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SAMOA NATIONAL STATEMENT ON TROPICAL CYCLONE (TC) & CLIMATE SEASONAL OUTLOOK 2020/21

Media Release: Samoa is likely to have 0 - 1 Named Tropical Cyclone this season

Key Messages

- 0 1 Tropical Cyclone (TC) is likely to pass the 400km radius of Samoa with possibility that it may reach Category 3 status or greater. The cyclone risk for Samoa this season compared to all tropical cyclone season is 'normal'.
- La Nina phase of El Nino Southern Oscillation (ENSO) is well established in the Pacific since October with anticipation to continue at least early 2021 after a peak during December 2020.
- Above average rainfall is most likely for Samoa in the upcoming season.

Tropical Cyclone Outlook for 2020 – 2021

The TC activity risk for Samoan region is 'normal' with 0-1 named TC count that can pass within 400km radius of the country, with at least 1 TC to reach Category 3 or greater. The TC season of Samoa extends from November to April, with the peak TC activity normally experienced from January to March. This upcoming cyclone season is expected to emulate past cyclone seasons that are similar background climate conditions to the present (2020/2021). Six identical cyclone seasons (analogue cyclone seasons) have been identified; and this outlook is based on statistical analysis of these analogue seasons. The analogue seasons include cyclones season 1970/71; 1984/85; 1995/96; 2007/08; 2016/17; 2017/18. Additionally, TCs have occasionally occurred off season as in outside of the normal TC season; November to April period. The analogue seasons also have out of season TCs, thus out of season TCs are also possible this season.

	Table 1: Severity of TCs in analog sea	asons
(1970-1971,	1984-1985, 1995-1996, 2007-2008, 2016	6-2017, 2017-2018)

	Number of TC		Regional TC Category				
Season	Region	Samoa	Cat 1	Cat 2	Cat 3	Cat 4	Cat 5
1970/1971	5	None	3	2	-	-	-
1984/1985	9	1 - Drena	2	2	4	1	-
1995/1996	4	None	3	-	-	1	-
2007/2008	4	1 - Daman	-	1	1	2	-
2016/2017	2	1 – Ella (Off season)	1	1	1	-	-
2017/2018	6	1 - Gita	2	. 1	2	1	-
Total	5	4	11	7	8	5	
Average (rounded up)	5	1	2	1	1	1	-

CLIMATE & OCEAN OUTLOOK FOR NOVEMBER 2020 TO APRIL 2021

El Nino Southern Oscillation (ENSO) has transitioned from Neutral state into its cold phase, **La Nina** in early October 2020. At present, the sea surface temperatures across the central equatorial region and eastern region are cooler (negative) than normal while a warm (positive) pool of water developed in the western region (to the north of Papua New Guinea). All surveyed climate models suggest ocean temperatures will remain at La Niña levels until early 2021. The Southern Oscillation Index (SOI); the atmospheric indicator has been consistently positive since July 2020 which shows a pattern of the established La Nina phenomenon.

The La Nina is expected to remain throughout at least early 2021 after it peaks during December 2020. The strength of the event is anticipated to become strong with similar conditions to the 2010-11 event. La Nina normally provides more rainfall than usual for Samoa. In light of this, wetter than normal conditions are expected for the island as it transition into the Wet Season coupled by the La Nina. Therefore, 'above average' rainfall is favored for Samoa in the coming season.

Potential Impacts

The tropical cyclones are associated with torrential rainfall, flash flooding, flooding of low lying areas, coastal flooding, storm surges, water spouts and strong to damaging winds. Additionally, there is a high possibility for potential landslides and river flashing this coming wet season especially when a tropical cyclone follows a prolonged period of wetter than normal conditions.

These events can cause a great deal of damage to property and lives. Samoa Meteorology Division will continue to closely monitor the change in the climate system and advise accordingly.

All communities are urged to remain vigilant, be alert and prepared throughout the 2020-21 TC season and take heed to TC alerts, warnings and advisories whenever it is issued to reduce the loss of life and damage to property.

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