

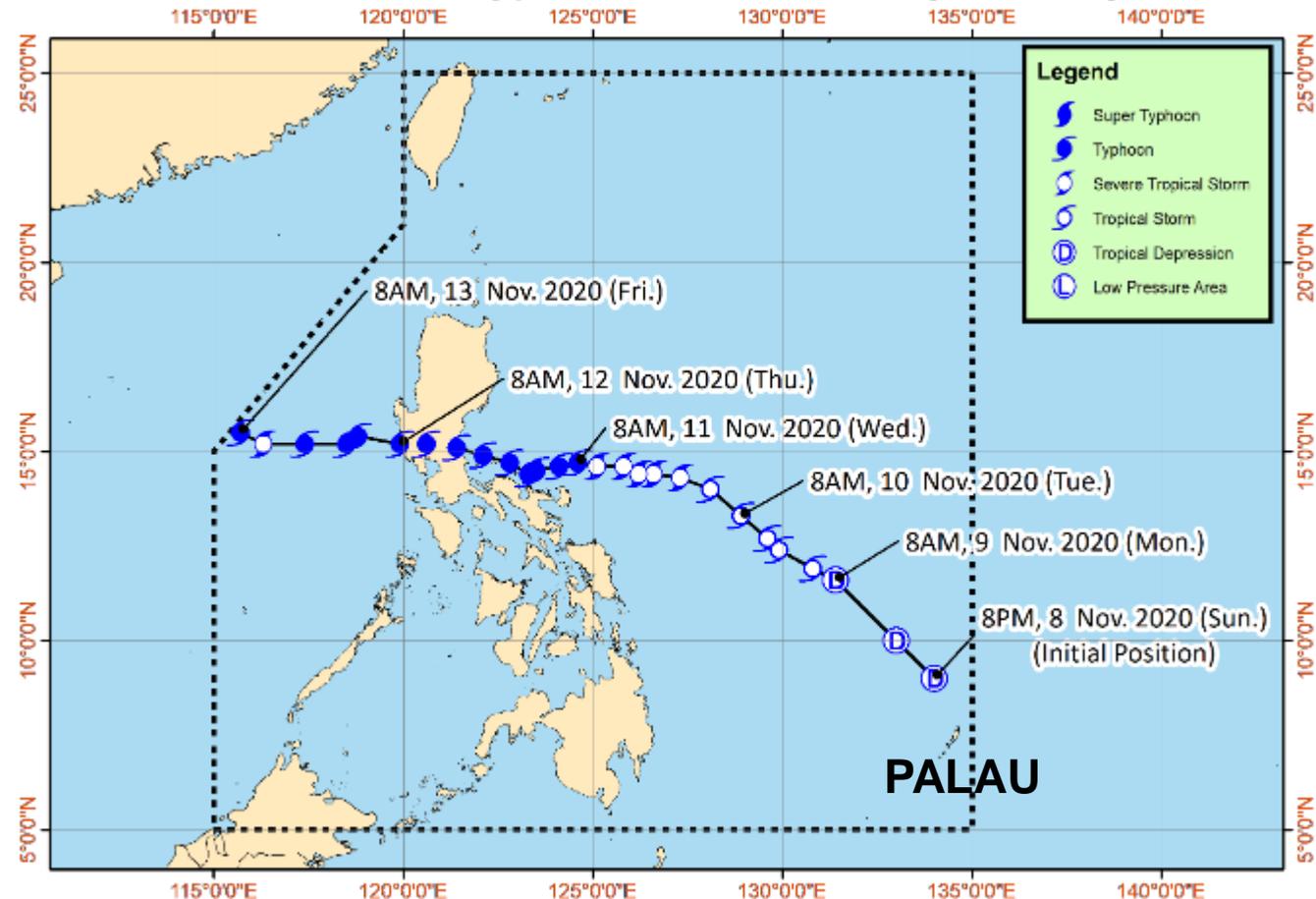
OVERVIEW OF TYPHOON ULYSSES

Presentor: Mr. SOCRATES PAAT, JR. (Senior Hydrologist, PAGASA)

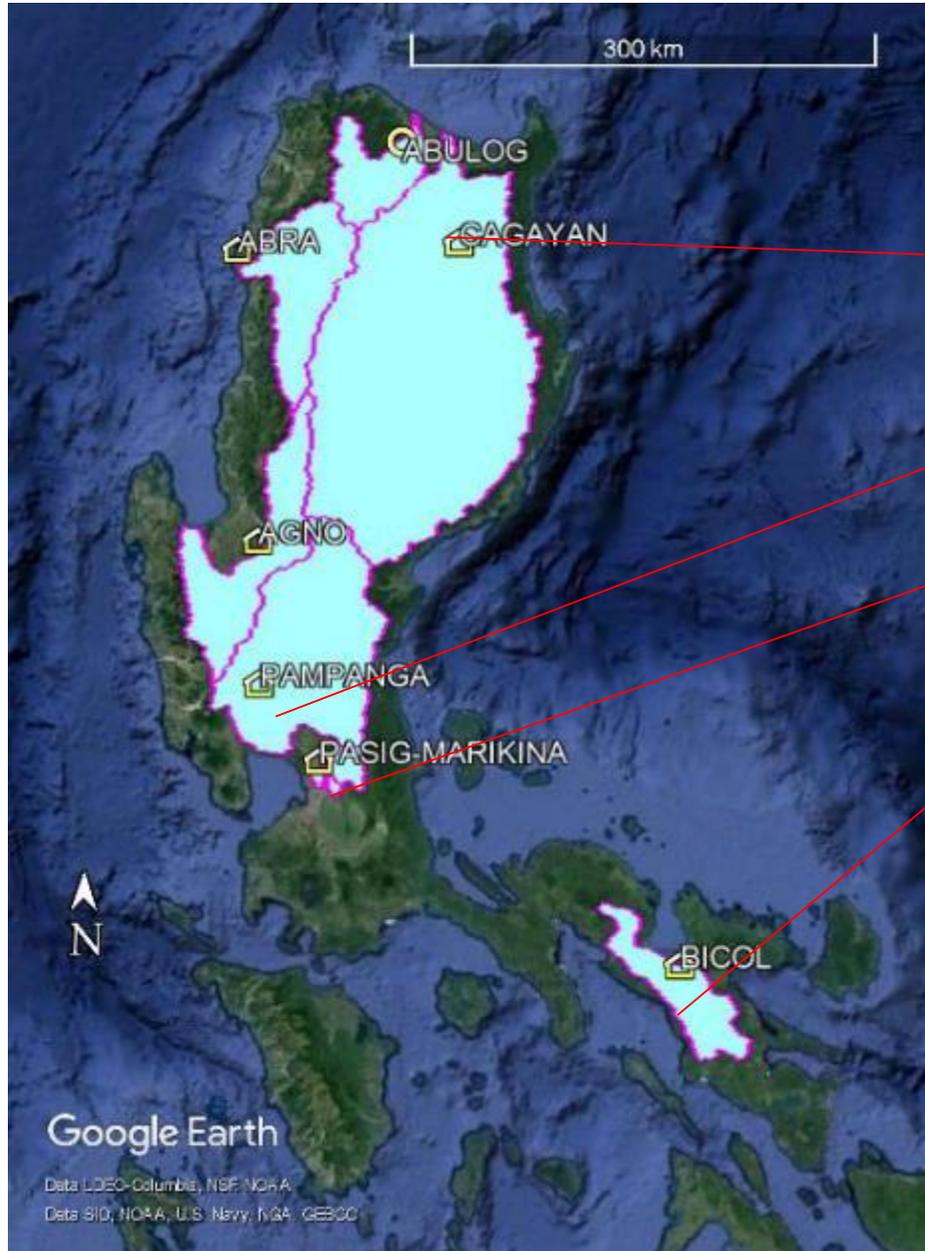
Typhoon Ulysses (International Name: Vamco)

- 20th tropical cyclone that entered the PAR in 2020
- Maximum wind speed reached: 155 km/h (Typhoon Category)
- Made 3 landfalls in Central Philippines
 - 1st & 2nd: small island Municipalities (Patnanungan/Burdeos, Quezon)
 - 3rd : Gen. Nakar, Quezon (main Island of Luzon)

Track of Typhoon "ULYSSES" {VAMCO}



EFFECTS OF THE PASSAGE OF TYPHOON ULYSSES



Big floodings in 4 Major River Basins:

(1) CAGAYAN

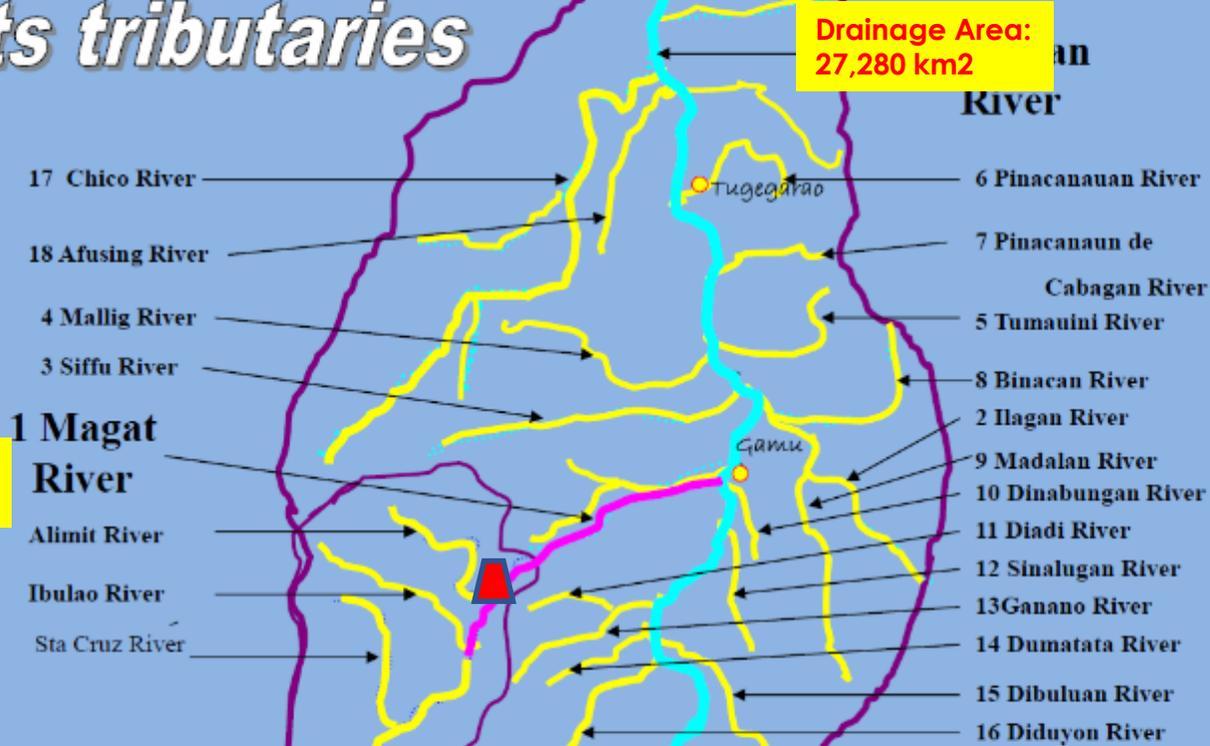
(2) PAMPANGA

(3) PASIG-MARIKINA

(4) BICOL

(1) CAGAYAN RIVER BASIN

Cagayan River and its tributaries



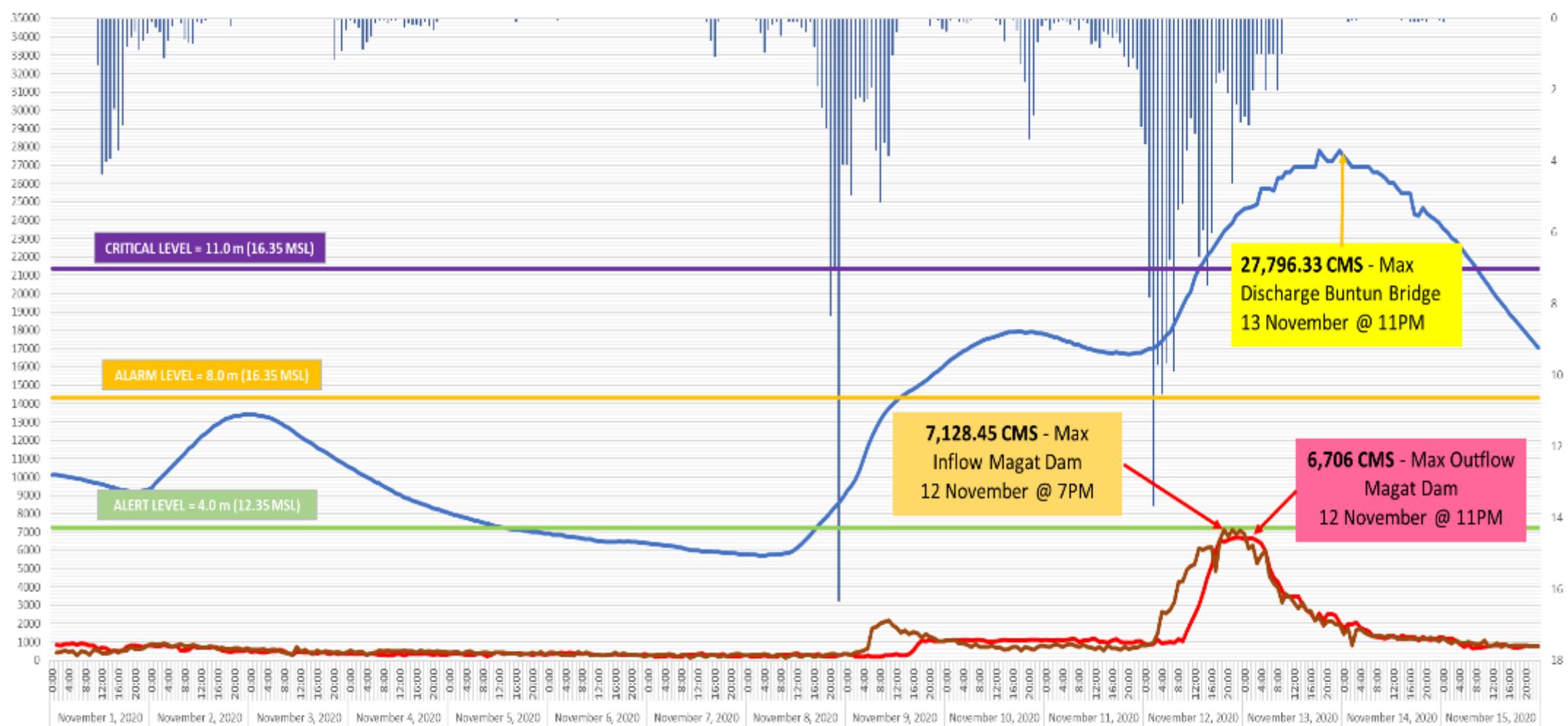
- Biggest among the 18 Major River Basins
- With 1 Multi-purpose Dam (Magat Dam)



"tracking the sky... helping the country"

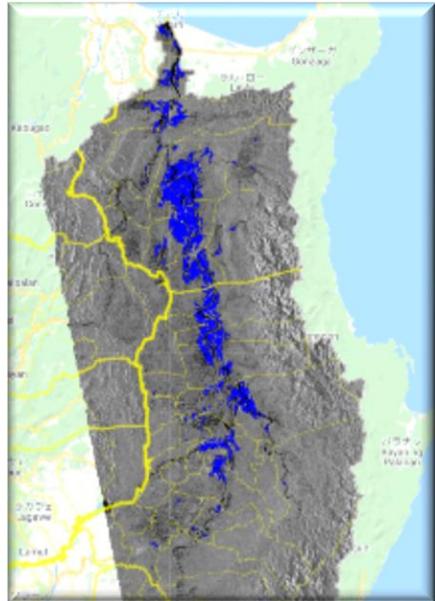


MAGAT DAM RELEASES DUE TO TY. ULYSSES



SIMULATION RESULT OF INUNDATION DUE TO TY. ULYSSES

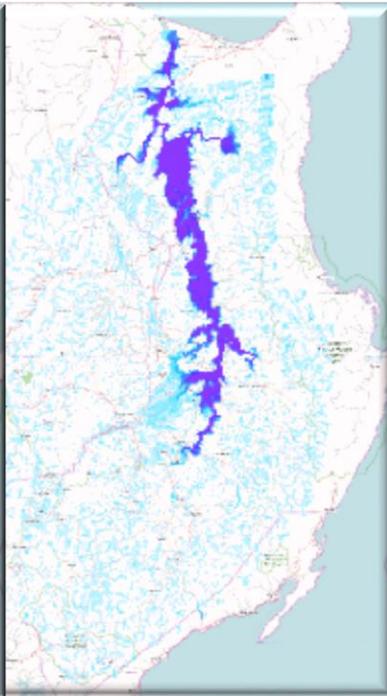
(Courtesy of ICHARM)



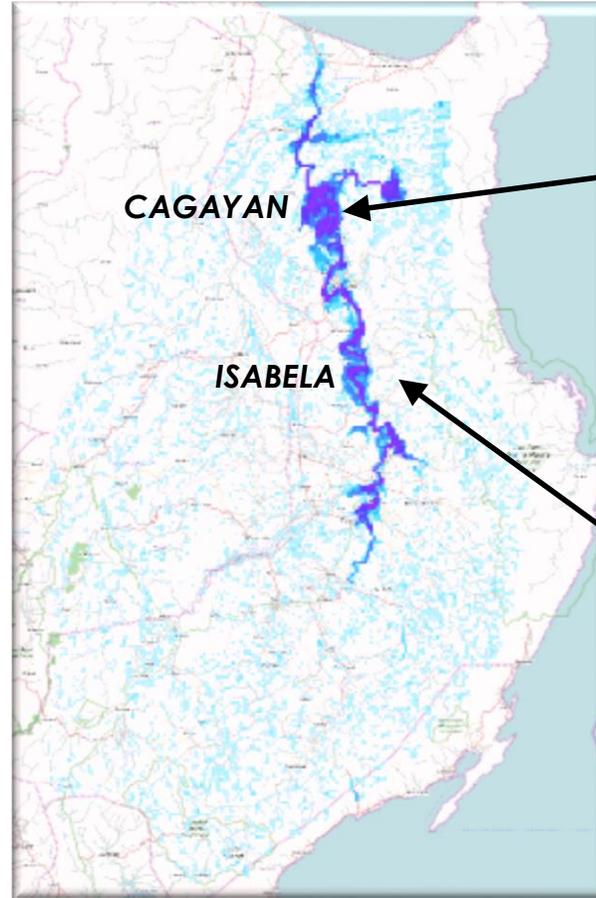
Sentinel-1 SAR



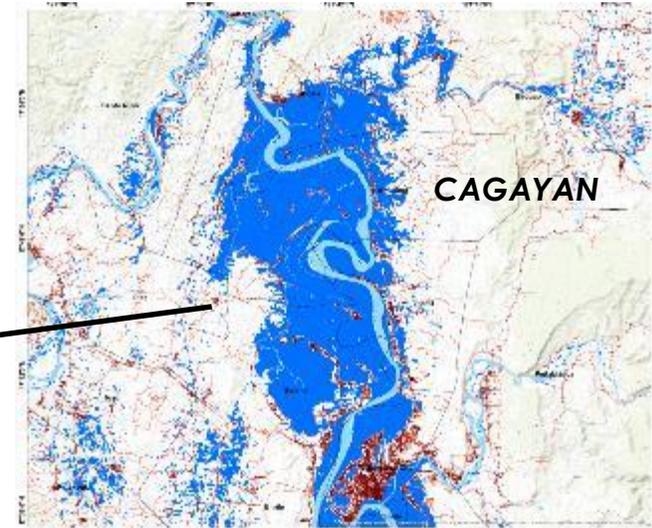
RRI Simulation
(ground gauge)



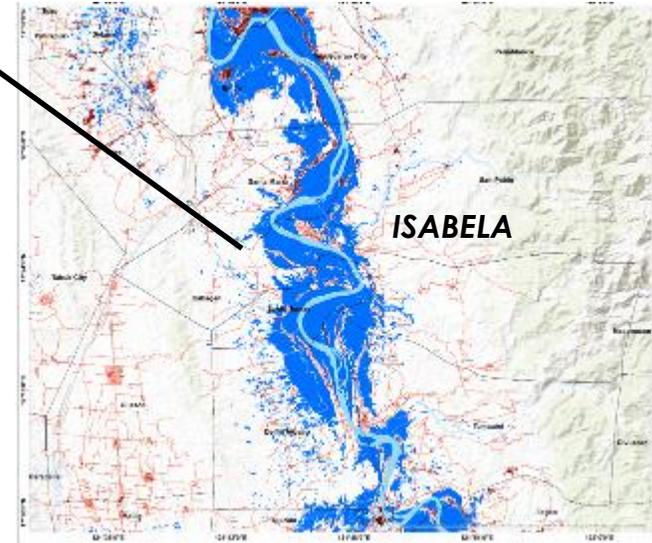
RRI Simulation
(GSMaP)



RRI Simulation
(Corrected GSMaP)



DETECTED FLOODS
BY SENTINEL 1B

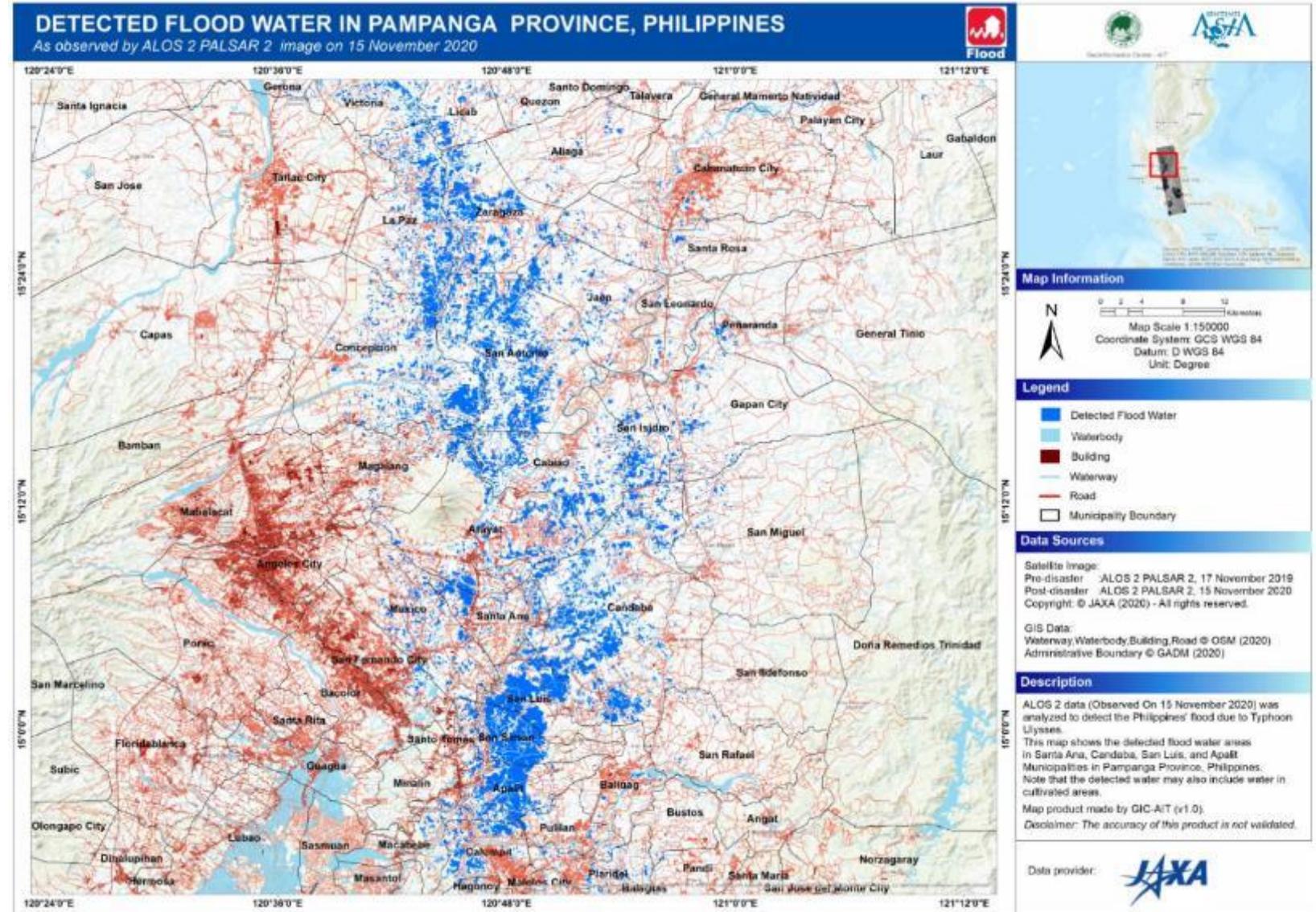
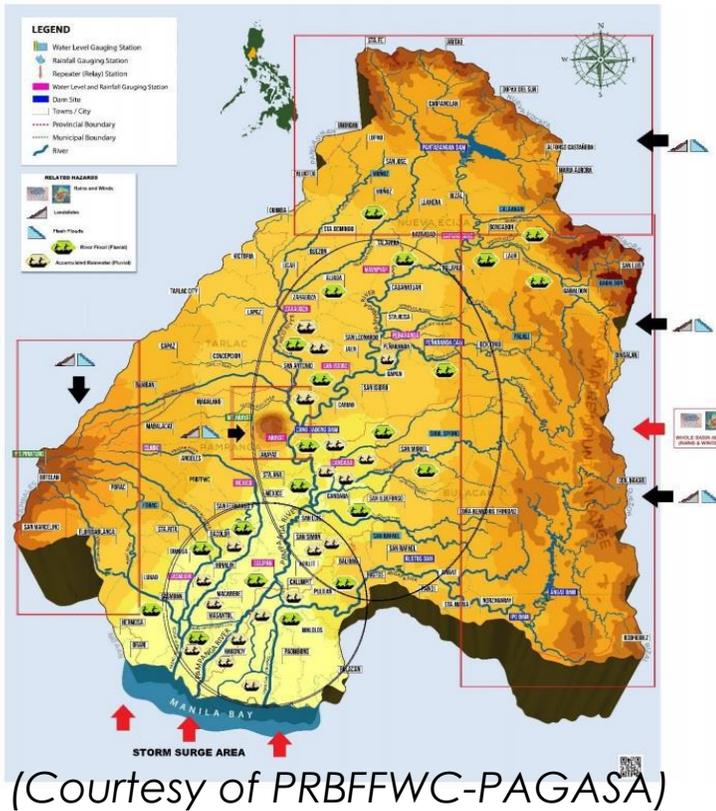


(2) PAMPANGA RIVER BASIN



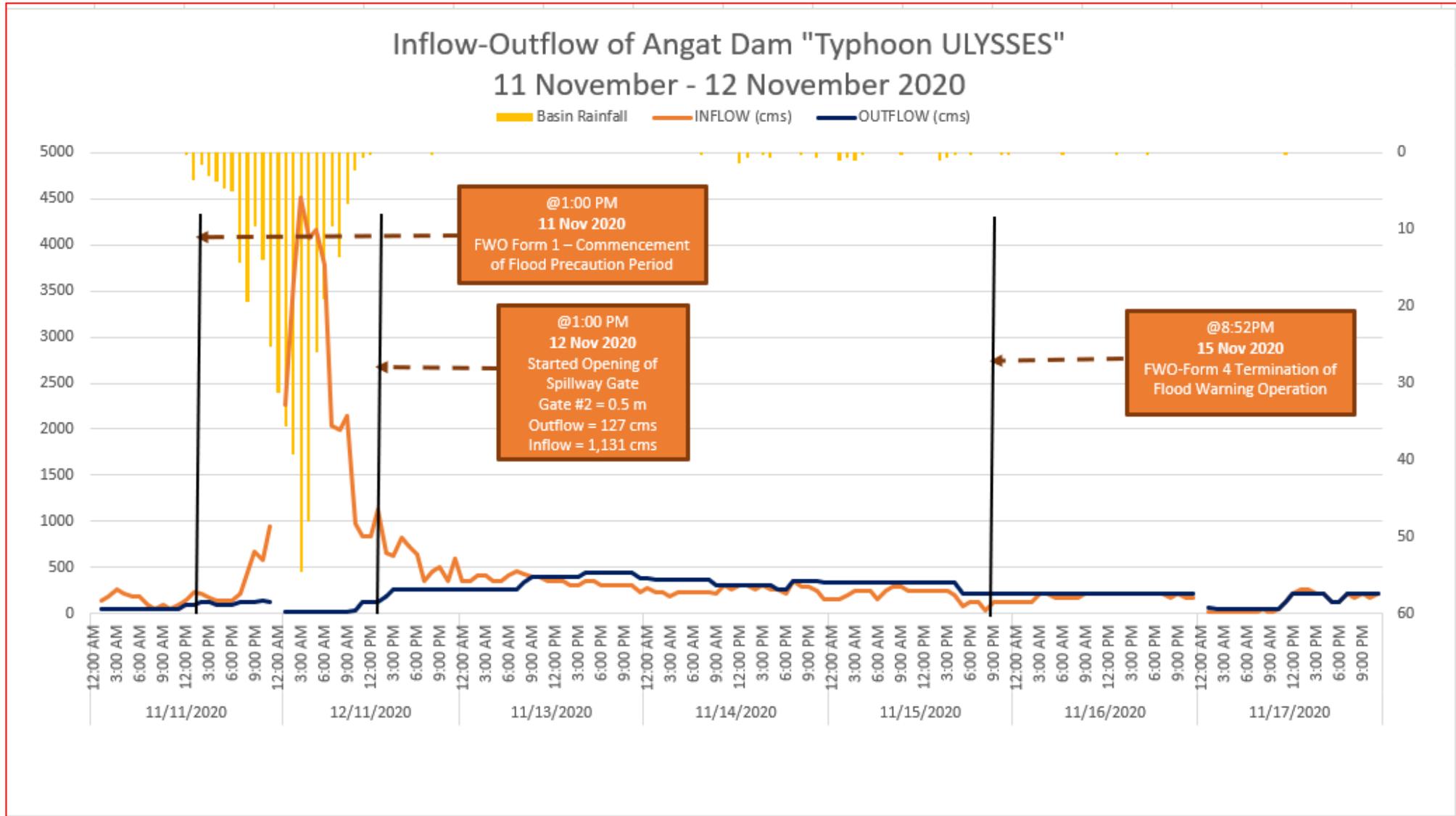
Republic of the Philippines
DEPARTMENT OF SCIENCE AND TECHNOLOGY
 Philippine Atmospheric, Geophysical and Astronomical Services
 Administration (PAGASA)

POSSIBLE DISTRIBUTION OF HAZARDS ASSOCIATED WITH TROPICAL STORM ULYSSES WITHIN THE PAMPANGA RIVER BASIN BEGINNING WEDNESDAY AFTERNOON (NOVEMBER 11, 2020)

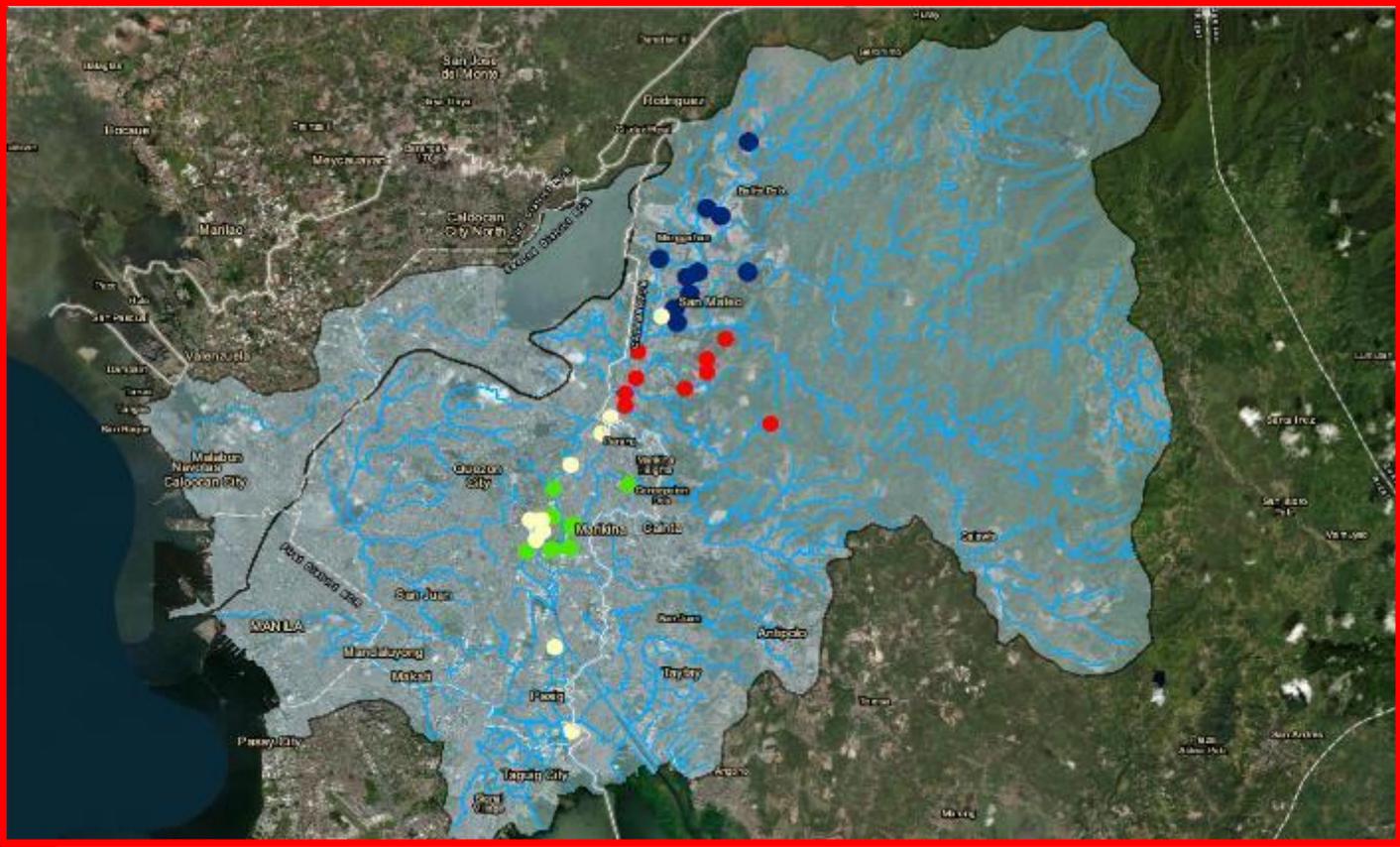
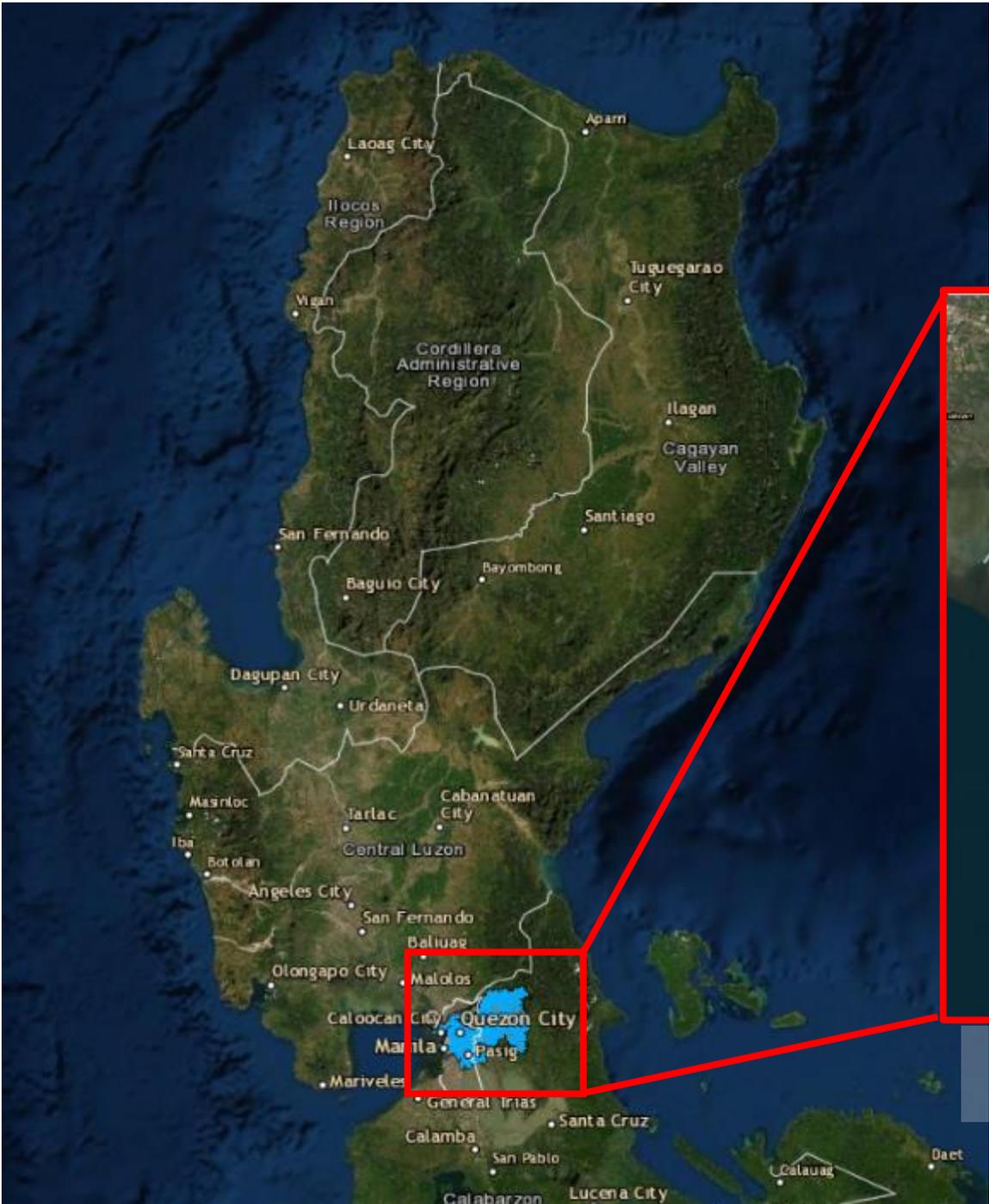


(Courtesy of AIT; Sentinel Asia; JAXA)

(2) ANGAT DAM (A SUB-SYSTEM WITHIN THE PAMPANGA RIVER BASIN)



(3) PASIG-MARIKINA RIVER BASIN



Source: NDRRMC and various media outlets

- PASIG-MARIKINA RIVER BASIN

COMPARISON WITH TY. ONDOY (KETSANA 2009)

- In Terms of Rainfall...

Station	TY ULYSSES Max 24-hour rainfall (mm) 1pm 11/11 – 1pm 11/12 (2020)	Tropical Storm ONDOY Max 24-hour rainfall (mm) 8pm 9/25 – 8pm 9/26 (2011)
Boso-boso (Antipolo)	289	388
Aries (Antipolo)	278	391
Mt. Oro (Rodriguez)	294	366
Nangka (San Mateo)	207	358
Mt. Campana (Antipolo)	282	No Data
Antipolo*	272.5	-
Macabud* (Rodriguez)	309	-
Science Garden (QC)	201	540 (455 8AM 9/25 – 8AM 9/26)
Airport – NAIA (Pasay)*	175.5	-
Pasig City Hall*	225.5	-
Port Area (Manila)*	119.5	-
Napindan (Pasig)	187	No Data

- In Terms of Water Level...

River	Station	TY ULYSSES Max Waterlevel (m) 11/11 – 11/12 (2020)	Tropical Storm ONDOY Max Waterlevel (m) 9/25 – 9/26 (2011)
Upper Marikina	Montalban	29.73 m 5am	29.67 m 4pm 09/26
	Nangka (Tributary)	24.58 m 5:50am 11/12	26.25 m 3pm 09/26
	San Mateo*	26.09 m 8am 11/12	
	Sto. Nino.	22.01 m 10:20 am 11/12	22.16 m 5pm 09/26
Lower Marikina	Rosario	17.06 m 10:50 am 11/12	17.92 m 6pm 09/26
San Juan River (Tributary to Pasig River)	Mindanao Ave.*	34.84 m 10:00 am 11/12	-
	Quezon Ave.*	16.87 m 10:00 am 11/12	-
	San Juan	14.15 m 10:00 am 11/12	15.90 m 7pm 09/26
Pasig River	Pandacan	12.96 m 10:00 am 11/12	13.64 m 8pm 09/26
	Fort Santiago	11.96 m 6:00 am 11/12	12.02 m 2am 09/27
Laguna Lake	Angono	13.13 m 11:00 am 11/12	13.84 m 11pm 09/27

- PASIG-MARIKINA RIVER BASIN

COMPARISON WITH TY. ONDOY (KETSANA 2009)

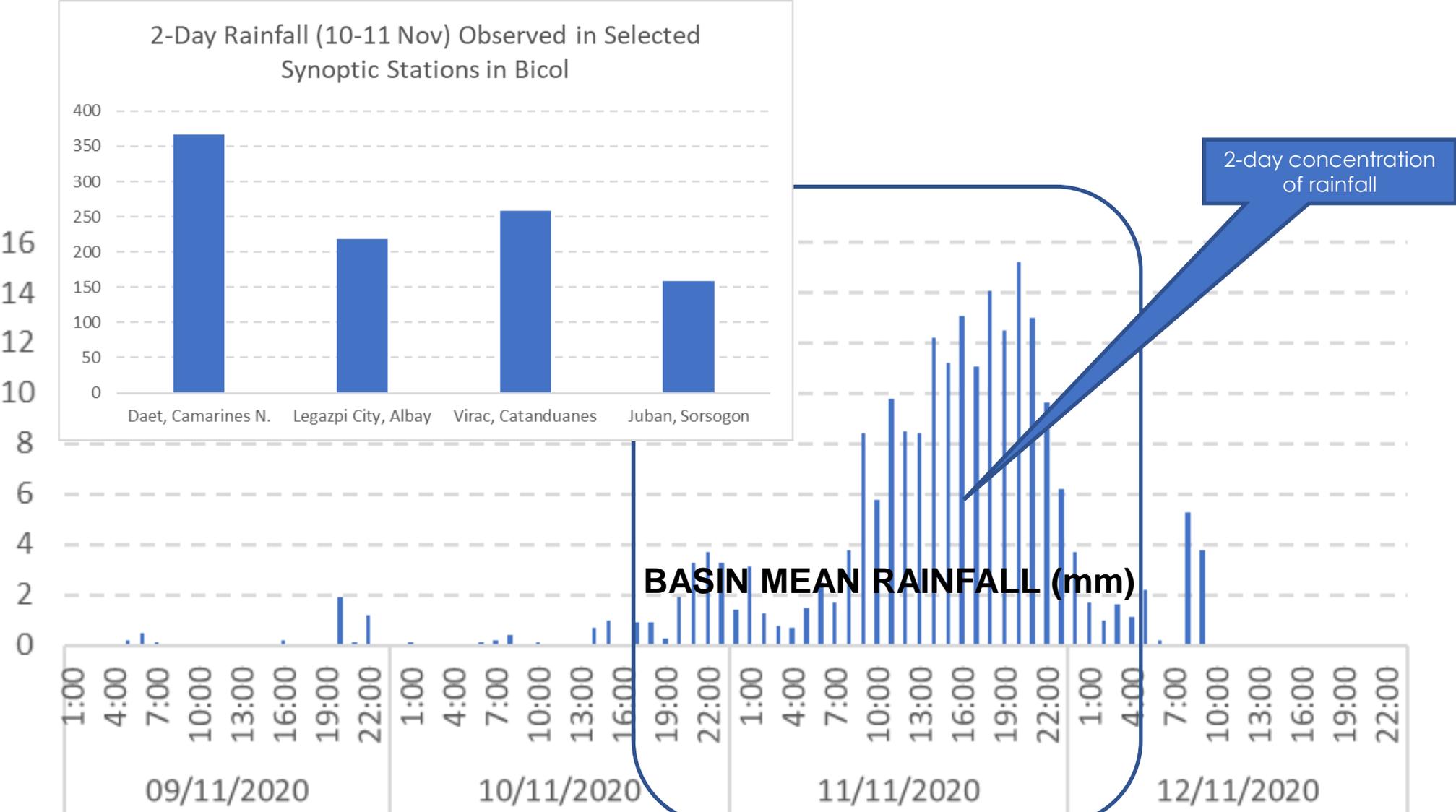
- ... ONDOY



- ... ULYSSES

(4) BICOL RIVER BASIN

TEMPORAL RAINFALL DISTRIBUTION



BICOL RIVER BASIN / REGION HIT BY 5 OF THE 7 CYCLONES THAT AFFECTED THE COUNTRY IN ONE MONTH TIME...

TROPICAL CYCLONE	MAXIMUM CATEGORY	DURATION	NUMBER OF CASUALTIES
1. Ofel	Tropical Depression	13-16 Oct	0
2. Pepito (Saudel)	Typhoon	19-22 Oct	0
3. Quinta (Molave)	Typhoon	23 - 27 Oct	27
4. Rolly (Goni)	Super-Typhoon	27 Oct - 3 Nov	25
5. Siony (Atsani)	Severe Tropical Storm	29 Oct - 6 Nov	0
6. Tonyo (Etau)	Tropical Storm	7 - 9 Nov	0
7. Ulysses (Vamco)	Typhoon	8 - 13 Nov	73



Note: The black dot indicates the location of Bicol Region.