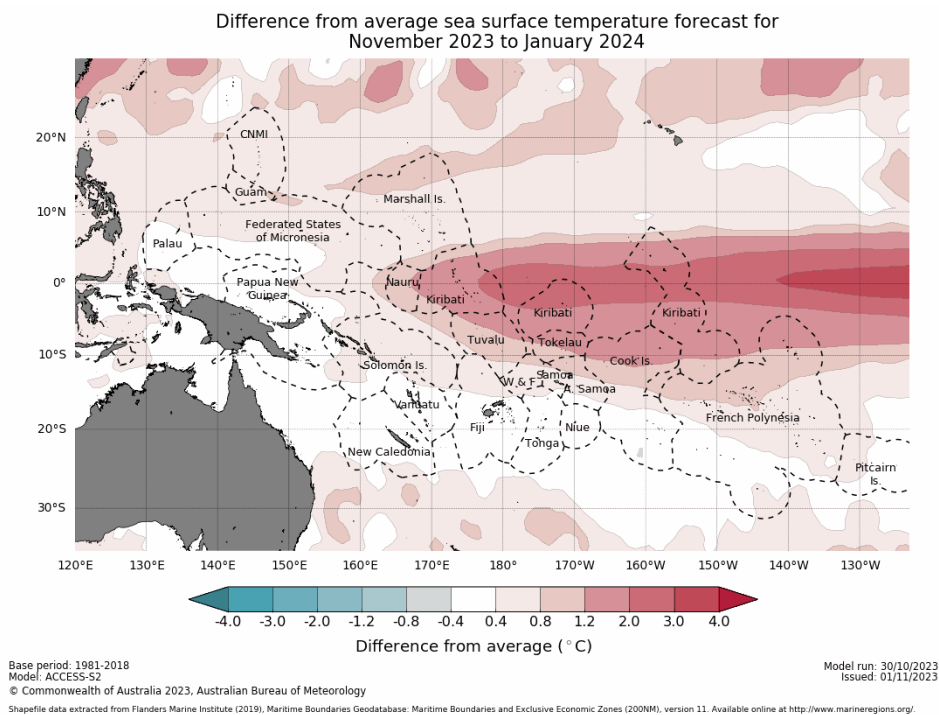


November to January 2023 Outlooks:

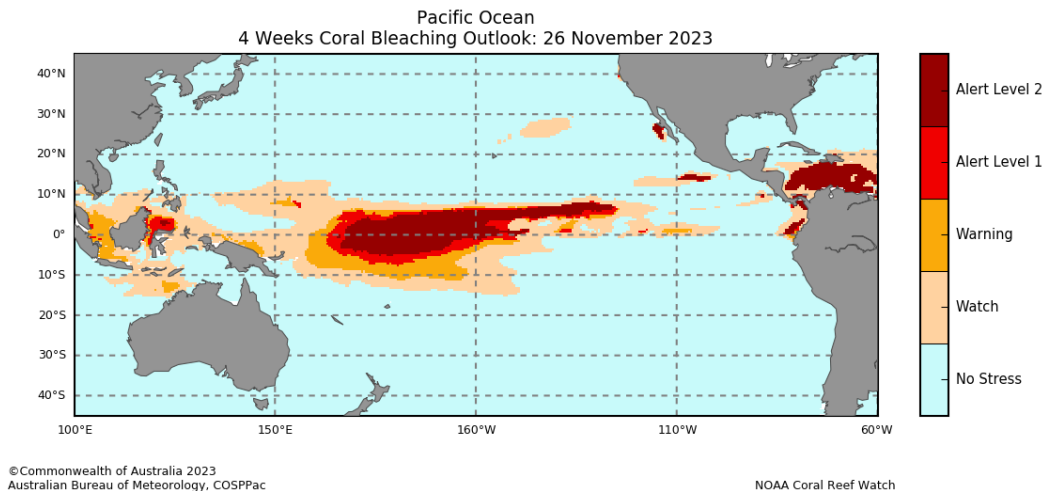
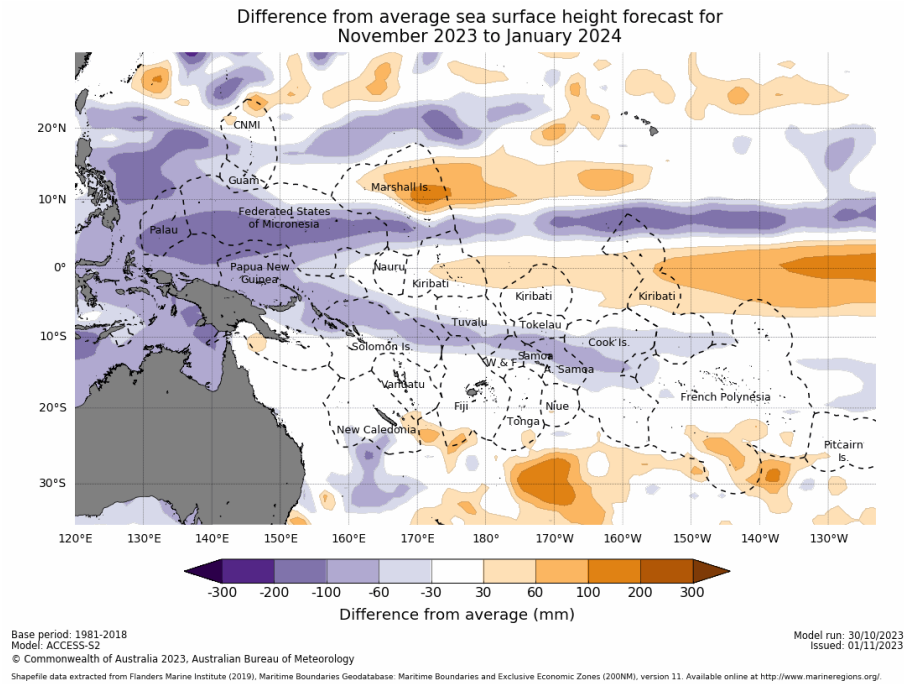
Sea surface temperature outlook: SSTs are forecast to be 0.4 to 3.0 °C affecting countries along the near-equatorial region. Above normal SSTs of 1.2 to 3.0 °C are forecast for Nauru, Kiribati, northern Tuvalu, and northern Cook Islands. Near-normal SSTs are forecast for Palau, southern FSM, PNG, Vanuatu, Fiji, Tonga, Niue, and southern Cook Islands.

Sea level outlook: Sea level is forecast to be 30-100mm above normal for countries along the near-equatorial region, particularly Kiribati. Patches of above normal 30-200mm sea levels are also forecast for northern RMI, southern Vanuatu, southern Fiji and far southern Tonga. Sea levels forecast to be 30 to 200mm below normal in PNG, Palau, FSM, southern RMI, northeastern Solomon, southern Tuvalu, Samoa, northern Cook Islands, and patches in Fiji, and southern Line Islands of Kiribati. Remaining countries are forecast to have near-normal sea levels. Note that this outlook does not include trends of sea level rise.

Coral Bleaching Outlook: For the four weeks outlook to 26 November, "Alert Levels 1 and 2" located in Nauru, southern RMI, northern Tuvalu, parts of central FSM, and Kiribati (Gilbert, northern Phoenix, and northern Line Islands). Broad region of 'Warning' areas surrounding the 'Alert 1 and 2' regions, also forecast for northern PNG, northern Solomon Islands, and northern Cook Islands. 'Watch' status affects FSM, RMI, northern PNG, northern Solomon Islands, northern Fiji, Samoa, and northern Cook Islands. The remaining countries are predicted to experience "no thermal stress".



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Observed Conditions

SST: sea surface temperature anomaly
SLA: sea level anomaly
BN: Below Normal
NN: Near Normal
AN: Above Normal

| Country | September 2023 | |
|---------------|----------------|--------|
| | SST | SLA |
| Cook Islands | AN, NN | AN |
| Fiji | AN | AN |
| FSM (Chuuk) | AN | NN, AN |
| FSM (Pohnpei) | AN | NN |

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|-------------------------|--------|--------|
| Kiribati | AN | AN |
| Marshall Islands | AN | AN, NN |
| Nauru | AN | AN |
| Niue | AN | AN |
| Palau | NN | AN |
| Papua New Guinea | NN | AN, NN |
| Samoa | AN | AN |
| Solomon Islands | NN, AN | AN, NN |
| Tonga | AN, NN | AN |
| Tuvalu | AN | AN, NN |
| Vanuatu | AN, NN | AN |

Country Stakeholder Engagement- Evaluations of how effective countries engage with their stakeholders

| Country | Date September 2023 | Stakeholder | Total Number of Participants | Number of male | Number of female |
|-------------------------------------|---|--|---|---------------------------|---------------------------------|
| Cook Islands – EAR Watch | September | No engagement | | | |
| Fiji - Climate Summary | 07 September | General public | 140 | 106 | 34 |
| Fiji - EAR Watch | 11 September | Humanitarian partners | 122 | 96 | 26 |
| Fiji - Climate Outlook | 29 September | General public | 124 | 93 | 31 |
| Fiji - Climate Outlook for Monasavu | 29 Septmber | Energy Fiji Limited | 13 | 13 | - |
| Fiji - Ocean Outlook | 20 September | A number of key ocean related stakeholders | 36 | 29 | 7 |
| Fiji – ENSO Update | 25 September | General Public | 142 | 116 | 26 |
| Fiji – Sugarcane rainfall outlook | 29 September | Sugarcane Industry stakeholders | 77 | 60 | 17 |
| Fiji - Meteorological data request | 01-30 September | A range of stakeholders | 35 | 33 | 2 |

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|--|--------------|--|-----|----|----|
| FSM (Chuuk) - EAR Watch | 11 September | DCO | 5 | 2 | 3 |
| FSM (Pohnpei) - | 10 September | Pohnpei Municipal, Gov't, Kosrae Municipal Gov't, Pohnpei and Kosrae DCO, Dept. Of Education, Red Cross, Fisheries, Environmental Protection Agency, DECEM, Mayors, Dept. Of Public Safety, Pohnpei Utility Corporation. | 43 | 37 | 6 |
| Kiribati - Climate bulletin | 13 September | Government and Non-Government Organisations and public subscribed to the products. | 158 | 68 | 86 |
| Kiribati - Ocean Bulletin | 13 September | Government and Non-Government Organisations and public subscribed to the products. | 158 | 68 | 86 |
| Kiribati - Media release | 13 September | KMS Media and KMS Staffs | 53 | 23 | 30 |
| Kiribati – EAR Watch | 13 September | Island Council Mayors and clerks, KMS staff | 62 | 35 | 27 |
| Marshall Island – Climate briefing | 20 September | Office of the Chief Secretary and the National Disaster Management Office | 6 | 4 | 2 |
| Nauru | September | No report | | | |
| Niue – Climate bulletin | 25 September | Private Sector, Government Officials, Government staff, Stakeholders | 50 | 25 | 25 |
| Niue – Monthly climate briefing | 27 September | Lakepa Girls and Boys Brigade Ekalesia Niue FCW | 45 | 21 | 24 |
| Palau - Station inspection | 1 September | WSO Palau | 5 | 2 | 3 |
| Palau- EAR Watch | 8 September | WSO Palau and Social Media | 13 | 9 | 4 |
| Palau - Meeting with Airport Minister and Director on AWOS and RADAR | 12 September | ROP and WSO Palau | 4 | 2 | 2 |
| Palau - Virtual meeting with NIWA on AWSs and AWOS | 13 September | ROP and WSO Palau | 2 | 1 | 1 |

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| Palau - Virtual meeting with PacIOOS on Wave Rider Buoy | 14 September | ROP and WSO Palau | 5 | 2 | 3 |
| Palau - Virtual meeting with UNEP Project team | 15 September | ROP and WSO Palau | 9 | 3 | 6 |
| Palau - PEAC | 15 September | Pacific Region | 10 | 8 | 2 |
| Palau-Climate and Ocean bulletin | 19 September | WSO Palau and Social Media | 13 | 9 | 4 |
| Palau-UNDP EDCR final board meeting | 20 September | Palau and WMO Palau | 8 | 4 | 4 |
| Palau-UNEP 4th Steering Committee meeting | 20 September | UNEP team and 5 countries, Palau included | 19 | 9 | 10 |
| Palau-Micronesia Manager meeting | 21 September | NOAA NWS Pacific Region | 17 | 12 | 5 |
| Palau-Meeting with Airport Director on AWOS installation | 22 September | ROP and WSO Palau | 3 | 2 | 1 |
| Palau-ITIC Team updates | 25 September | ROP and WSO Palau | 9 | 5 | 4 |
| Palau - ITIC meeting with NEMO Executive Director | 26 September | ROP and NEMO | 3 | 1 | 2 |
| Palau-ITIC meeting with NEC regarding LIDAR data | 27 September | ROP and NEMO | 28 | 19 | 9 |
| Palau - Marine Rescue Operations (MRO) & Airport Full- | 28 September | Palau, NEC and supporting first responders | 39 | 21 | 18 |

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| Scale planning | Exercise | | | | | |
| Palau - PMC Meeting on Weather Ready Pacific | Council | 29 September | PMC participants | 28 | | |
| PNG | | September | No report | | | |
| Samoa - EAR Watch | | 28 September | RED Cross, Water Authority (SWA), Media, Health, Works & Infrastructure, Land & Transport Authority, Agriculture & Fisheries, Fire Services, Ministry of Women, National University of Samoa, Tourism, Foreign Affairs, Communication and Information Technology, Disaster Managers, Marines | 65 | 27 | 38 |
| Samoa – Seasonal Rainfall Outlook | | 28 September | RED Cross, Water Authority (SWA), Media, Health, Works & Infrastructure, Land & Transport Authority, Agriculture & Fisheries, Fire Services, Ministry of Women, National University of Samoa, Tourism, Foreign Affairs, Communication and Information Technology, Disaster Managers, Marines | 65 | 27 | 38 |
| Solomon Islands – Climate bulletin | | September | Red Cross, NDMO, Ministry of Agriculture, SIBC, Hydrology, Solomon star, Paoa FM, World Vision, Glodridge Mining, Ministry of Mines and Energy, MEHRD, Forestry, Ministry of Health, Solomon Water, MECDM, Live and Learn, Tourism, Maritime Service, People with Disability, MID, Ministry of Fisheries, Sol Tuna Ltd, UN Women, Council of Women, Community Representatives | 58 | 46 | 12 |
| Solomon Islands – EAR Watch | | September | Red Cross, NDMO, Ministry of Agriculture, SIBC, Hydrology, Solomon star, Paoa FM, World Vision, Glodridge Mining, Ministry of Mines and Energy, MEHRD, Forestry, Ministry of Health, Solomon Water, MECDM, Live and Learn, Tourism, Maritime Service, People with Disability, MID, Ministry of Fisheries, UN Women, Council of Women. | 53 | 39 | 14 |
| Solomon Islands - Ocean Bulletin | | September | Red Cross, NDMO, Ministry of Agriculture, SIBC, Hydrology, Solomon star, Paoa FM, World Vision, Glodridge Mining, Ministry of Mines and Energy, MEHRD. | 14 | 9 | 5 |
| Tonga – Climate Bulletin | | 3 September | Government ministries, NGOs, Media Private Sector | 155 | 118 | 37 |

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|---|--------------|---|----------------|--------------|------------|
| Tonga – Ocean Outlook | 3 September | Government ministries. NGOs, Media, Private Sector | 155 | 118 | 37 |
| Tuvalu – Climate Bulletin | September | MET Staff Disaster Dept TRC TuCAN Agriculture All Civil Servants All Kaupule Secretary | 44 | 23 | 21 |
| Tuvalu – EAR Watch | September | MET Staff Disaster Dept TRC TuCAN Agriculture All Civil Servants All Kaupule Secretary | 44 | 23 | 21 |
| Tuvalu – Ocean Outlook | September | MET Staff Disaster Dept TRC TuCAN Agriculture All Civil Servants All Kaupule Secretary | 44 | 23 | 21 |
| Vanuatu - Radio Talk-back Show on El Nino Alert | 13 September | Radio Vanuatu VMGD | 3 | 1 | 2 |
| Vanuatu - El Nino Stakeholder Briefing | 22 September | VMGD, Van-KIRAP, NDMO, Save the Children, Oxfam, VBTC, Department of Forestry, Department of Agriculture, National University of Vanuatu, Vanuatu Daily Post, Radio New Zealand, General Public | 41 | 25 | 16 |
| Vanuatu - El Nino Media Release in 3 Official Languages | 23 September | Vanuatu Daily Post | General public | | |
| Vanuatu - El Nino update through Radio NZ Pacific | 27 September | Radio NZ Pacific | General public | | |
| Total | | | 2,197 | 1,417 | 772 |

Note: The stakeholder data above may not total up due to lack of data from NMS or no participation