

Pacific Islands - Ocean and Climate Outlook Forum (OCOF) No. 182

Country: Papua New Guinea

Part 1: Recent climate

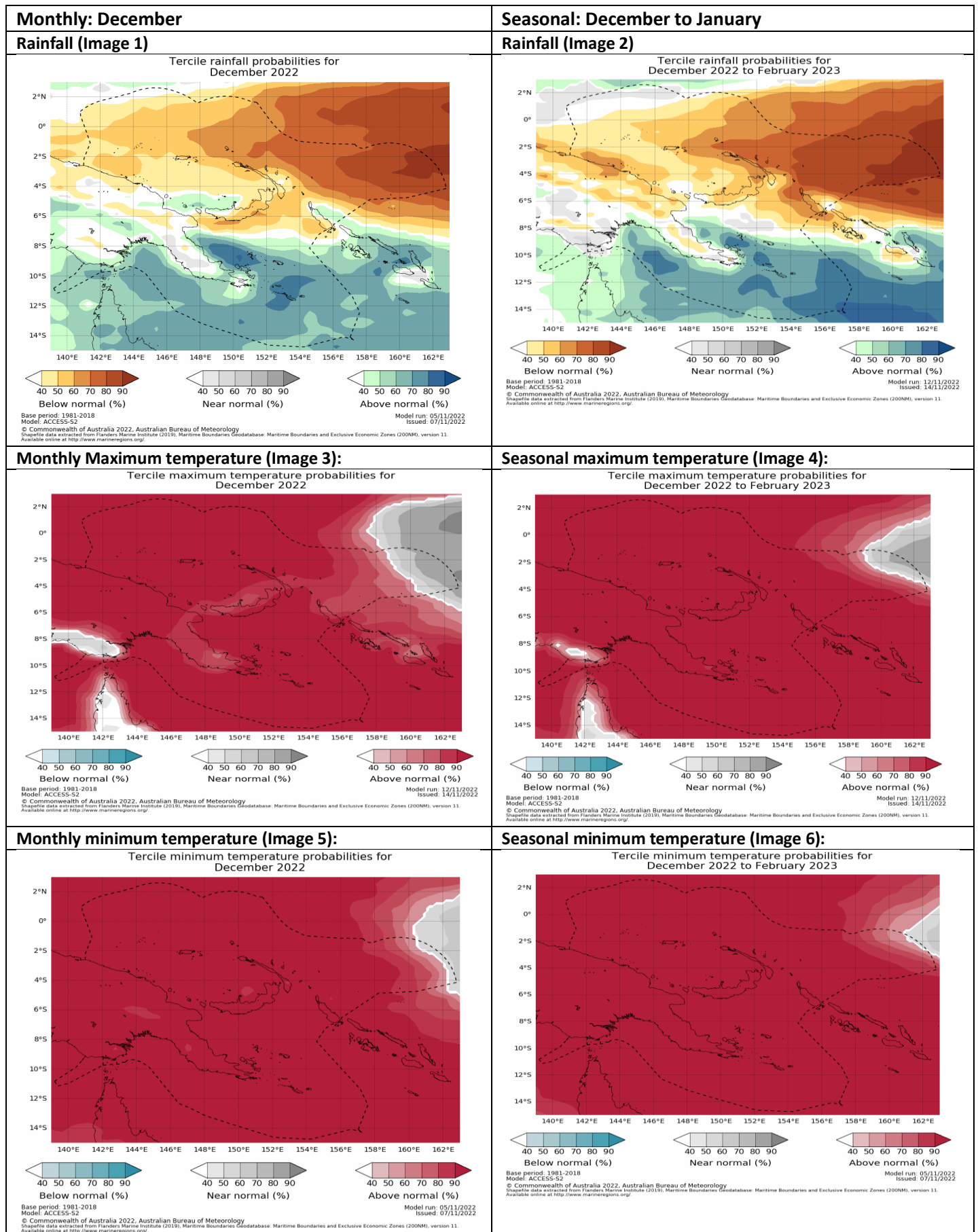
TABLE 1: Monthly Rainfall

Station (include data period)	Aug-2022	Sep-2022	Oct-2022				
			Total (mm)	33%tile	67%tile	Median	Rank
	Total (mm)	Total (mm)	Rainfall (mm)				
Momase Region							
Madang (1944-2022)							
Nadzab (1973-2022)	75.0	40.2					
Wewak (1956-2022)	287.2	245.4	89.0	191.5	265.6	223.5	2/66
Vanimo (1918-2022)	81.6	81.6	237.0	152.9	227.5	186.2	47/64
Highlands Region							
Goroka (1948-2022)		33.6	23.8	115.0	176.8	155.0	3/58
New Guinea Islands Region							
Momote (1949-2022)	136.6	125.2	60.8	181.3	266.0	227.7	2/74
Kavieng (1916-2022)	76.6	20.6	33.0	179.0	285.3	224.9	4/95
Southern Region							
Misima (1917-2022)							
Port Moresby (1875-2022)	48.4	91.8	23.8	12.0	40.0	25.0	66/125

TABLE 2: Three-month Total Rainfall for August to October 2022

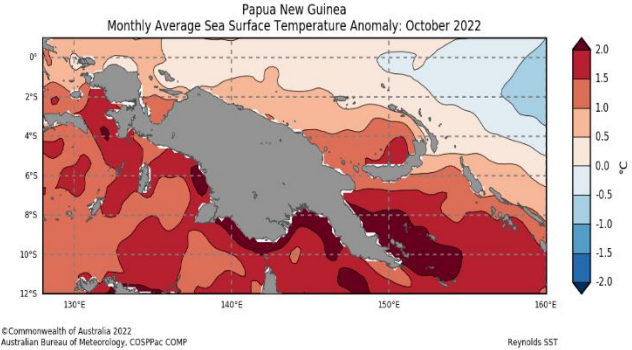
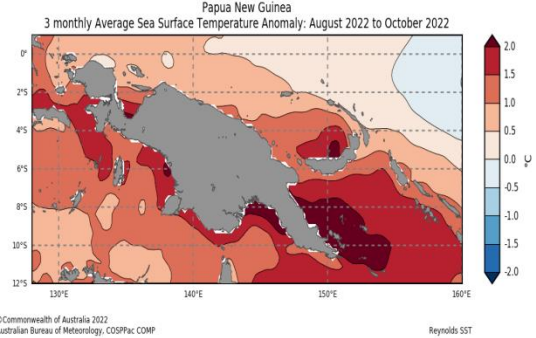
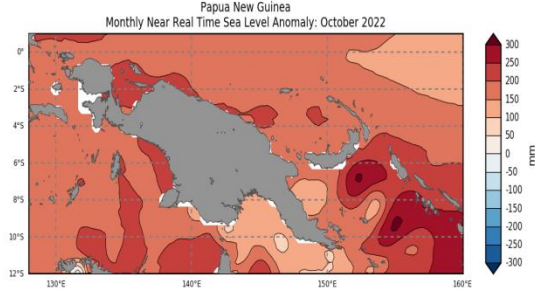
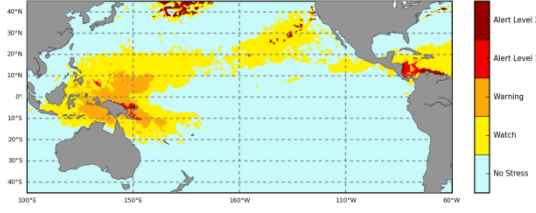
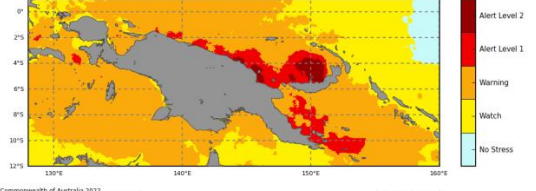
Station	Three-month Total		33%tile	67%tile	Median	Rank
	Rainfall (mm)					
Momase Region						
Madang (1944-2022)						
Nadzab (1973-2022)						
Wewak (1894-2022)	621.6	Normal	500.1	655.0	571.9	38/65
Vanimo (1918-2022)	400.2	Below normal	492.0	572.4	527.8	12/61
Highlands Region						
Goroka (1948-2022)			272.3	388.7	343.8	
New Guinea Islands Region						
Momote (1949-2022)	322.6	Below normal	649.7	896.5	762.5	4/73
Kavieng (1917-2022)	130.2	Below normal	523.3	720.1	639.0	3/89
Southern Region						
Misima (1917-2022)						
Port Moresby (1875-2022)	164.0	Above normal	61.0	113.2	81.4	101/110

Part 1i. Monthly and Seasonal Outlooks for December 2022 and December 2022 to February 2023



Part 2: Recent Ocean Observation

Monthly/Three months: October 2022 and August to October 2022

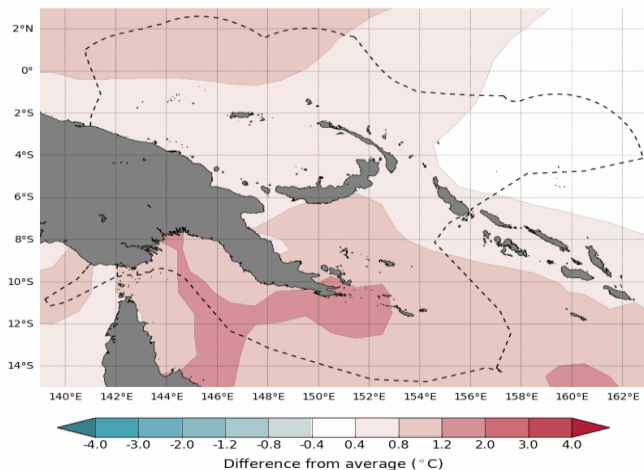
Monthly: October	Last three months: August to October 2022:
<p>Sea Surface Temperature (Image 1):</p>  <p>©Commonwealth of Australia 2022 Australian Bureau of Meteorology, COSPPac COMP</p> <p>Reynolds SST</p>	<p>Sea Surface Temperature (Image 4):</p>  <p>©Commonwealth of Australia 2022 Australian Bureau of Meteorology, COSPPac COMP</p> <p>Reynolds SST</p>
<p>Sea level (Image 2):</p>  <p>©Commonwealth of Australia 2022 Australian Bureau of Meteorology, COSPPac COMP</p> <p>AVISO SeaWiFS SLA</p>	
<p>Daily coral bleaching alert (Image 3):</p>  <p>©Commonwealth of Australia 2022 Australian Bureau of Meteorology, COSPPac COMP</p> <p>NOAA Coral Reef Watch</p>	 <p>©Commonwealth of Australia 2022 Australian Bureau of Meteorology, COSPPac COMP</p> <p>NOAA Coral Reef Watch</p>

Part 2i. Monthly and Seasonal Outlooks for December 2022 and December 2022 to February 2023

Monthly: December

Monthly sea surface temperature (Image 5):

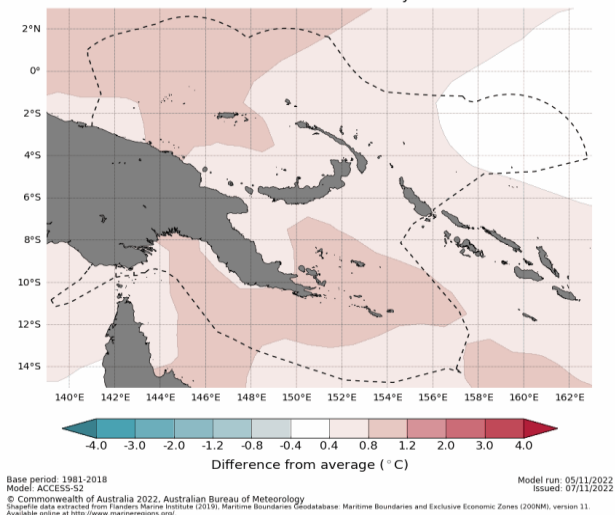
Difference from average sea surface temperature forecast for December 2022



Seasonal: December to February

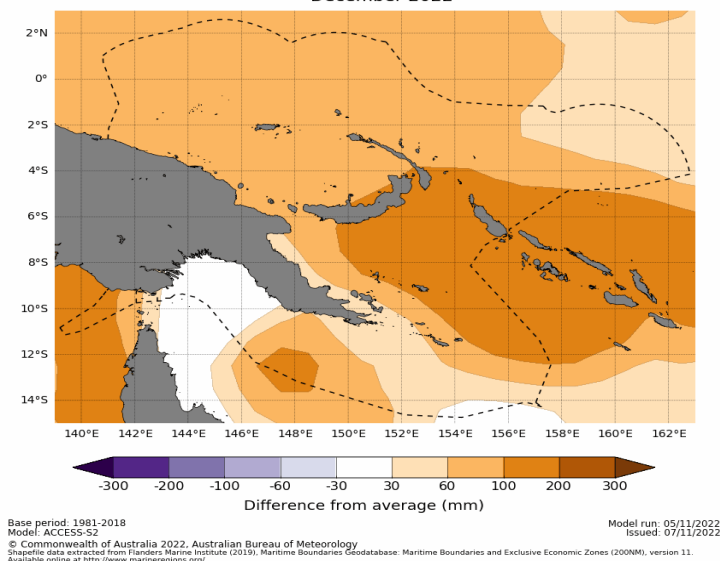
Seasonal sea surface temperature (Image 6):

Difference from average sea surface temperature forecast for December 2022 to February 2023



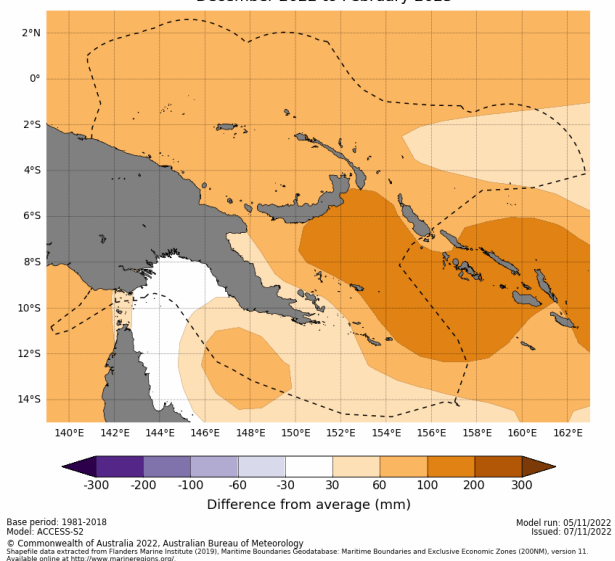
Monthly sea level (Image 7):

Difference from average sea surface height forecast for December 2022



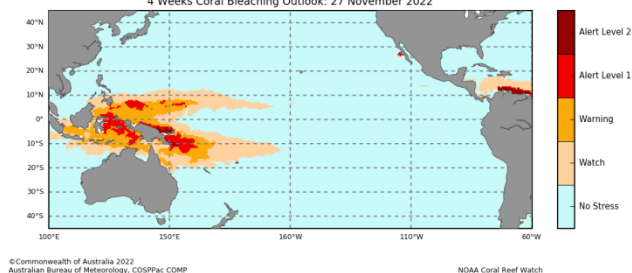
Seasonal sea level (Image 8):

Difference from average sea surface height forecast for December 2022 to February 2023

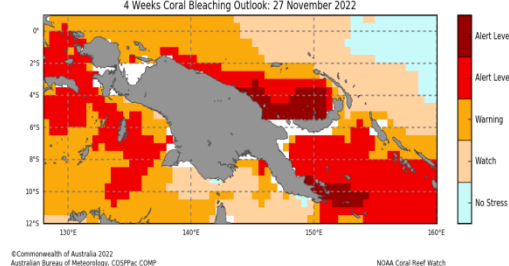


4-week Coral Bleaching (Image 9):

Pacific Ocean
4 Weeks Coral Bleaching Outlook: 27 November 2022



Papua New Guinea
4 Weeks Coral Bleaching Outlook: 27 November 2022



Summary Statement

Monthly and last three months: October 2022/August to October 2022 statement

Rainfall in October was normal at Port Moresby, above normal at Vanimo and below normal at all other monitoring stations.

Wewak and Momote recorded their second driest October on record, whilst Goroka reported its third driest and Kavieng its fourth driest October on record, respectively.

Data was not available for Nadzab, Madang, and Misima.

Rainfall over the last three months was normal at Wewak, above normal at Port Moresby, and below normal at Vanimo, Momote and Kavieng.

Momote and Kavieng had their third and fourth driest August to October rainfall on record, respectively.

Three-month totals were not available for Madang, Nadzab, Goroka and Misima.

Part 1i. Monthly and Seasonal Outlooks for December 2022 and December 2022 to February 2023

Monthly /Seasonal rainfall and temperature Outlook statements

December rainfall is likely to be near-normal to above normal over the Southern region, Hela, and Western Highlands Provinces, and near-normal to below normal over the Momase and New Guinea Islands Regions, plus the rest of Highlands Provinces.

Rainfall for December to February is likely to be below normal over the Momase and New Guinea Islands Regions. In contrast, the Milne Bay Province is likely to receive above normal rainfall in the next three months. For the Highlands and remaining Southern regions, the outlook offers little guidance.

Maximum and minimum temperatures during December are likely to be above normal across PNG, except for the southern parts of Western province where temperatures are likely to be near-normal.

Maximum and minimum temperatures averaged over December to February are likely to be above normal over PNG.

Part 2: Recent Ocean summary statement

Monthly and last three months: October/August to October 2022

October ocean temperatures around Papua New Guinea were mainly 0.5 to 2°C above normal. Areas around the southern and southeast coasts recorded ocean temperatures more than 2.0°C above the long-term average.

Averaged over August to October, ocean temperatures around Papua New Guinea showed a pattern very similar to that of October.

October sea levels around PNG were 50mm to 200mm above normal.

PNG has an alert level 1 to 2 coral bleaching status for northern waters of East Sepik, West Sepik, Madang and West New Britain whilst an alert level one for waters around Northern and Milne Bay Provinces.

Part 2i. Monthly and Seasonal Outlooks for December 2022 and December 2022 to February 2023

Ocean Variable statement

December ocean temperatures around PNG are predicted to be mainly 0.4 to 1.2°C above normal. In some areas off the southern coast, temperatures are predicted to be 1.2 to 2.0°C above normal.

Averaged over December to February, ocean temperatures around PNG are predicted to be 0.4 to 1.2°C above normal.

December and December to February sea levels around PNG are predicted to be mostly 30 mm to 200 mm above normal. One exception is the Gulf of Papua where sea levels are predicted to be within 30 mm of normal.

The outlook for coral bleaching for PNG shows an alert level one for coastal water of East Sepik, West Sepik, and Northern provinces, whilst an alert level two is in place for coastal waters of Madang, Milne Bay and West New Britain provinces.

TABLE 3: Stakeholder Engagement- Evaluations of how effective NMS engage with stakeholders

Product	Date: October 2022	Stakeholder	Total Number of Participants	Number of male	Number of female
Seasonal Climate Update	9 th	Govt: National Disaster Centre, Dept. of Agriculture and Livestock, Climate Change Development Authority, National Agriculture Research Institute, Dept. of Transport, Dept. Of Mineral Policy and Geohazard Management, Dept. of Works, PNG Fire, National Maritime Safety Authority, Civil Aviation Safety Authority, PNG Forest Authority, National Capital District Commission, PNG Customs Authority, National Dept. Of Health, Dept. of Education, Centre for Environmental Protection Authority, Water PNG. UN agencies: UNDP, IOM, UNOCH. Private: PNG Air Services Limited, ExxonMobil, Ok Tedi Mining Ltd, PNG Power Ltd, Global Construction Ltd, Datec, Interoil, Air	171	130	41

		Niugini, Bank South Pacific, Kina Bank, SMEC, PNG Ports, Media and Universities.			
National Oceans Workshop	17th - 21st	PNGNWS, BoM, SPC, SPREP, CBOs, Provincial Administration Offices, NGOs, DFAT, CEPA, UPNG, Maritime Transport Sector, Dept of Mineral Policy and Geohazards Management, Maritime Safety Authority, Department of Justice-Oceans Division, Media	65	39	26
Drought Early Warning System	26th	Govt: National Disaster Centre, Dept. of Agriculture and Livestock, Climate Change Development Authority, National Agriculture Research Institute, Dept. of Transport, Dept. Of Mineral Policy and Geohazard Management, Dept. of Works, PNG Fire, National Maritime Safety Authority, Civil Aviation Safety Authority, PNG Forest Authority, National Capital District Commission, PNG Customs Authority, National Dept. Of Health, Dept. of Education, Centre for Environmental Protection Authority, Water PNG. UN agencies: UNDP, IOM, UNOCH. Private: PNG Air Services Limited, ExxonMobil, Ok Tedi Mining Ltd, PNG Power Ltd, Global Construction Ltd, Datec, Interoil, Air Niugini, Bank South Pacific, Kina Bank, SMEC, PNG Ports, Media and Universities.	120	75	45
NCOF	27th	National Disaster Centre, PNG Red Cross, DRM Alliance,	12	7	5

		World Vision, PNGNWS, Dept of Mineral Policy & Geohazards Mgnt.			
Total			368	251	117