

Tropical Storm Djuan (Auring)

Report #1

19 February 2021, 5PM PHT

Manila Observatory



# SUMMARY

## INTENSITY and CURRENT LOCATION

- Tropical Storm (TS) Dujuan (Auring) with 83 kph max 1-min winds (as of 8AM Feb 19 JTWC)  
(**Note:** As of 10AM Feb 19, PAGASA classified TC as Severe Tropical Storm with 95 kph max 10-min winds)
- TC center located at ~535 km ESE of Hinatuan, Surigao del Sur (as of 10AM Feb 19, PAGASA); moving slowly northwestward

## FORECAST TRACK AND WINDS

- TS Dujuan will retain its intensity, landfalling over E of Caraga Region on Sunday morning (Feb 21), transits the Visayas and will exit near Busuanga island, Palawan by Tuesday (Feb 23)

## CURRENT RAINFALL

- Satellite image shows wide extent of TS Auring rain bands affecting E Mindanao, E Visayas
- Past 24-hr rain total : light to moderate rain ( $< \sim 50$  mm) over Surigao del Norte/Sur, Agusan del Norte/Sur, Misamis Oriental, Compostela Valley, Davao, Davao Oriental, Leyte (as of 2:30 PM Feb 18 to 2:30 PM Feb 19)

## FORECAST TOTAL RAINFALL

- Within 48 hours : moderate to heavy rain ( $> 50$  to 100 mm) over Misamis Oriental, Surigao del Norte/Sur, Agusan del Norte/Sur, Davao Oriental, Compostela Valley
- Within 72 hours : heavy rain ( $> 200$  mm) over Misamis Oriental, Surigao del Norte; moderate to heavy rain ( $> 50$  to 100 mm) over Misamis Occidental, Lanao del Norte, Agusan del Norte/Sur, Surigao del Sur, Compostela Valley, Davao Oriental

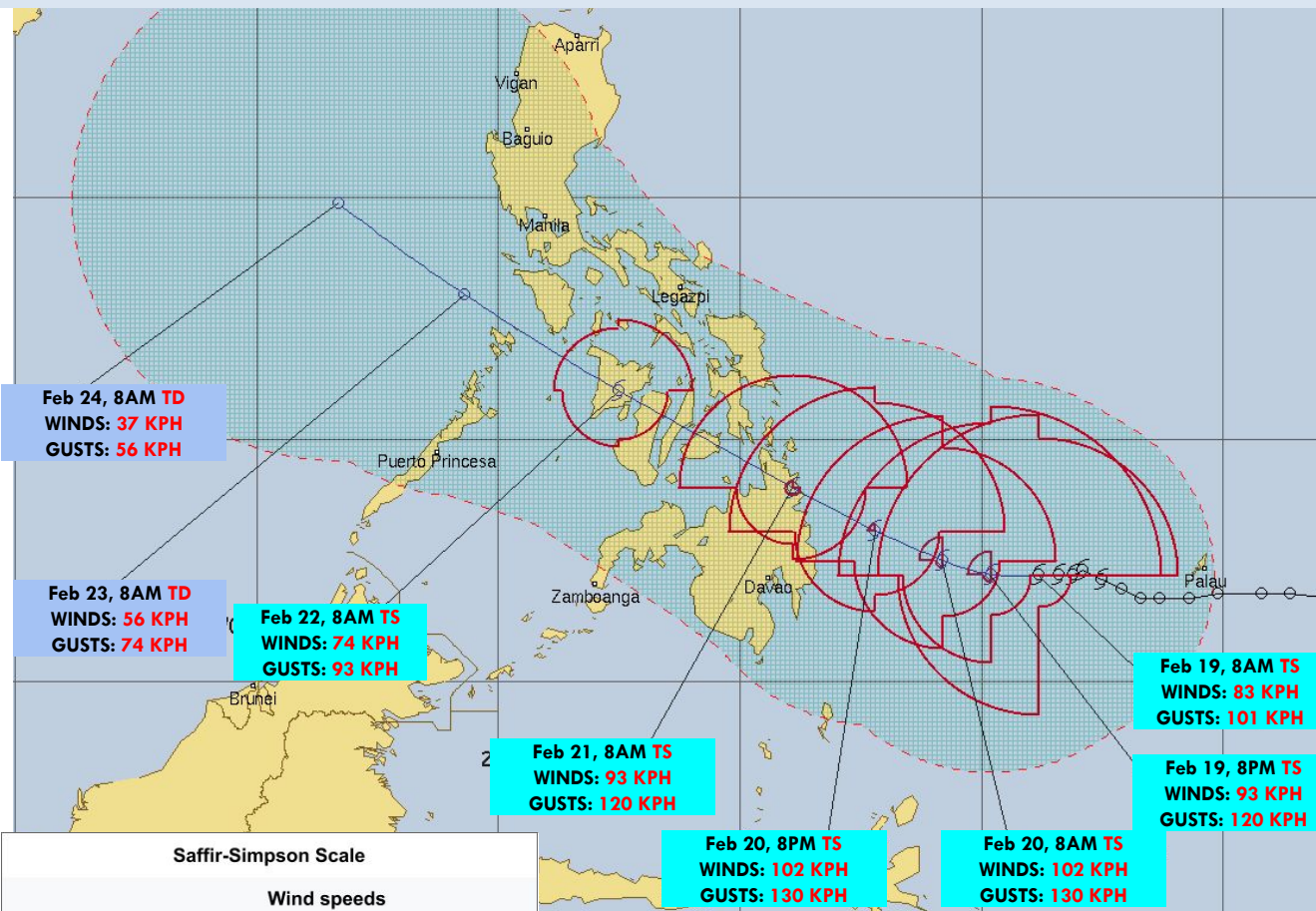
## EXPOSURE, VULNERABILITIES, OTHER HAZARDS (IMPACT AREAS)

- Potentially significant amounts of rainfall over northeast Mindanao, central and western Visayas, northern Palawan and Mindoro may induce landslides in high-elevation areas and flooding in low-lying areas
- Monitoring of forecast storm track and associated rainfall; monitoring of water levels in dams and river systems within the potential impact areas recommended

*NOTE: This report (website) contains information on potential impacts based on multiple data sources and scientific information. For official updates and warnings, please refer to PAGASA and other government agencies.*



# Current status of TS Dujuan (Auring)



TROPICAL STORM 01W (DUJUAN) WARNING #8  
WTPN31 PGTW 190300  
190000Z POSIT: NEAR 7.2N 131.2E  
MOVING 270 DEGREES TRUE AT 04 KNOTS  
MAXIMUM SIGNIFICANT WAVE HEIGHT: 20 FEET  
19/00Z, WINDS 045 KTS, GUSTS TO 055 KTS  
19/12Z, WINDS 050 KTS, GUSTS TO 065 KTS  
20/00Z, WINDS 055 KTS, GUSTS TO 070 KTS  
20/12Z, WINDS 055 KTS, GUSTS TO 070 KTS  
21/00Z, WINDS 050 KTS, GUSTS TO 065 KTS  
22/00Z, WINDS 040 KTS, GUSTS TO 050 KTS  
23/00Z, WINDS 030 KTS, GUSTS TO 040 KTS  
24/00Z, WINDS 020 KTS, GUSTS TO 030 KTS

CPA TO:	NM	DTG
ZAMBOANGA	225	21/14Z
PUERTO PRINCESA	184	22/15Z
MANILA	135	22/21Z
CLARK AB	152	23/02Z
SUBIC BAY	119	23/02Z

BEARING AND DISTANCE	DIR	DIST (NM)	TAU (HRS)
ANGAUR	276	180	0
KAYANGEL	256	215	0
KOROR	268	191	0
NGULU	260	380	0
SONSOROL	332	129	0
TOBI	360	252	0

**LESS THAN 34 KNOTS**  
**34-63 KNOTS**  
**MORE THAN 63 KNOTS**  
**FORECAST CYCLONE TRACK**  
**PAST CYCLONE TRACK**  
**DENOTES 34 KNOT WIND DANGER AREA/USN SHIP AVOIDANCE AREA**  
**FORECAST 34/50/64 KNOT WIND RADII (WINDS VALID OVER OPEN OCEAN ONLY)**

Saffir-Simpson Scale				
Wind speeds				
(for 1-min maximum sustained winds)				
Category	m/s	knots (kn)	mph	kph
5	≥ 70	≥ 137	≥ 157	≥ 252
4	58-70	113-136	130-156	209-251
3	50-58	96-112	111-129	178-208
2	43-49	83-95	96-110	154-177
1	33-42	64-82	74-95	119-153
TS	18-32	34-63	39-73	63-118
TD	≤ 17	≤ 33	≤ 38	≤ 62

- As of 10AM Feb 19, center of Dujuan (Auring) located ~535 km East-Southeast of Hinatuan, Surigao del Sur (PAGASA)
- Forecast to retain its intensity (JTWC), landfalling over E of Caraga Region on Sunday morning (Feb 21), transits the Visayas and will exit near Busuanga island in Palawan by Tuesday (Feb 23)

NOTATION: DAY/TIME (in ZULU) SPEED (in KTS). Convert time in Zulu to Philippine time, add 8 hours. E.g. 30/00Z is Oct 30/0800PHT or 8AM PHT

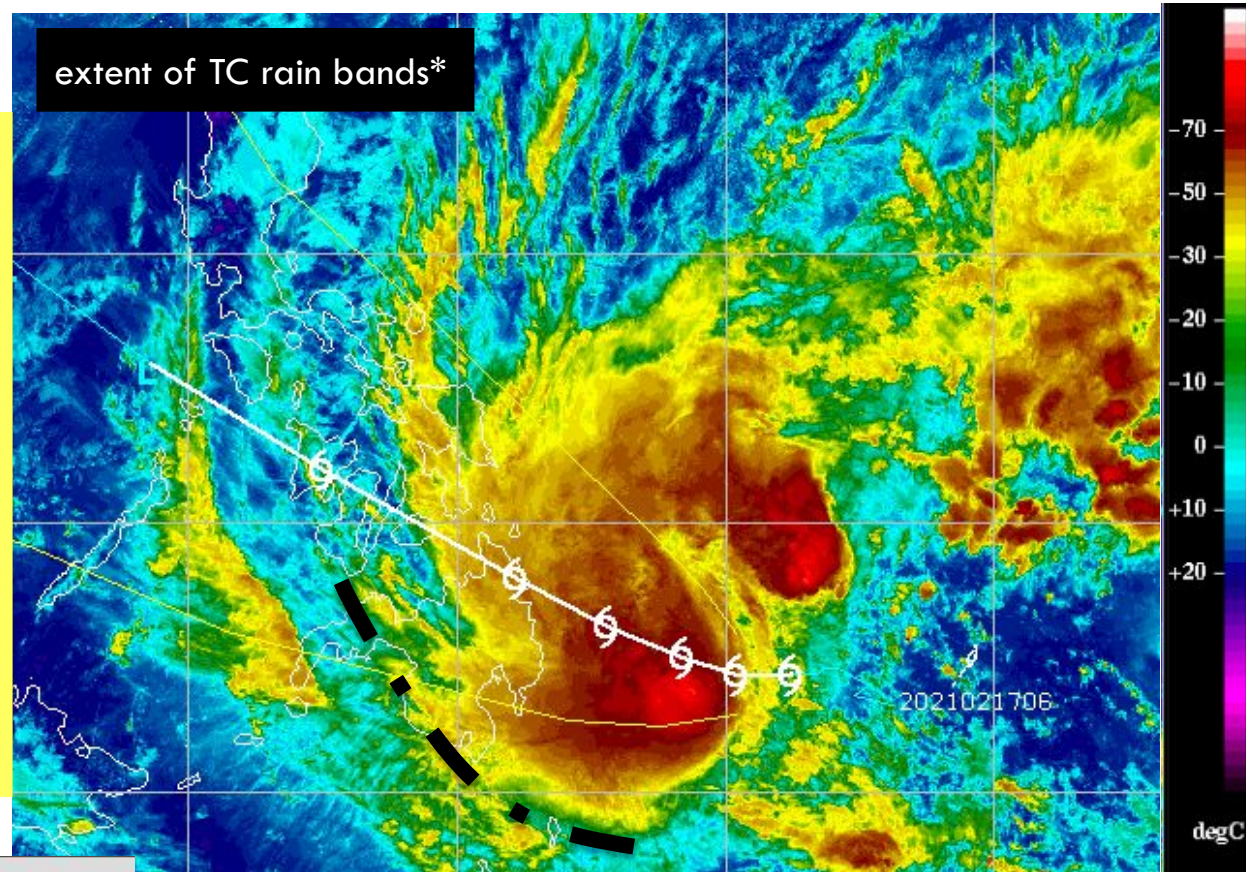


# Potential rainfall associated with TS Dujuan (Auring)

Longwave Infrared Image, NHC Color Enhancement

**As of 2:30 PM, Feb 19**

- TS Dujuan (Auring) rain bands\* wide extent (~700 km), affecting Mindanao and E Visayas
- Areas near the center (red) indicate high rainfall over East of Mindanao



\* “NASA research has indicated that cloud top temperatures (red to bright red) that reach or exceed the threshold of -52°C typically have heavy rainfall areas “

(<http://www.nasa.gov/content/11-w-north-pacific-ocean/#.UgeFGBZCrbw>)

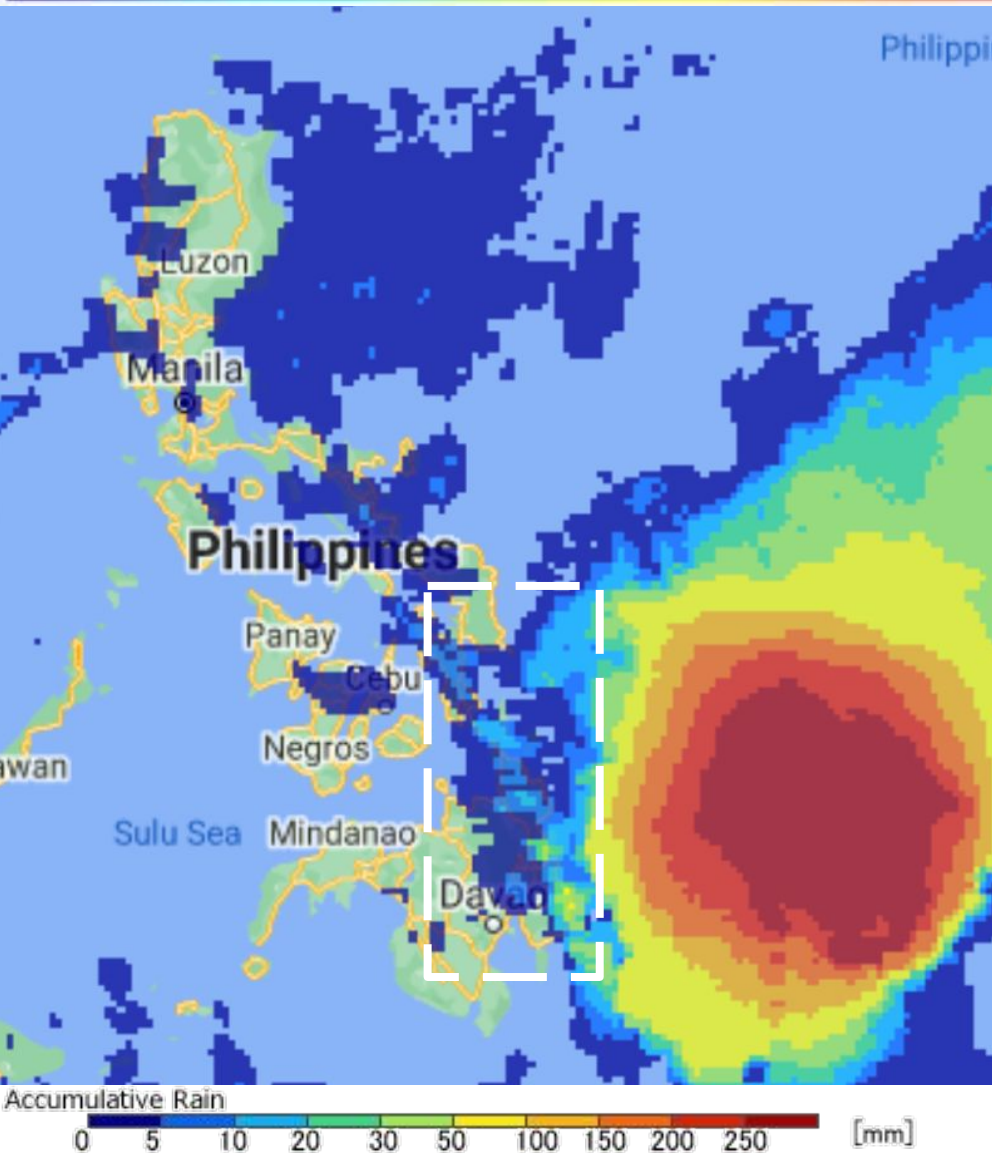
# Past 24-hr total rainfall associated with TS Dujuan (Auring)



## JAXA Realtime Rainfall Watch 世界の雨分布リアルタイム



衛星全球降水マップ  
GSMaP  
GLOBAL SATELLITE MAPPING OF PRECIPITATION



Satellite 24-hr rainfall estimates from 2:30 PM, Feb 18 to 2:30 PM, Feb 19 indicate rainfall over E of Mindanao

Areas with light to moderate rain ( $< \sim 50$  mm) (white dashed box):

- Surigao del Norte/Sur, Agusan del Norte/Sur, Misamis Oriental, Compostela Valley, Davao, Davao Oriental, Leyte





# Forecast total rainfall

Within next 48 hours (from 2AM Feb 19 to 2AM Feb 21):

- **Moderate to heavy rain (>50 to 100 mm)** over Misamis Oriental, Surigao del Norte/Sur, Agusan del Norte/Sur, Davao Oriental, Compostela Valley

Within next 72 hours (from 2AM Feb 19 to 2AM Feb 22):

- **Heavy rain (>200 mm)** over Misamis Oriental, Surigao del Norte
- **Moderate to heavy rain (>50 to 100 mm)** over Misamis Occidental, Lanao del Norte, Agusan del Norte/Sur, Surigao del Sur, Compostela Valley, Davao Oriental

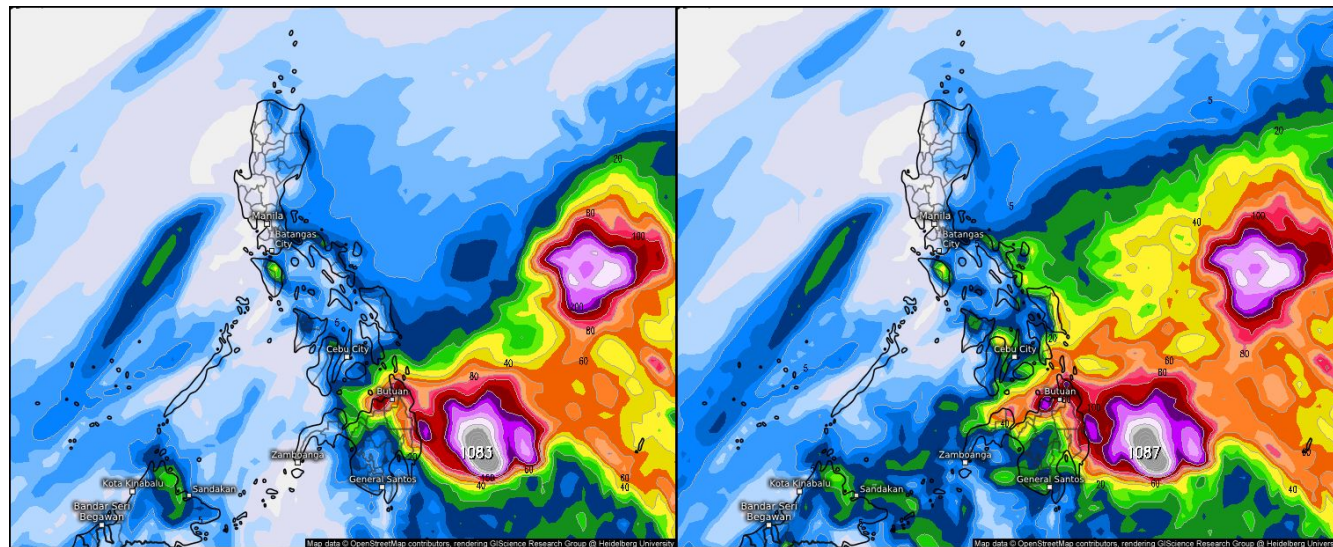
*\*Affected areas and rainfall amount forecast may change with TS Auring track*

## 48-hour Total Rainfall Model Forecast

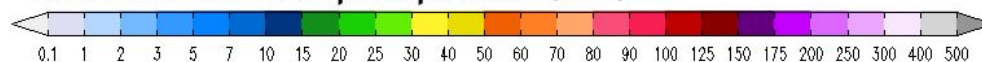
19 Feb 2 AM – 21 Feb 2 AM

## 72-hour Total Rainfall Model Forecast

19 Feb 2 AM – 22 Feb 2 AM

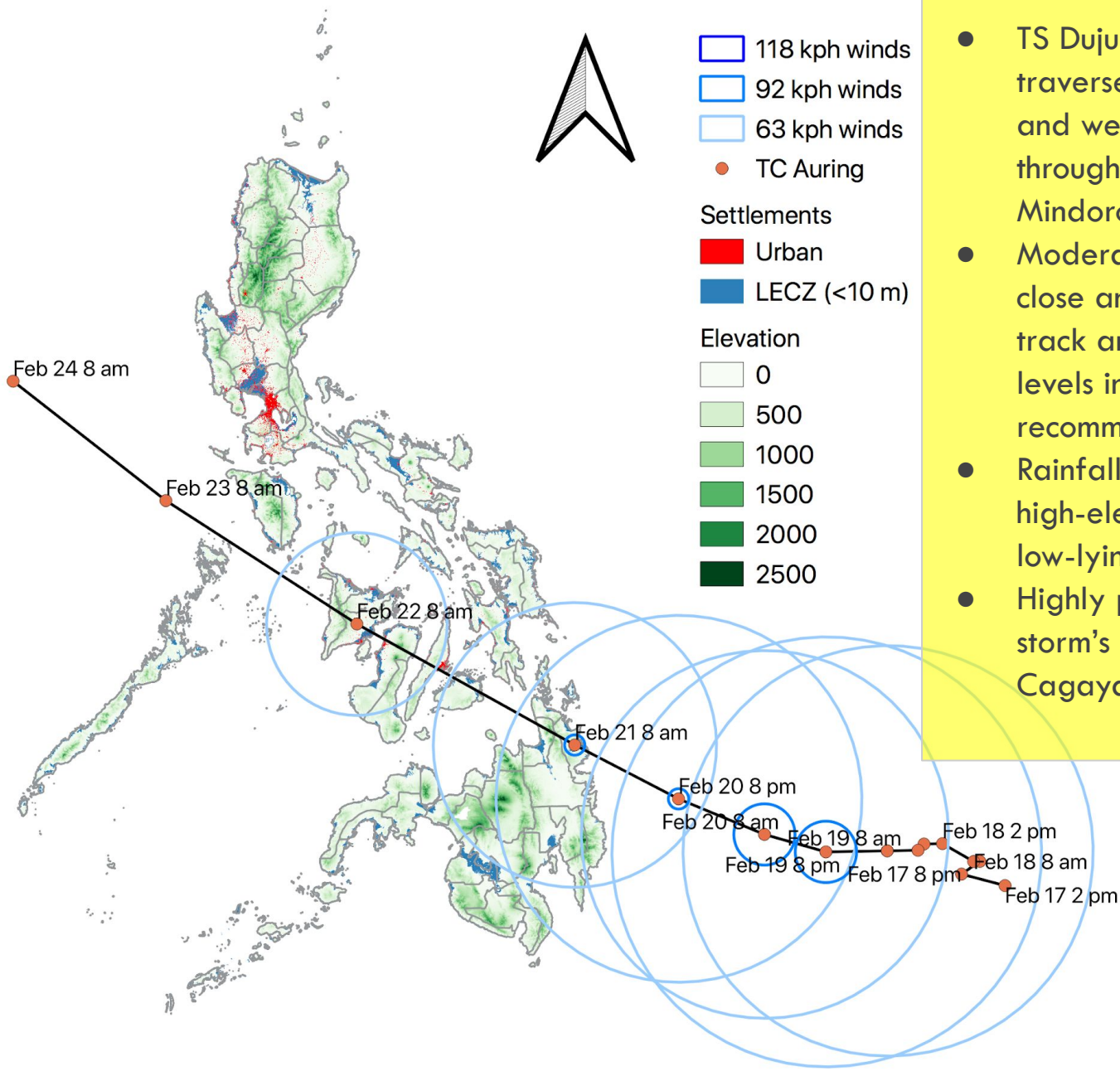


### Accumulated total precipitation (mm)



Philippines  
GFS (15 days) from 02/18/2021/06z

# Potential Impact Area of TS Dujuan (Auring)



- TS Dujuan (Auring) expected to slowly traverse northeast Mindanao, central and western Visayas, before exiting through northern Palawan and Mindoro.
- Moderate to heavy rainfall expected; close and constant monitoring of storm track and rainfall forecast, and water levels in dams and river systems recommended in the next few days
- Rainfall may cause landslides in high-elevation areas and flooding in low-lying areas
- Highly populated urban areas in the storm's path include the cities of Cagayan de Oro, Cebu and Iloilo.



## **Acronyms, abbreviations used**

**TC** - tropical cyclone

**TS** - Tropical Storm

**STS** - Severe Tropical Storm

**CAT** - Tropical Cyclone category based on Saffir-Simpson 1-min sustained winds scale

**ESE** - East Southeast

**N** - north/northern

**NE** - northeast

**W** - west/western

**E** - east/eastern

**S** - south/southern

**PAR** - Philippine area of responsibility

## **Links**

PAGASA - <http://bagong.pagasa.dost.gov.ph/tropical-cyclone/severe-weather-bulletin/2>

JTWC - <https://www.metoc.navy.mil/jtwc/jtwc.html>

CIMSS - <https://tropic.ssec.wisc.edu/>

JAXA - [http://sharaku.eorc.jaxa.jp/GSMaP\\_NOW/index.htm](http://sharaku.eorc.jaxa.jp/GSMaP_NOW/index.htm)

Meteologix PH - <https://meteologix.com/ph>

Exposure and Vulnerability Maps - <http://mapsanddata.observatory.ph>