

# **MEMBER REPORT**

ESCAP/WMO Typhoon Committee  
8<sup>th</sup> Integrated Workshop/2<sup>nd</sup> TRCG Forum

**(CAMBODIA)**

Macao, China  
2 - 6 December 2013

# **CONTENTS**

- I. Overview of tropical cyclones which have affected/impacted Member's area since the last Typhoon Committee Session**
- II. Summary of progress in Key Result Areas**

## I-Overview of tropical cyclones which have affected/impacted Member's area in 2013 (Free format)

### 1. Meteorological Assessment (highlighting forecasting issues/impacts)

Cambodia is a country located in the southern portion of the Indochina Peninsula in Southeast Asia and be dominated by Monsoon.

Since Jan September until October 2013, there is no Tropical Cyclone impacted directly to the country. However, the influence of some Tropical Cyclones that goes strike into the South China Sea such Typhoon WUTIP and Typhoon Nari have increased the intensity of southwest monsoon wind blow over the country while the ITCZ prevail over Indo China Peninsula and over the country, it was caused to rain continuously from 5 or 7 days and bring much more rainfall almost part of the country during 2 months from September to October 2013 (See Chart1).

From 06-07 November 2013, Tropical Depression 30W crosses into the South of Cambodia at 06 and 07 November with its speed from 10-15 Knots move westward and gust from 15-25 Knots. During two days under the influence of TD30W, the heavy rainfall associate with gust occurred in the central and south part of the country (See Fig.1 Accumulative Rainfall 24 Hours and Fig.2 the reflective cloud where the most severe weather from Radar). Response to this event Ministry of Water Resources and Meteorology has provided the early warning through Weather Announcement to the public for 5 days before the event occurred in order to keep the safe life of the people, and the Department of Meteorology keep the update of general weather situation and warning on its website, and the special TV channels BAYON and CNC also provided the weather information updated through this website.

**Chart1: Accumulative Rainfall from September-October**

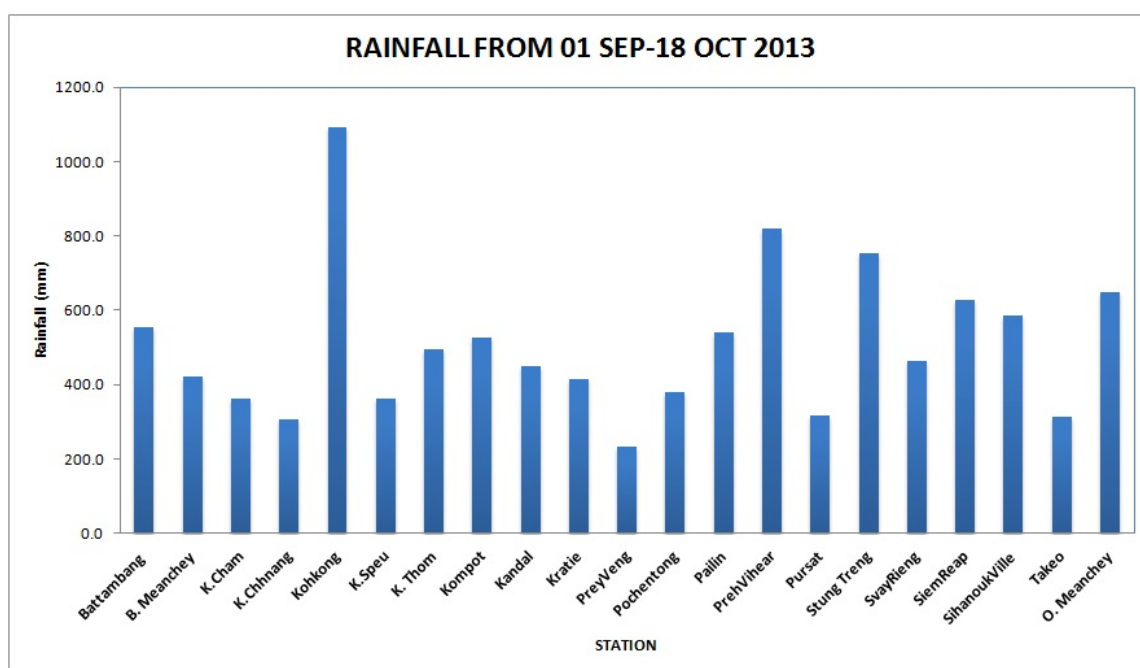


Fig.1. Accumulative Rainfall 24 Hours

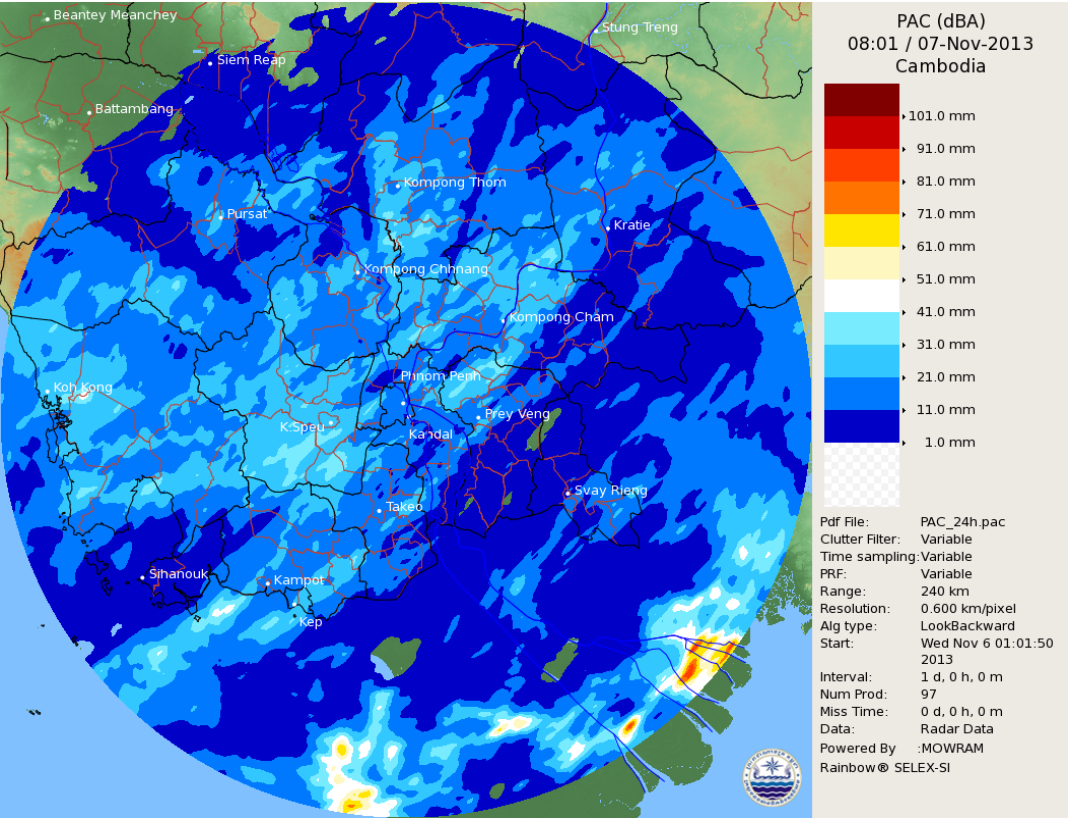
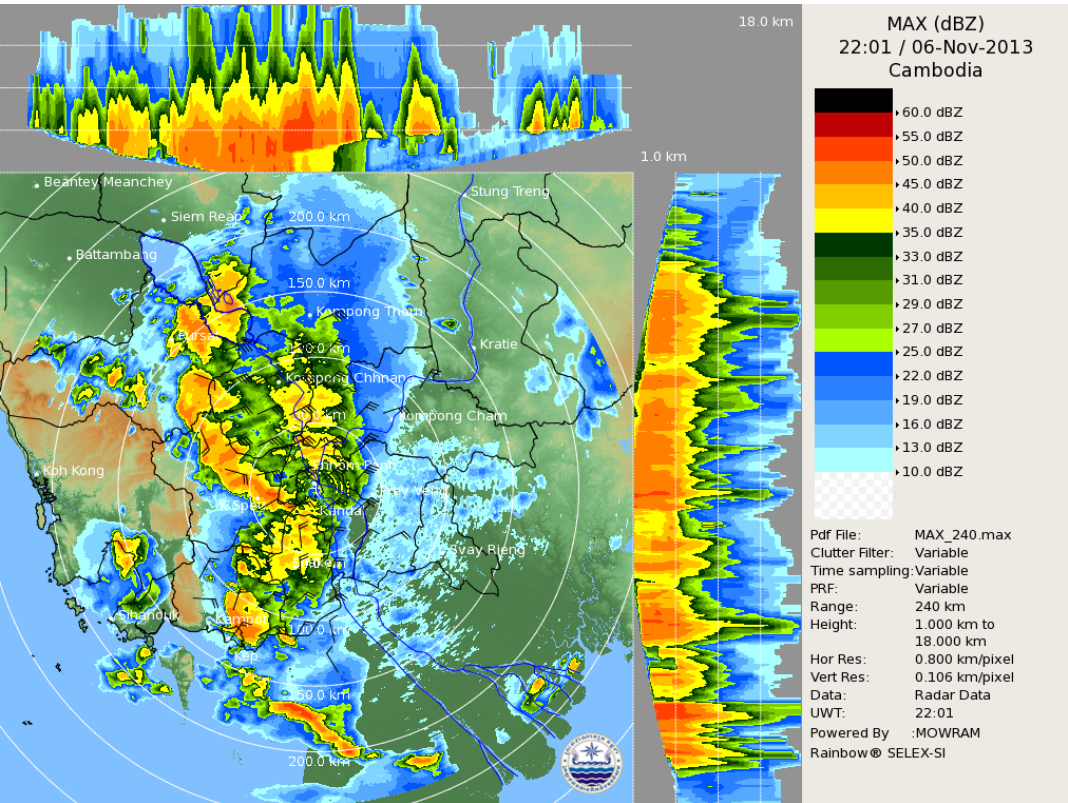


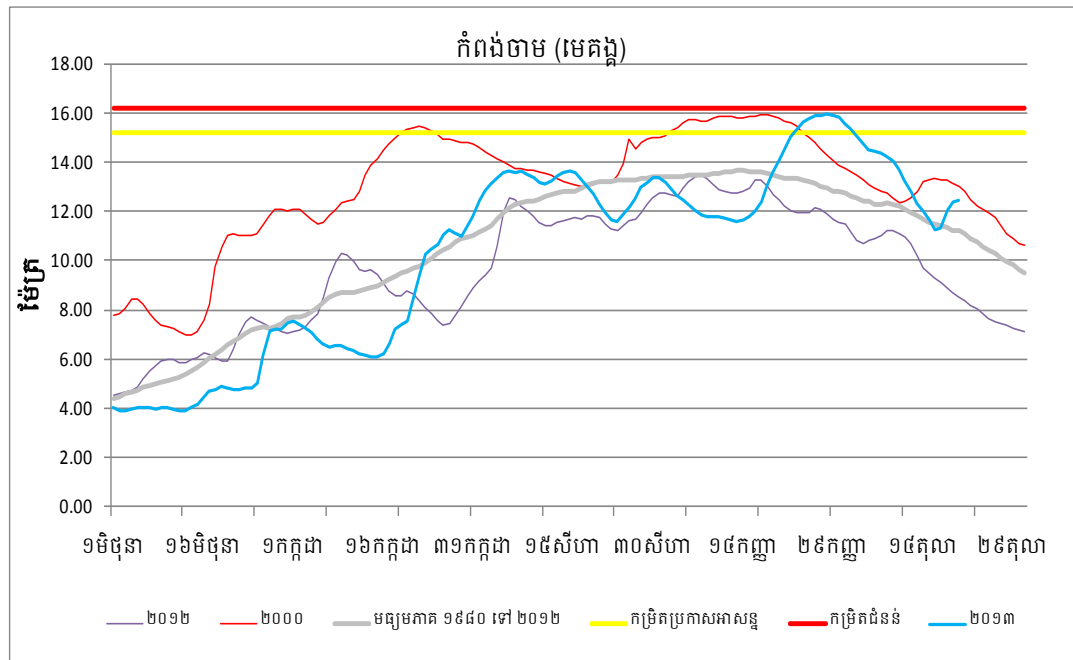
Fig.2 the reflective cloud



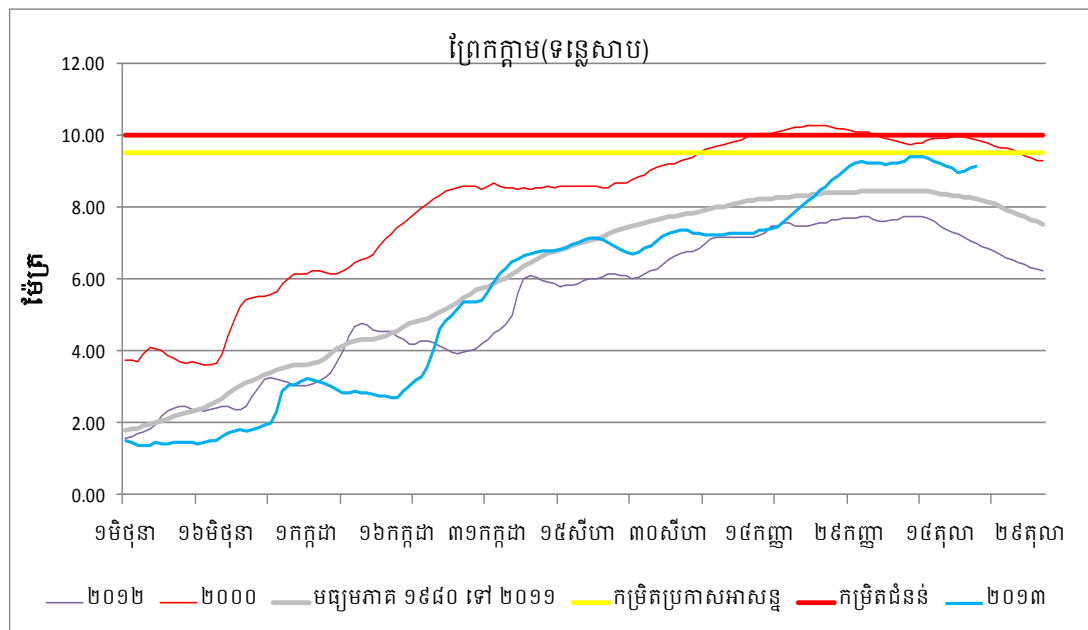
## 2. Hydrological Assessment (highlighting water-related issues/impact)

Through the graph of water level from two stations, one is from Kampong Cham station (Station along Mekong River) and another is from Prek Kdam station (Station along Tonle Sap River), showed that the water level in both stations is higher than the warning level during September and the beginning of October, 2013 (See Graph 1 and 2).

- Graph1: Water Level in Kampong Cham Station



- Graph2: Water Level in Prek Kdam Station



During two month of rainy season September to October 2013, there is continuous rainfall and some days received the heavy rainfall while the Central Viet Nam , Lao PDR and northeast Thailand receive the heavy rainfall according to Typhoon Wutip make landfall the Central Viet Nam as Category 1Typhoon on 30 September and passed over Laos on 1 October and then moved to Thailand, it is the result of flood and flash flood in some provinces around the Mekong River such Stung Treng, Kratie, Kampong Cham, Phnom Penh, Kandal and Prey Veng and worth affected to two provines of the Northwest Cambodia such as Banteay Meanchey and Battambang.

Monsoon Rain accompanying with the influence of Typhoon Nari prevail over the South of China sea and made landfall Viet Nam are also cause to flash flood in north western and southeastern province of Cambodia in mid-Octorber.

### 3. Socio-Economic Assessment (highlighting socio-economic and DRR issues/impacts)

Typhoon Wutip forecast to reach Viet Nam between 30 September and 01 October, 2013 its impact and potential for further into Lao, affecting the Mekong basin upstream of Cambodia. Its impact and potential for further flooding remain to be determined; it is caused an increase in water levels which worsen the situation in already flood areas by the monsoon rain continuously over Cambodia.

The passage of Typhoon Nari bypassed Cambodia, but it affected Viet Nam Lao and Thailand, the heavy rain in both Viet Nam and Thailand and subsequence overflow of water level also resulted in flash flood in the border province of Cambodia (See pictur1).

**Pictur1: Flooding on National Road 5, Battambang (11 October, 2013)**





According to the report of National Committee for Disaster Management, there were twenty provinces have been affected by flooding and flash flood since the third week of September until October.

- There were 168 persons confirmed deaths;
- Some 377,354 households affected and of those some 31,314 evacuated to safe areas;
- Some 231,484 houses, 1,242 schools, 78 health centers and hospitals, and 533 pagodas flooded with roads, bridges and infrastructure damaged.

(Please read more detail of the affected areas and damages in 2013 in Table1)

**Table1: Flood and Flash Flood Affected in 2013**

(Source of National Committee for Disaster and Management)

ខេត្ត/ក្រុង	Affected Family	Evacuated Family	Houses Affected	Houses Damages	People (Death)	People(Wounded)	School Affected	Pagoda Affected	Health Center Affected	Road Affected	Rural Road Affected	Bridge Affected	Dame Affected
ព្រះវិហារ	4609	397	981	3	1		9			8205	43390	3	
កំពង់ធំ	17463	1114	17463		24	3	121	41	4	26015	172673		1
បន្ទាយមានជ័យ	54,463	8,902	15,027	3	9	1	249	128	21	78,130	1,135,473		13
សៀមរាប	19,022	3,550	3,645	11	15	2	39	8	7	30,941	160,688	7	4
ឧត្តរមានជ័យ	13,244		3,217	3	4					21,900	24,340	17	19
កំពង់ចាម	51,376	3,546	43,759	36	29		268	144	17	11,174	338,126	4	43
ក្រចេះ	18,552	621	12,447	2	5		88	59	1	35,768	166,230		10
ស្ទឹងត្រែង	9,813	1,523	9,385	2	3		31	20	3	16,500	155,179	119	
ព្រៃវែង	44,764	866	32,193	8	26		155	53	8	2,748	116,900	1	
កណ្តាល	35,311	235	22,327	31	15		126	23	6	8,892	214,803	7	15
កំពង់ឆ្នាំង	6,667	897	3,591		9		2	38		4,110	37,000		
ភ្នំពេញ	3,522	1,622		4							1,900		
រតនគិរី	6,524	2,289		13					2	8,940	163,969	6	
បាត់ដំបង	74,160	4,504	62,451	166	17	4	77	14	9	152,450	819,640		
ប៉ៃលិន	1,989	239	851		3	1	17	2		2,249	8,290	4	5
ពោធិ៍សាត់	9,271	746	1,004	5	2	18	57			21,800	82,407	15	
ស្វាយរៀង	3,808	253	347		1			1		3,700	6,244		2
តាកែវ	2,796	10	2,796		5		3	2		6,850	46,000		2
មណ្ឌលគិរី													
ព្រះសីហនុ										200			
	<b>377,354</b>	<b>31,314</b>	<b>231,484</b>	<b>287</b>	<b>168</b>	<b>29</b>	<b>1,242</b>	<b>533</b>	<b>78</b>	<b>440,572</b>	<b>3,693,252</b>	<b>183</b>	<b>114</b>

#### 4. Regional Cooperation Assessment (highlighting regional cooperation successes and challenges)

In 2013, Department of Meteorology Cambodia has sent:

- 2 participants attended in Severe Weather Forecasting Demonstration Project Regional Subprojects for the Bay of Bengal and Southeast Asia, and Training Workshop on Severe Weather Forecasting and Warning Services from 08-19 April, 2013.

- 1 participant attended in Training Workshop on Producing High Resolution Climate information from 13-24 October 2013 at KMA, APEC Climate Center (Bursan),
- 1 participant attended in Training Seminar on Seasonal Prediction Product from 11-15 November 2013 at JMA.

Cambodia needs more training on Severe Weather Forecast and analysis, Tropical Cyclone Track Analysis.

Cambodia would like to thank for Typhoon Committee, JMA, KMA and TMD that have share the Numerical Weather Prediction through their website, it is very useful for using in weather forecast and analysis.

## **II. Summary of progress in Key Result Areas**

- National Meteorology and Hydrology has closely monitored and provided the Announcement from 5-7 days ahead the Typhoon and Sever Weather occurring or affected to the Country.
- National Committee for Disaster Management has closely monitored affected communities with relevant authorities.
- Food distributions have taken place in most provinces, in particular by the Cambodian Red Cross (CRC) has currently targeted 63,914 households across 18 districts.