# MEMBER REPORT CAMBODIA

ESCAP/WMO Typhoon Committee 14<sup>th</sup> Integrated Workshop Guam, USA 4-7 November 2019

# CONTENTS

# I. Overview of tropical cyclones which have affected/impacted Member's area since the last Committee Session

- Meteorological Assessment (highlighting forecastingissues/impacts).

**II. Summary of Progress in Priorities supporting Key Result Areas** 

## I. Overview of tropical cyclones which have affected/impacted Member's area since the last Committee Session

## - Meteorological Assessment (highlighting forecasting issues/impacts)

## **General Weather Situation :**

This year, El Niño phenomenon affected the Country; the southwest monsoon is delayed until the 3<sup>rd</sup> week of May. The temperature is higher than normal (Fig.1). The highest temperature from March to May for Coastal Area is 38°C; 40°C in Low Lying area, and 41°C in Plateau (Fig.2).

## Fig.1 The Difference Temperature in 2019 for Phnom Penh







## **Rainfall Situation**

The rainfall intensity from January to May is below normal according to el nino effected ; and near normal from May to September. Dry spell occurred in the third week of July for 7 days. In the in the first period of the year (January to April); almost provinces received less rainfall and severely dry occurred in low lying area and Coastal Area and near normal in Plateau area. From May to September the rainfall situation was becoming normal over the county; and extremely wet

found in coastal area and Plateau area from August to September (See SPI in Table 1).

## Flash Flood:

In the early August the monsoon trough lied across the upper part of Thailand Laos and Vietnam toward to the low pressure cell in upper South China Sea associated with the active southwest monsoon prevailed over the Gulf of Thailand lead to continuously rainfall over coastal area associated the torrential rain at midnight 08 August for 272 mm per 6 hours caused severe flash flood in Sihanouk ville (Kampong som province) (Fig. 3, 4, 5).

## Table 1. SPI in 2019

Standard Precipitation Deviation Index in 2019

Phnom Penh (Low lying Area)				
Year	Month	OBS	SPI	Categry
2019	JFM	35.1	-1.54	Severely dry
2019	FMA	105.9	-1.25	moderately dry
2019	MAM	260.6	-0.62	near normal
2019	AMJ	363.1	-0.20	near normal
2019	MJJ	399.2	-0.05	near normal
2019	JJA	360.1	-0.21	near normal
2019	JAS	497.5	0.35	near normal

## Standard Precipitation Deviation Index in 2019

#### Stung Treng Province (Plateau Area)

Year	Month	OBS	SPI	Categry
2019	JFM	37.0	-0.98	Near normal
2019	FMA	61.0	-0.95	Near normal
2019	MAM	321.6	-0.55	Near normal
2019	AMJ	336.1	-0.52	Near normal
2019	MJJ	769.6	0.15	Near normal
2019	JJA	930.0	0.39	Near normal
2019	JAS	2035.7	2.10	Extremely Wet

Standard Precipitation Deviation Index in 2019					
BATTAMBANG PROVINCE (Low lying Area)					
Year	Month	OBS	SPI	Categry	
2019	JFM	29.9	-1.69	Severely dry	
2019	FMA	122.3	-1.24	Moderately dry	
2019	MAM	266	-0.53	Near normal	
2019	AMJ	294.4	-0.39	Near normal	
2019	MJJ	378.1	0.02	Near normal	
2019	JJA	370.5	-0.02	Near normal	
2019	JAS	504.6	0.64	Near normal	

#### Standard Precipitation Deviation Index in 2019

#### Kampot Province (Coastal Area)

Year	Month	OBS	SPI	Categry
2019	JFM	143.8	-1.22	Moderately dry
2019	FMA	301.8	-0.74	Near normal
2019	MAM	388.8	-0.47	Near normal
2019	AMJ	509.3	-0.11	Near normal
2019	MJJ	496.6	-0.14	Near normal
2019	JJA	1120.1	1.76	Very wet
2019	JAS	1270.1	2.22	Extremely wet

## Fig. 3 24h rainfall detected by radar



## Fig.4 Rainfall Distribution in August 2019 for Sihanouk Ville





Fig.5 Flash Flood in Sihanouk Ville in 08 August 2019

## **Tropical Cyclone impacted:**

In 2019, there is one cyclone affected Cambodia. Tropical Storm MATMO (1922) category 3 after made land fall Vietnam at 21 UCT (4:00 am local time) with maximum sustained wind of 60 km/h. It was moving west at a speed of 30 km/h to Cambodia at 10:00 am (Local time) of 31 October and down grade to the tropical depression category 2 with maximum speed 30 km/h over Northeast part of Cambodia. There is no significant heavy rainfall and also no damages caused by this Storm (Fig.6, 7, 8).

Fig. 6 TS MATMO (1922) Satellite analysis by JMA

#### Fig. 7 Accumulative 24h on 31 October 2019



#### Accumulative Rainfall 0n 31 October 2019



Fig.8 Tropical storm MATMO announcement by Ministry of Water Resources and Meteorology



# **II. Summary of Progress in Priorities supporting Key Result Areas**

1- Follow up the project on "Strengthening Climate information and Early Warning System" (2015-2020). With support from UNDP and funding from the GEF-Least Developed Countries Fund. This project is supporting the Ministry of Water Resources and Meteorology to increase Cambodia's institutional capacity to assimilate and forecast weather, hydrological and climate information, and to improve communities' access to reliable information and early warning systems.

Under the project, 24 automatic weather stations and 29 hydrological stations for surface and ground water have been installed across the country, integrating technology and placing communities at the heart of a people-centered early warning system.

Information from the stations will be key to generating early warning messages, both for planning and for disaster preparedness and emergency response.

2- Start to Carry out project on "Installation of the Automatic Weather System (AWS) in Cambodia" (2019-2022). With support from Korea Meteorological Administration and funding from Korean Government Fund.

Under project, installing 25 weather stations in the eastern part of country to generating early warning messages and for disaster preparedness and emergency response.

## **Contact Information:**

Member: CAMBODIA Name of contact for this item: Peou Phalla Telephone: +855- 23-213490 Email: departmentmeteorology@gmail.com

Thank you!