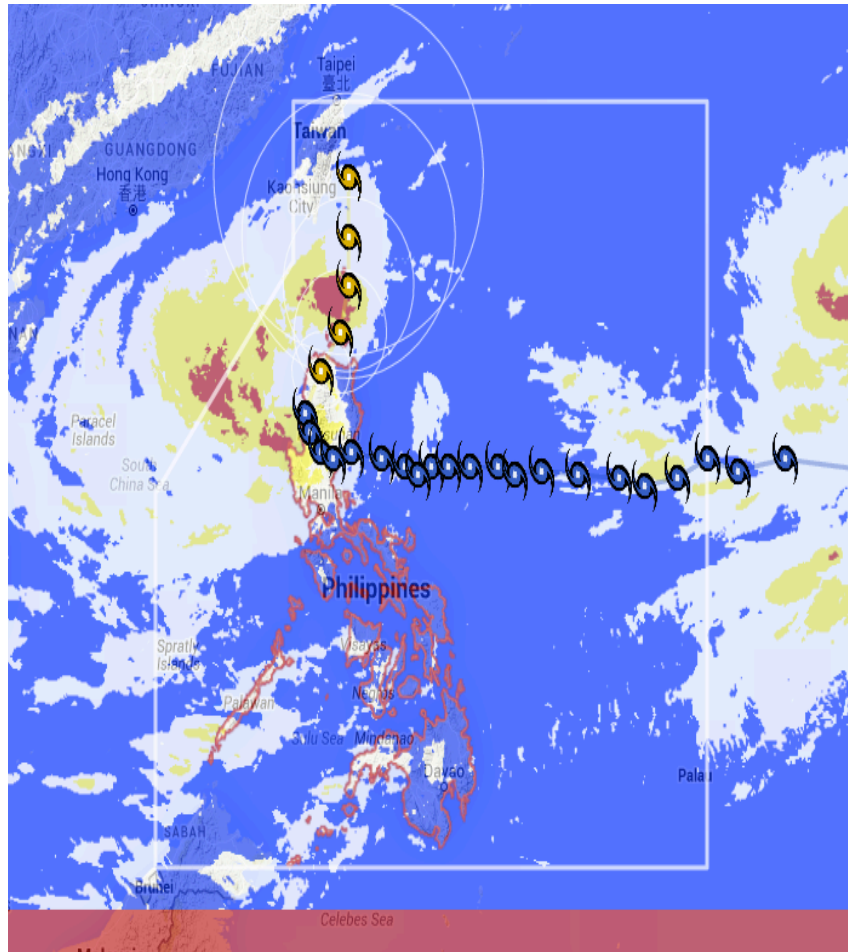




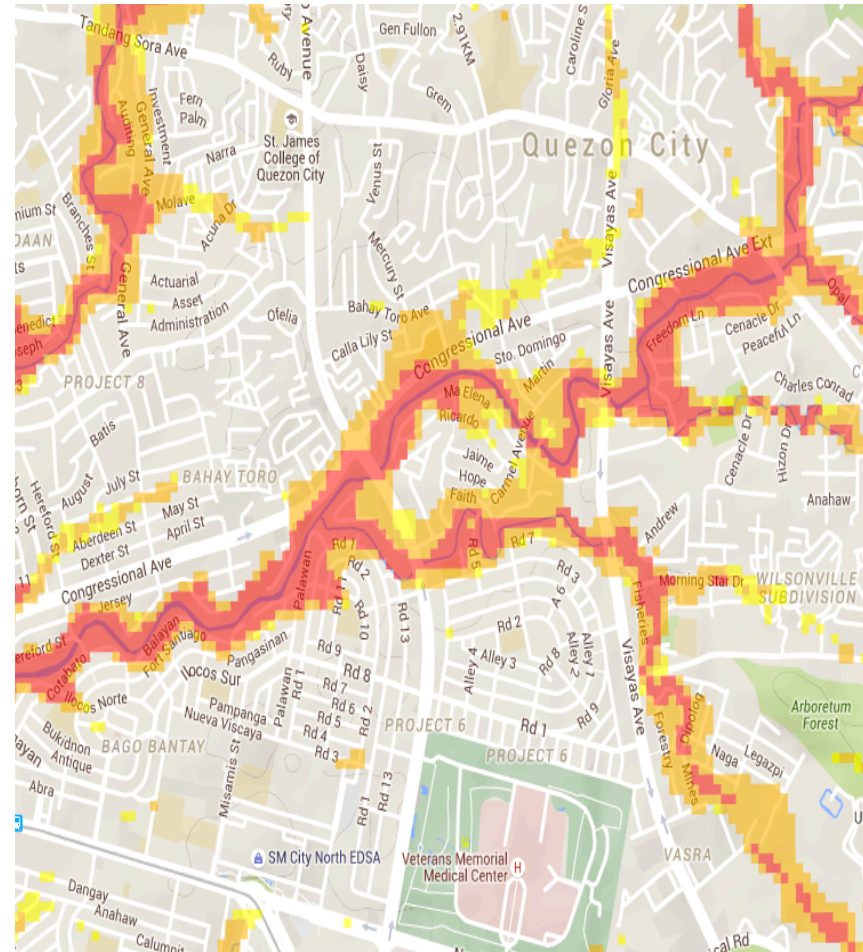
Nationwide Operational Assessment of Hazards

**Project NOAH team**

# AVOIDING DISASTERS

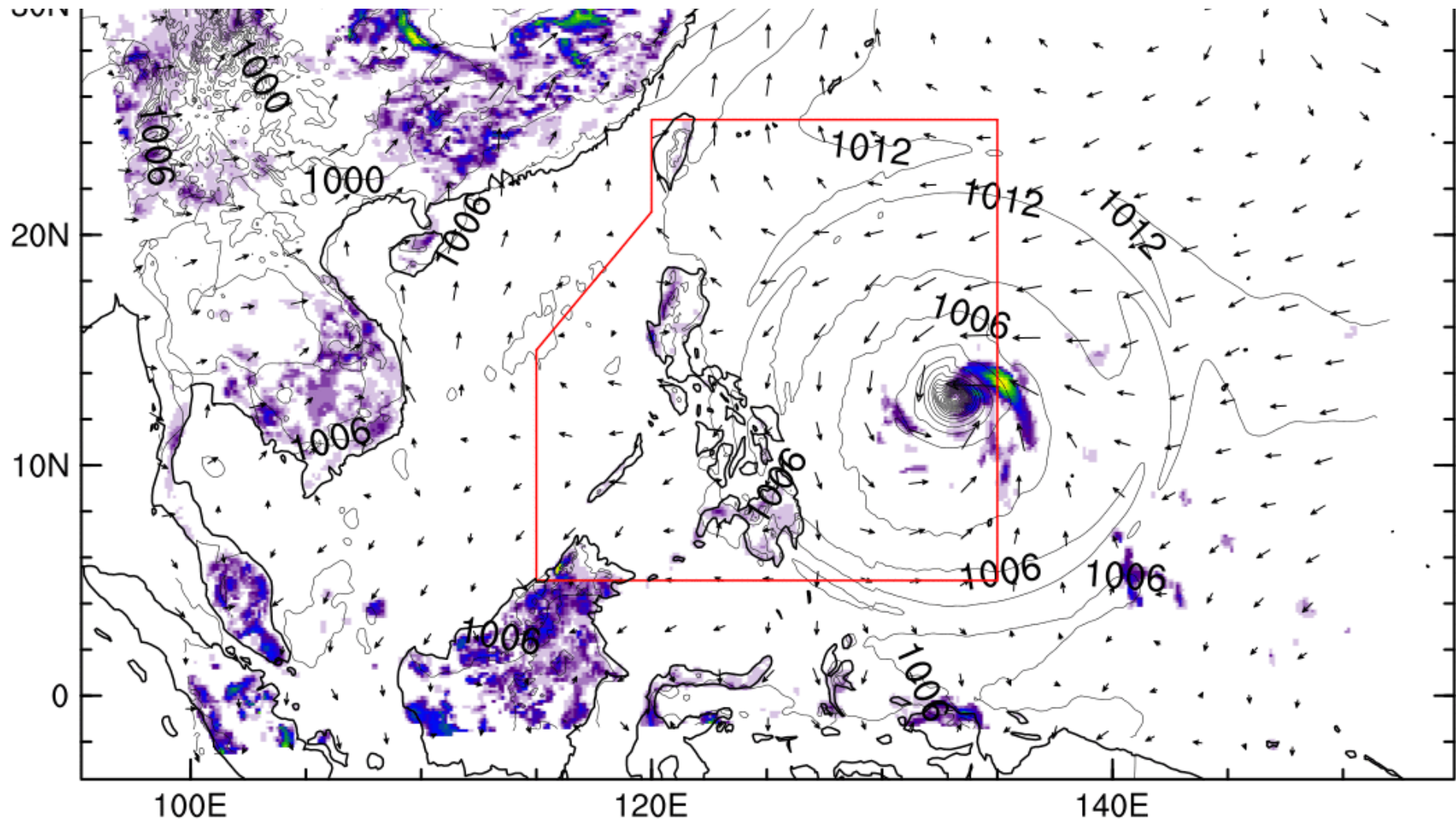


## WARN

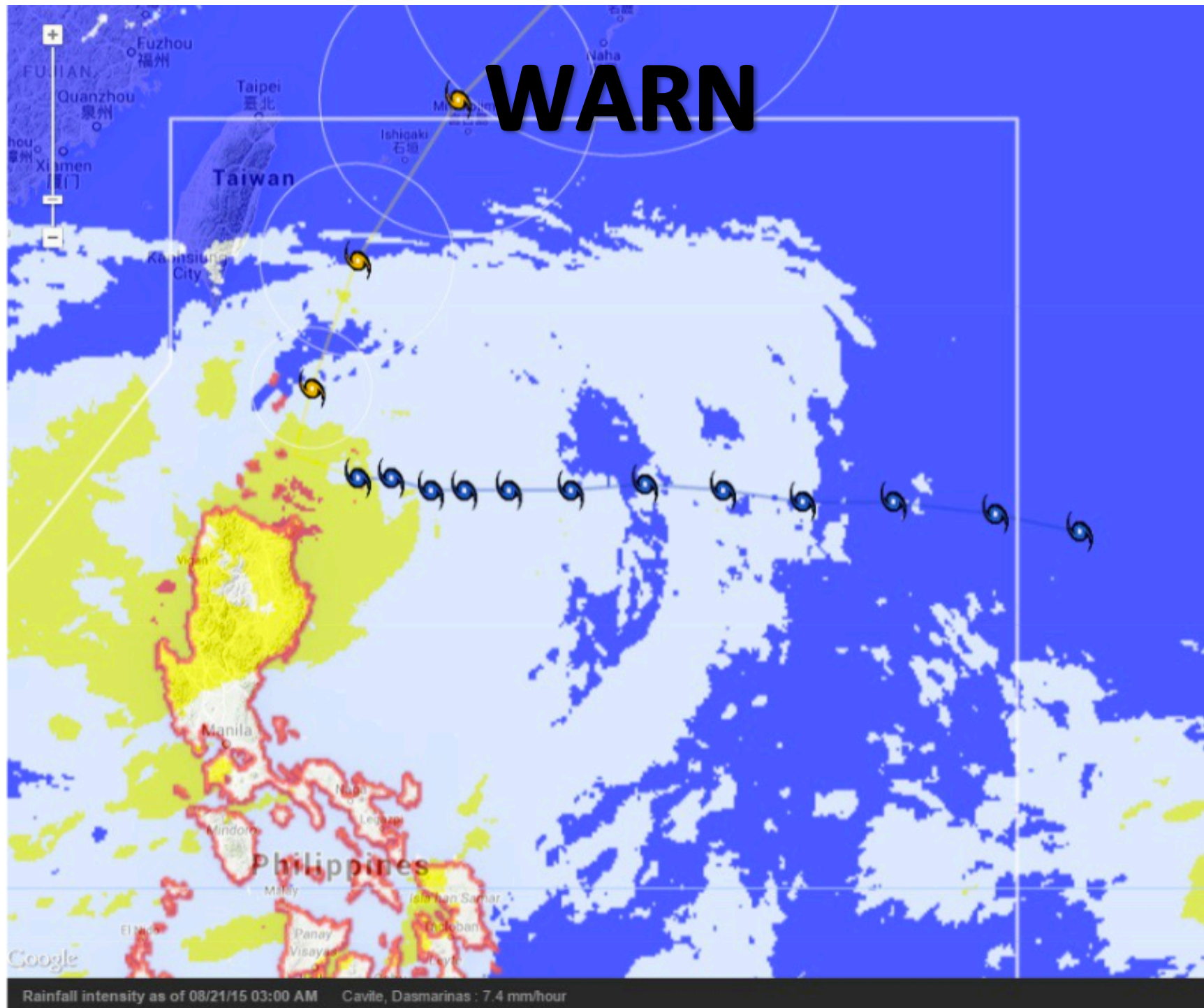


## RESPOND

# WARN

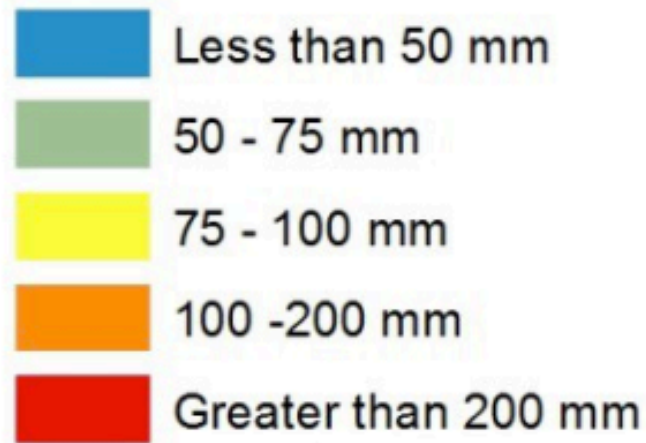


# WARN



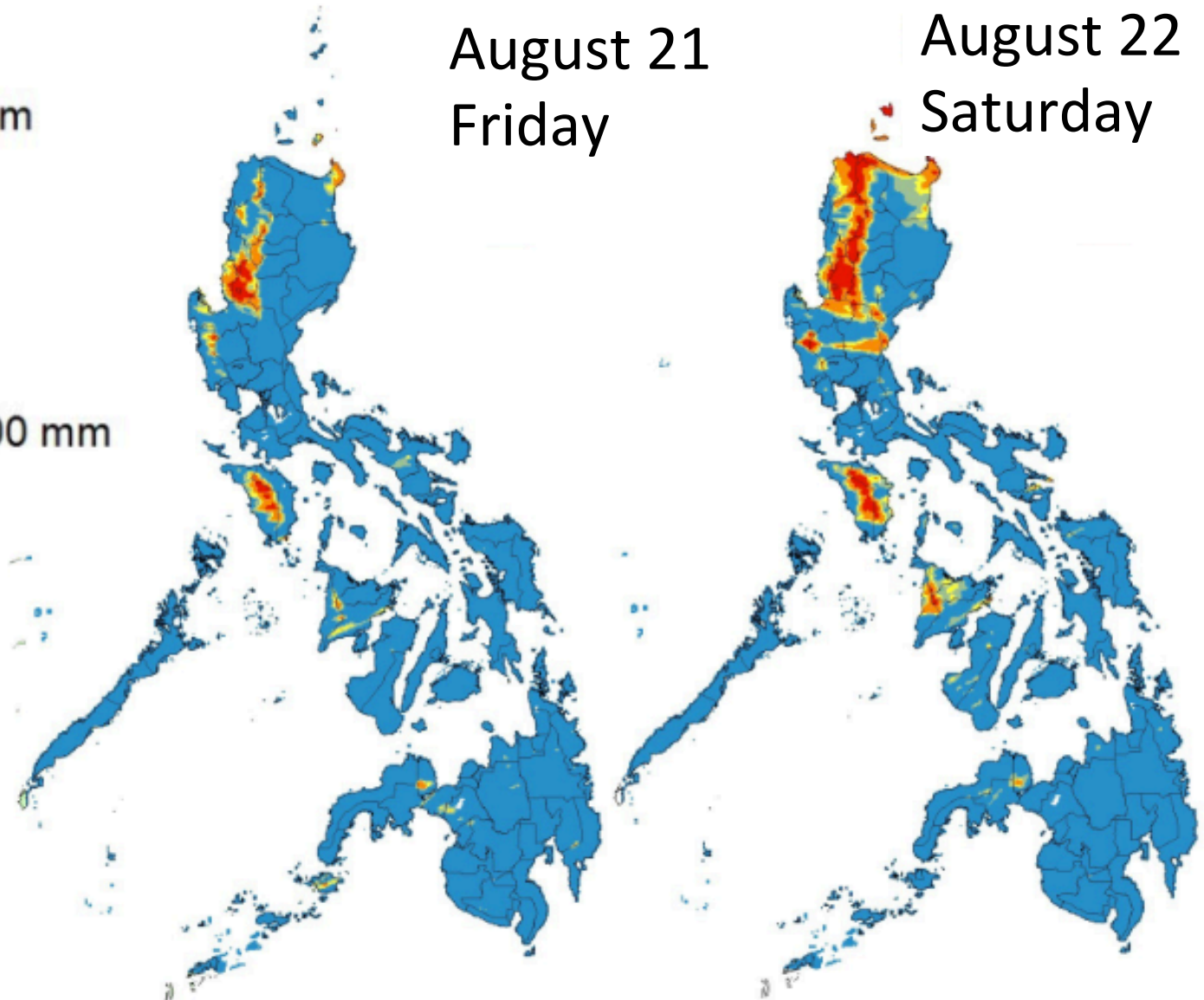
# PAGASA WRD

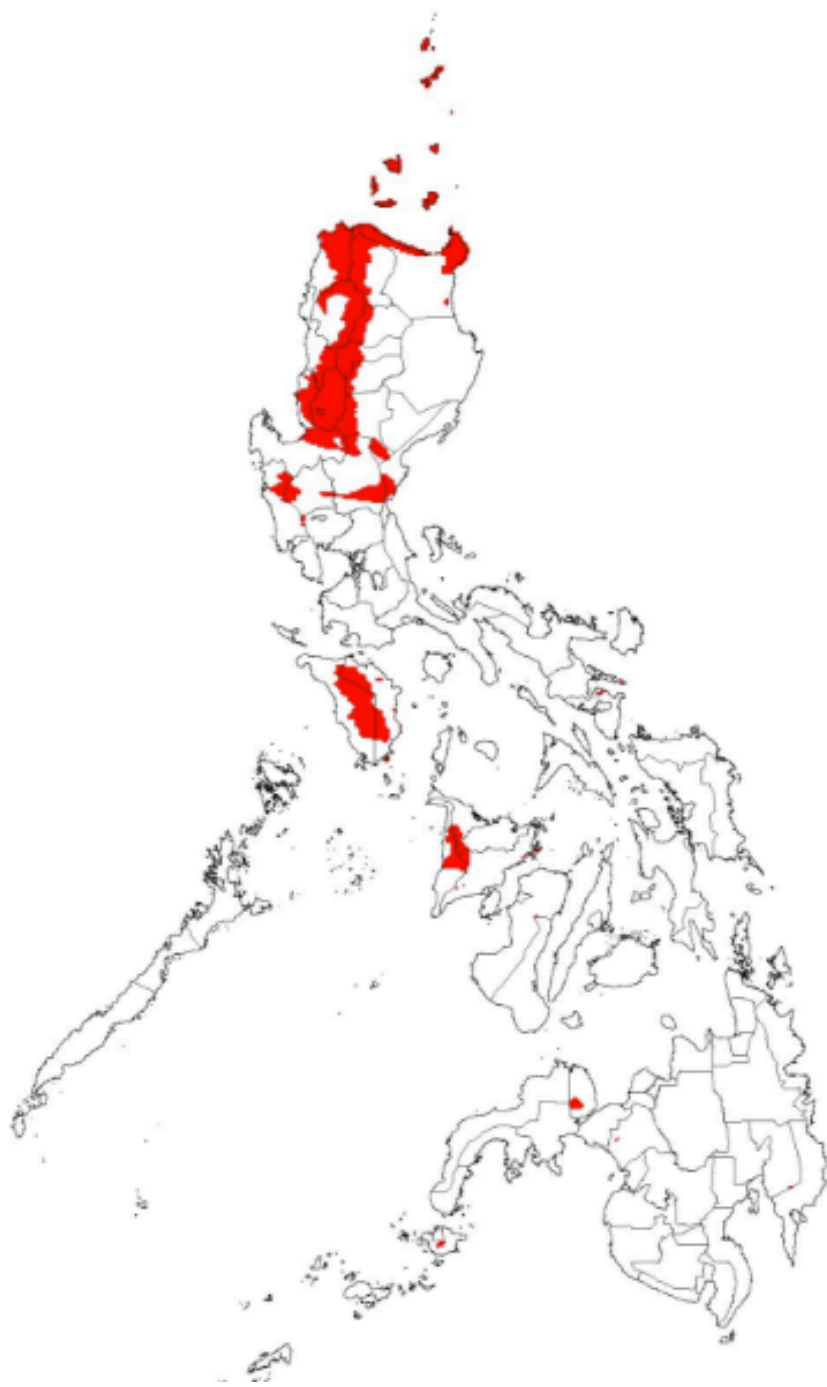
## Accumulated Rainfall Forecast



August 21  
Friday

August 22  
Saturday





**AREAS WITH  $\geq 100$  mm OF  
RAIN THAT MAY TRIGGER  
LANDSLIDES & FLOODS**

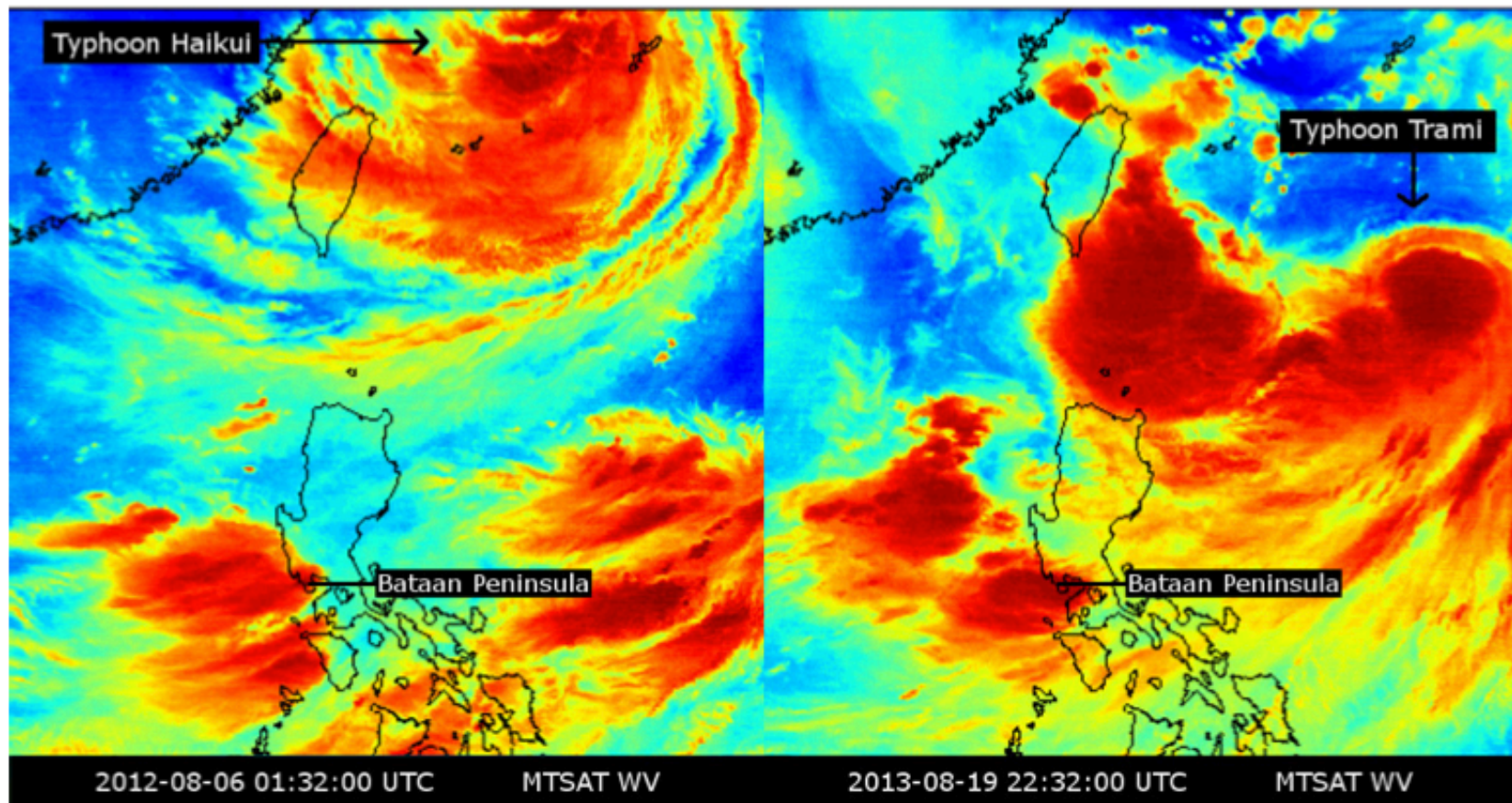
*Based on  
PAGASA WRF*

**231**  
Municipalities in  
**12** regions

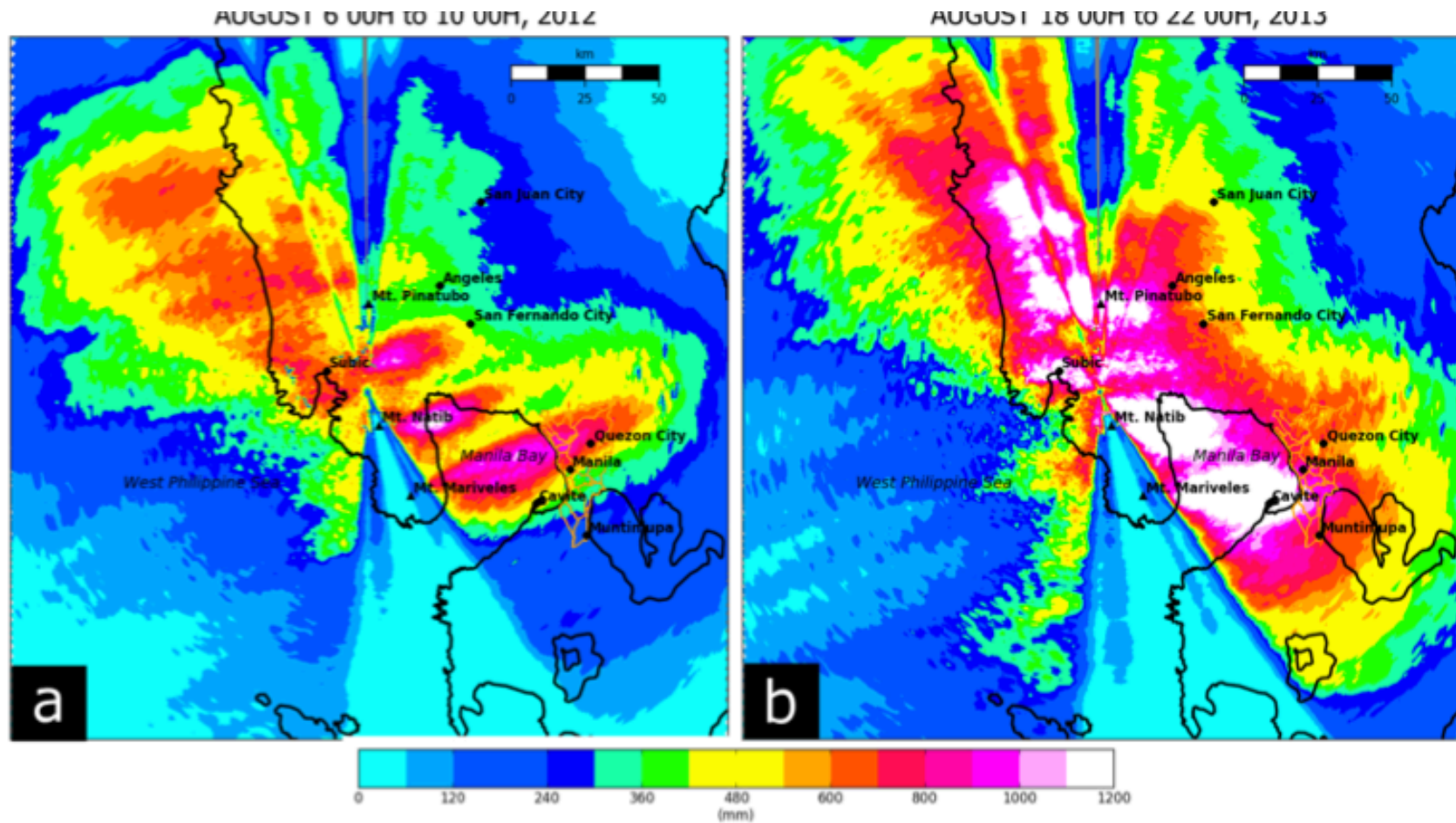
# Problems in days in advance forecast for disaster preparedness

- “Equations for the forecast models are built for higher latitude areas” — Julian Hunt, Director General and Chief Executive of the British Meteorological Survey from 1992-1997
- Land-sea-atmosphere interaction poorly understood in this region
- Accuracy of weather forecasts is never 100% because it is a model.

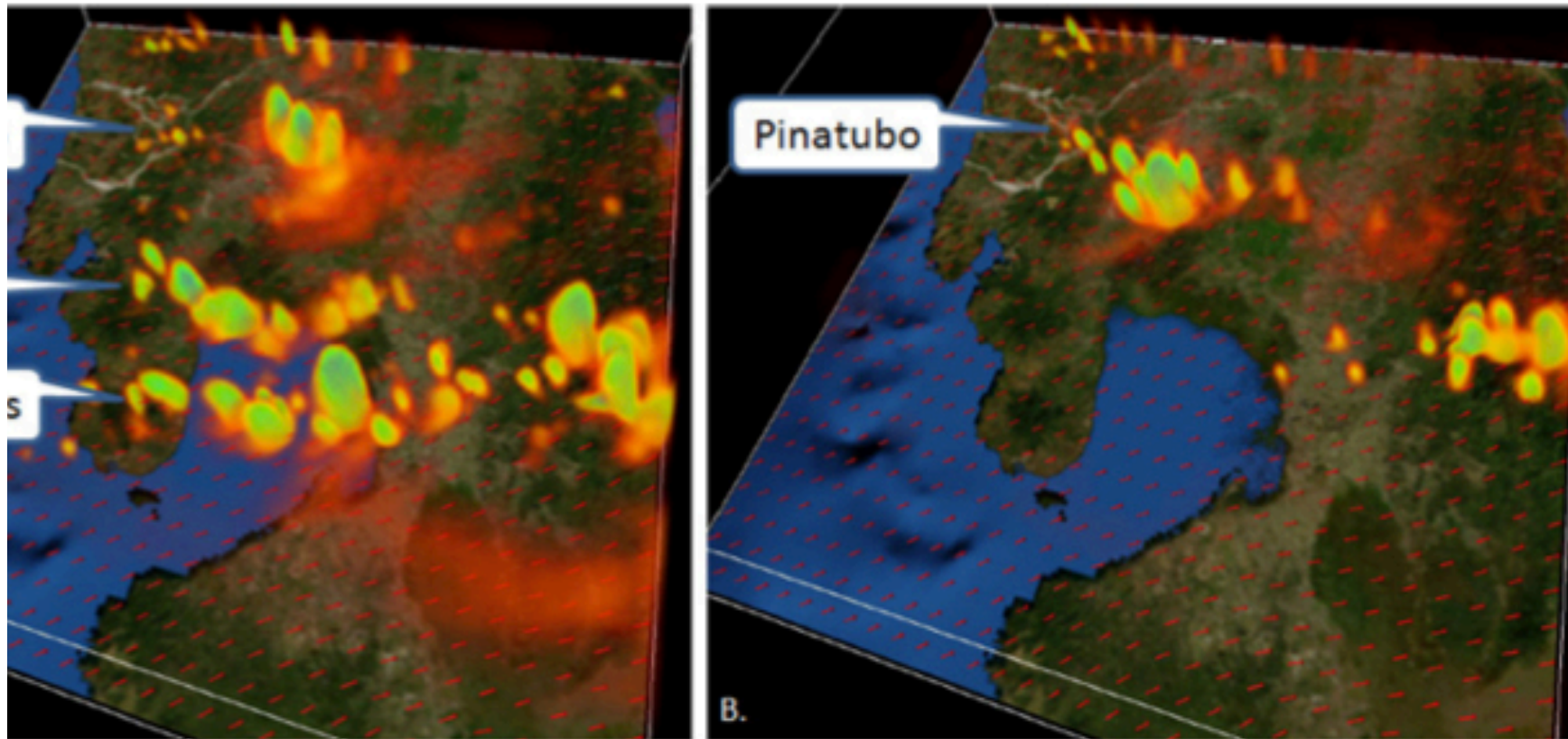
# Land-sea-atmosphere interaction



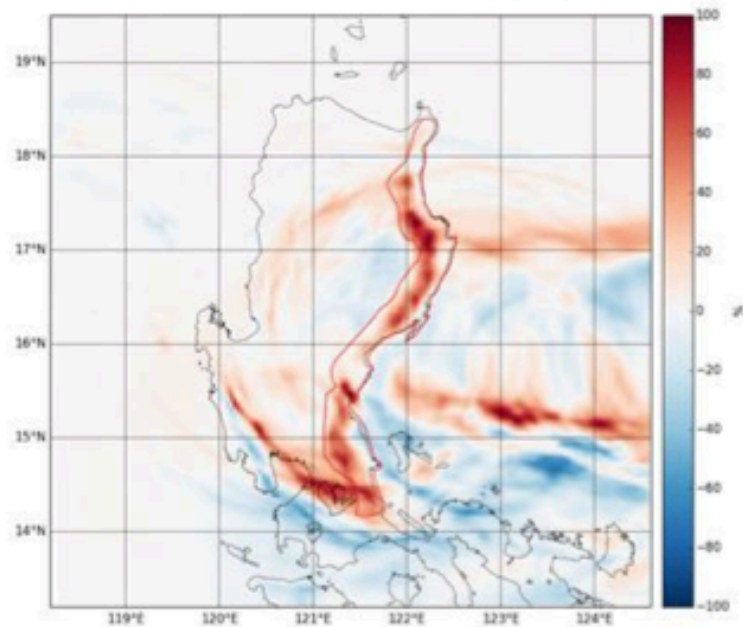
# Land-sea-atmosphere interaction



# Land-sea-atmosphere interaction

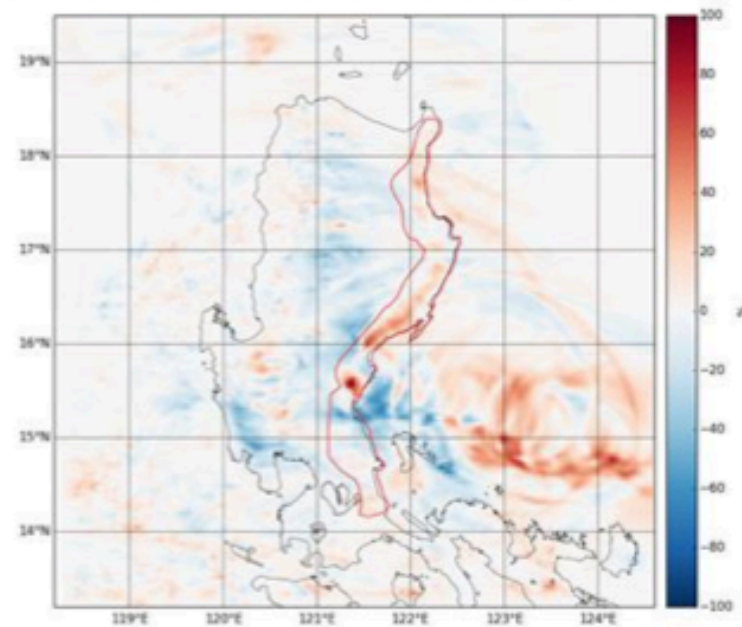


Normalized Difference in Total Accumulated Precipitation After Modifying Topography for TS Ondoy



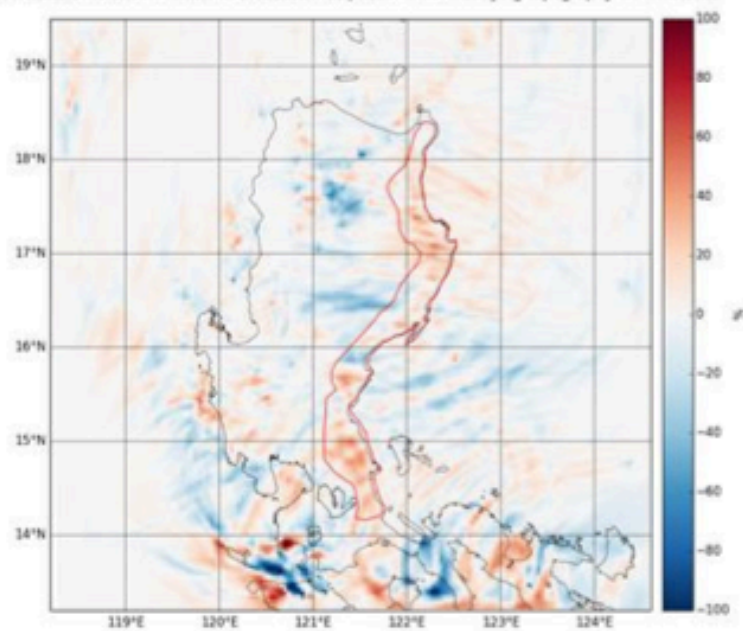
(a)

Normalized Difference in Total Accumulated Precipitation After Modifying Topography for TY Labuyo



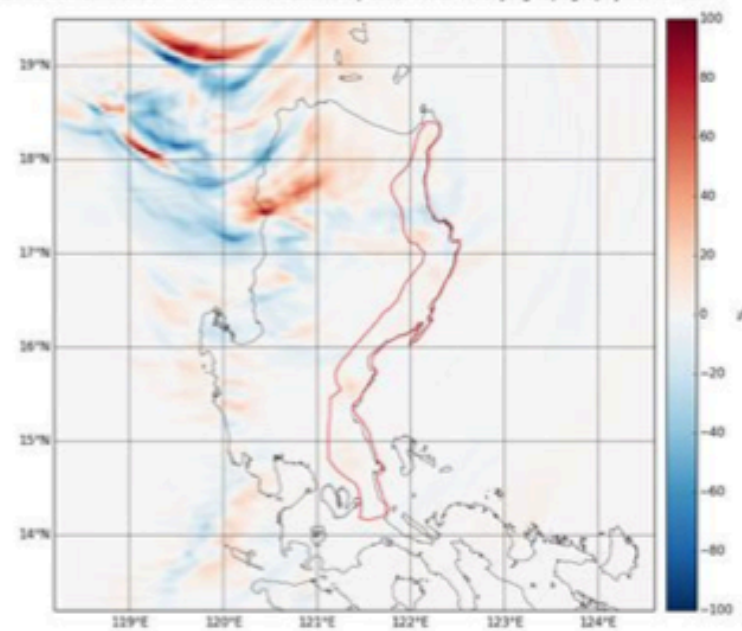
(b)

Normalized Difference in Total Accumulated Precipitation After Modifying Topography for TY Glenda



(c)

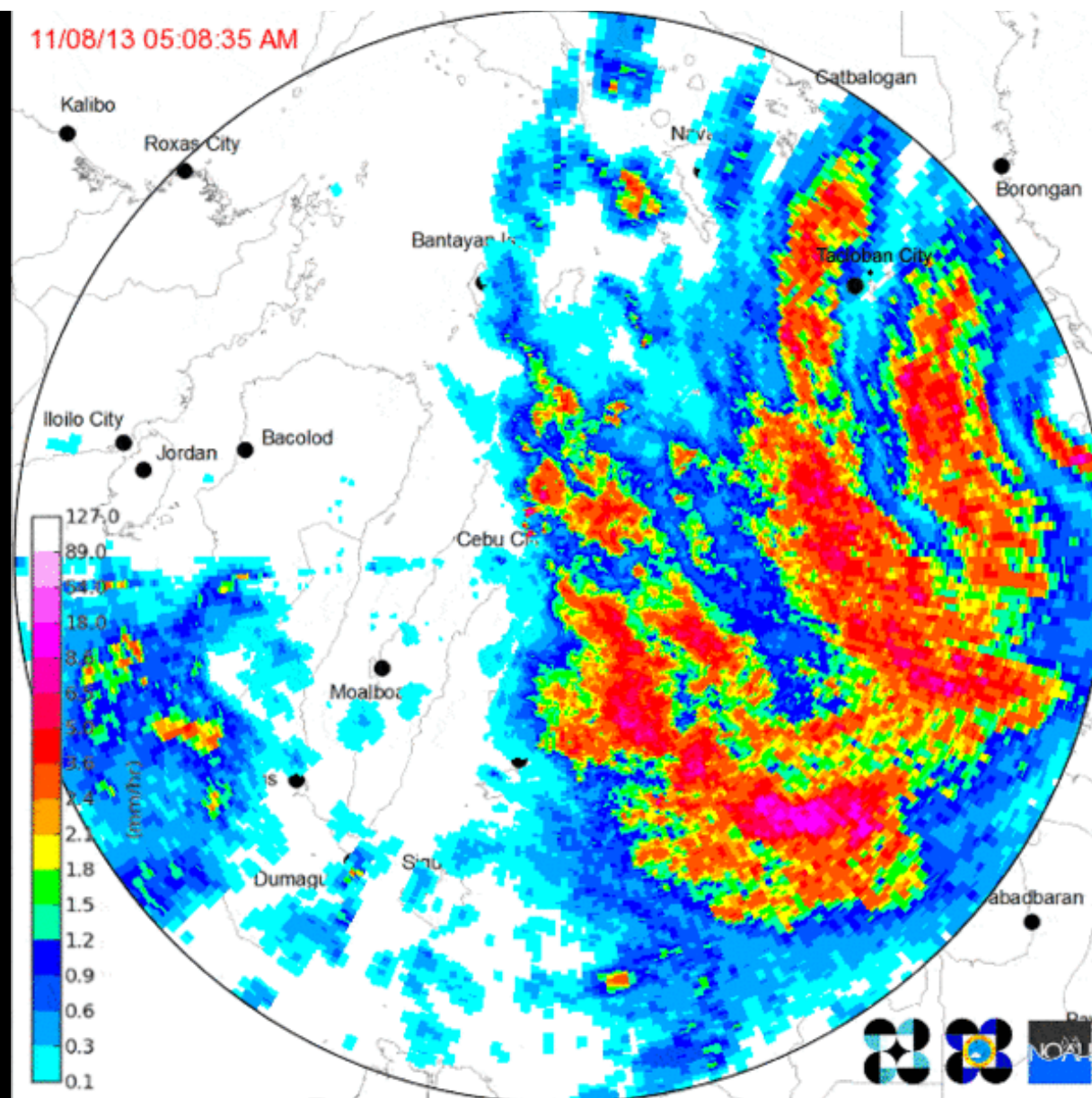
Normalized Difference in Total Accumulated Precipitation After Modifying Topography for TS Mario



(d)

# DOPPLER RADAR

Yolanda Doppler Radar image  
as it traverses the central  
Philippines region



Department of Science and Technology  
Nationwide Operational Assessment of Hazards





Find a place...



Google Maps Satellite

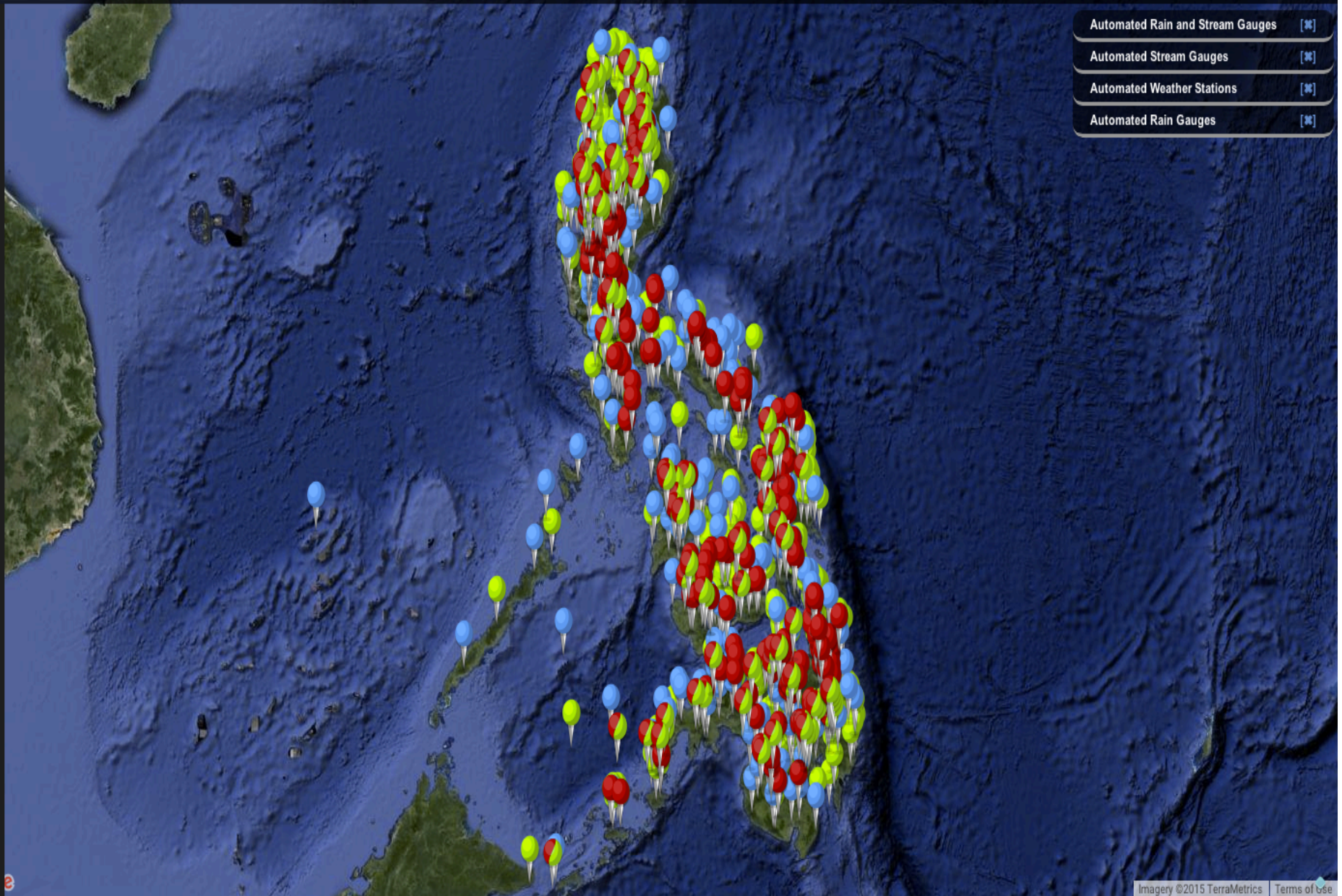


Automated Rain and Stream Gauges [36]

Automated Stream Gauges [36]

Automated Weather Stations [36]

Automated Rain Gauges [36]



Imagery ©2015 TerraMetrics Terms of use



# WARN

Find a place...  Google Maps Satellite + -

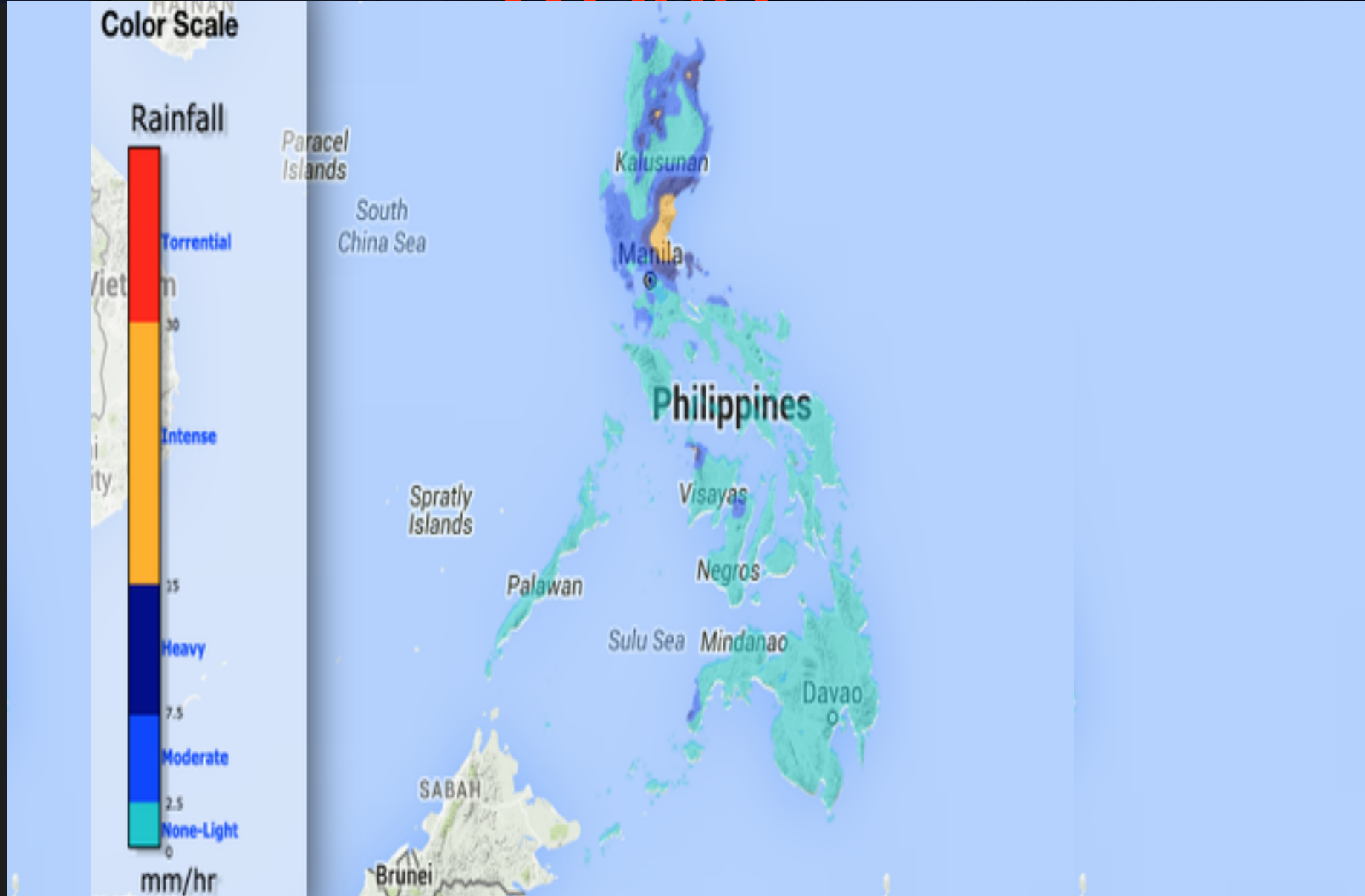


## Color Scale

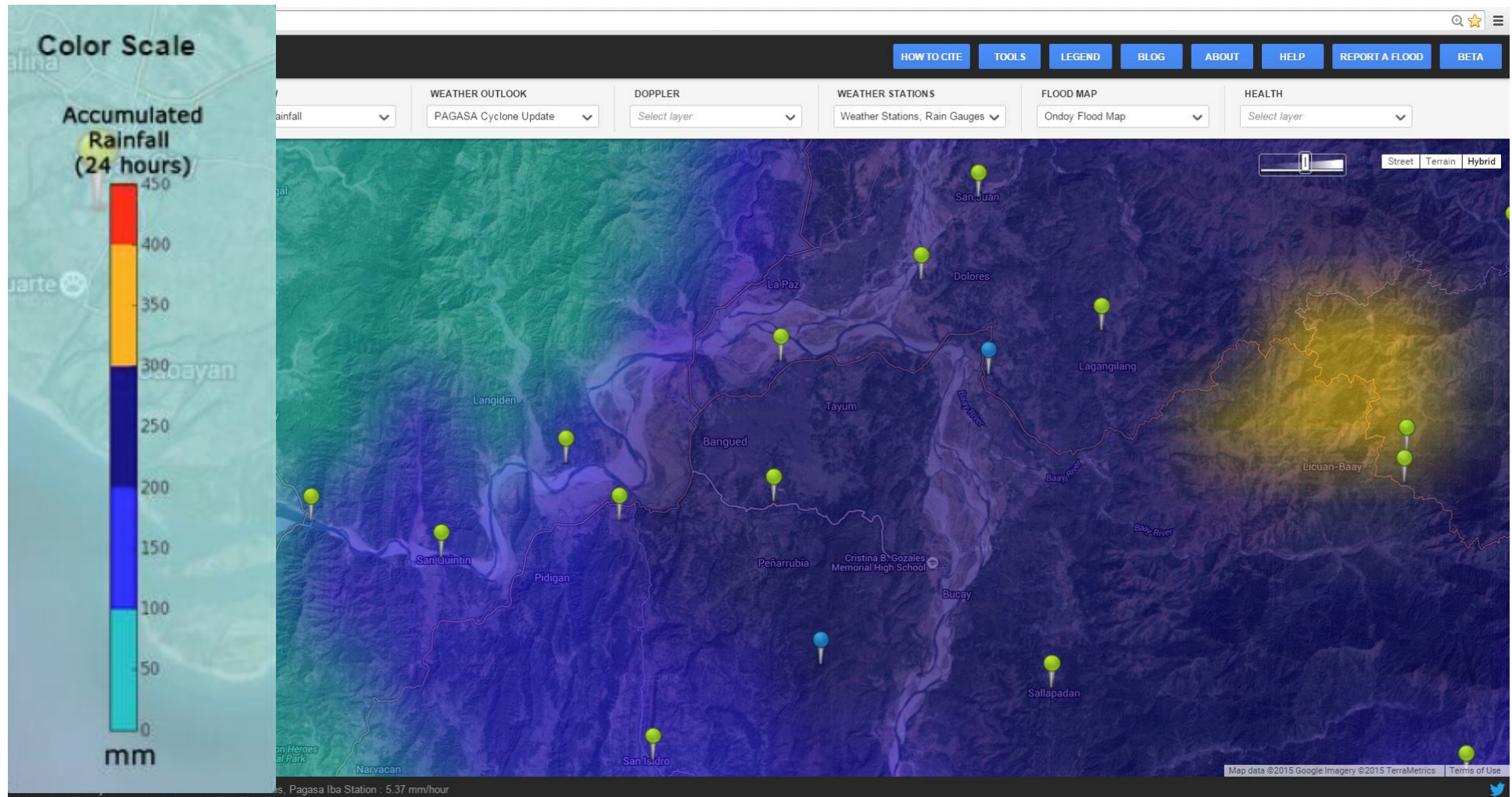
### Rainfall



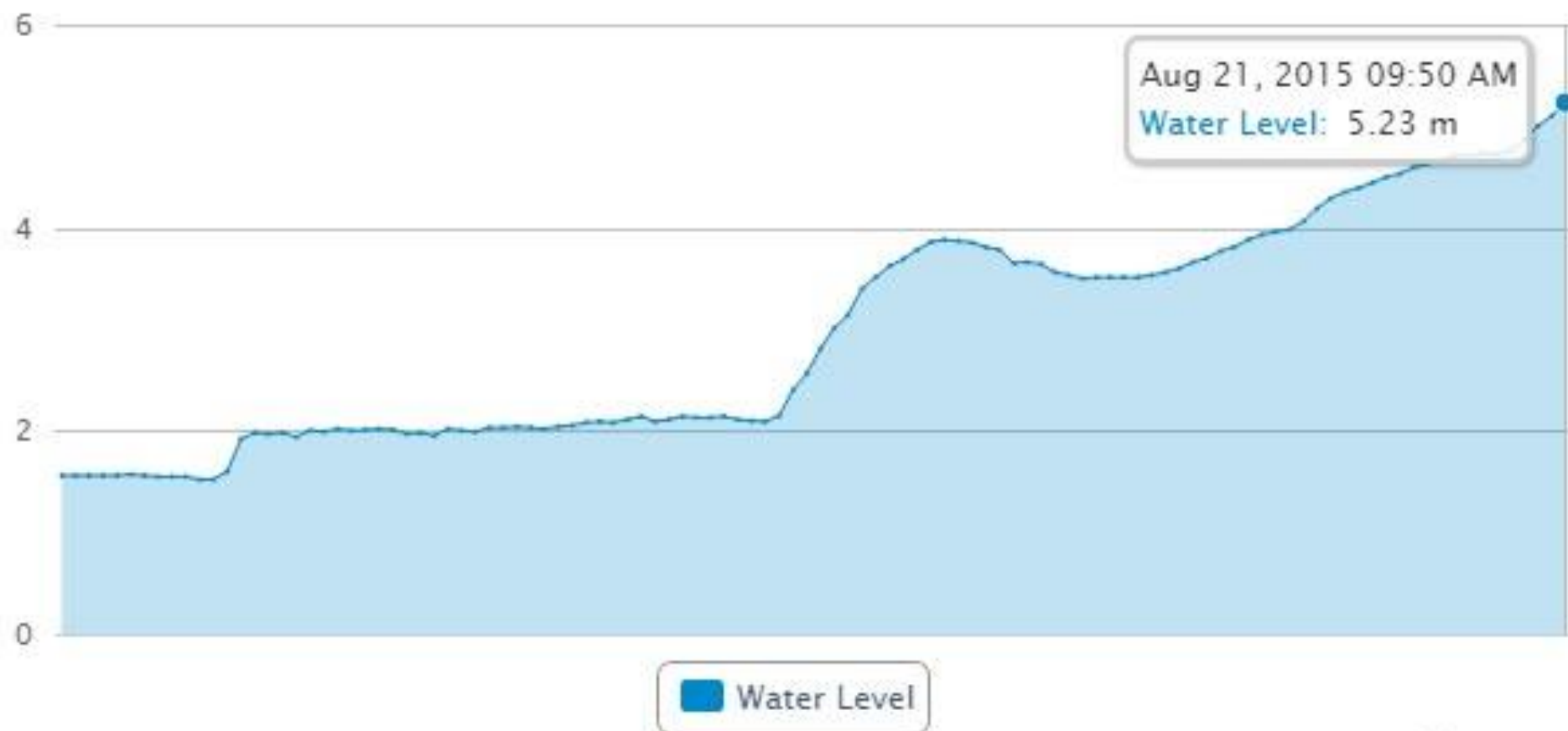
mm/hr



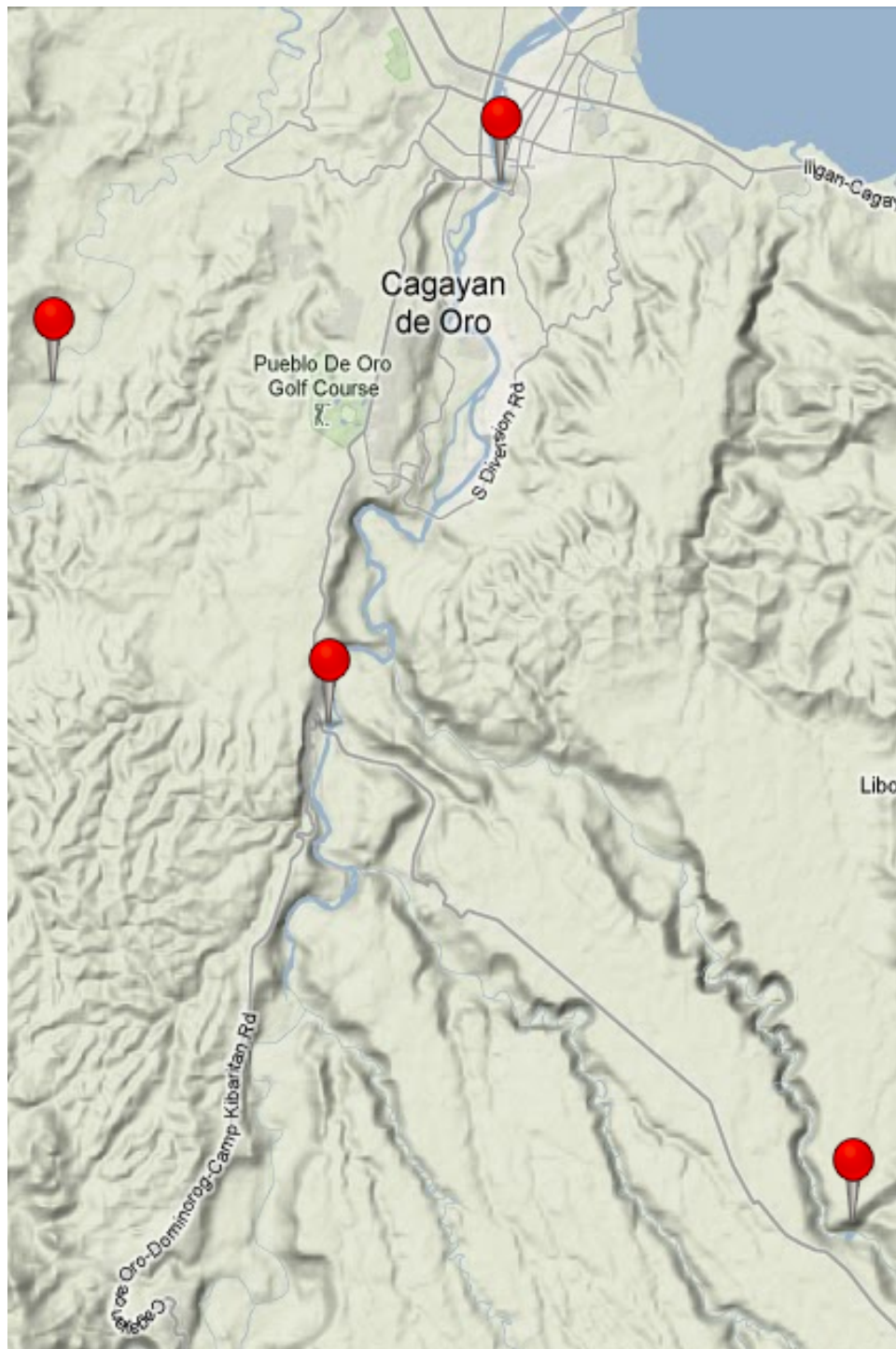
# WARN



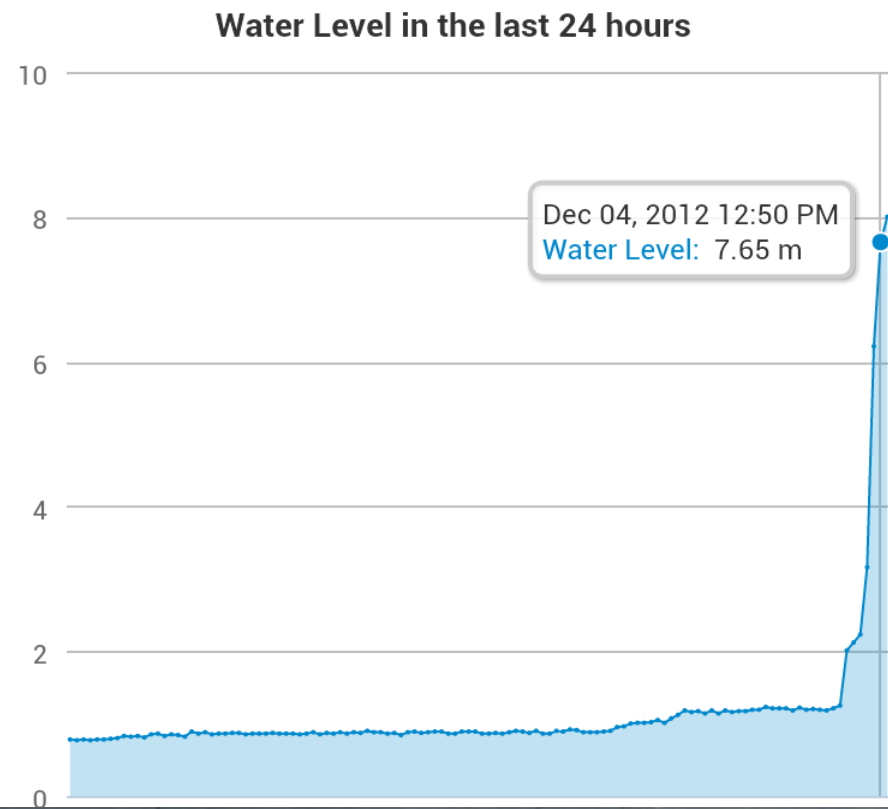
### Water Level in the last 24 hours

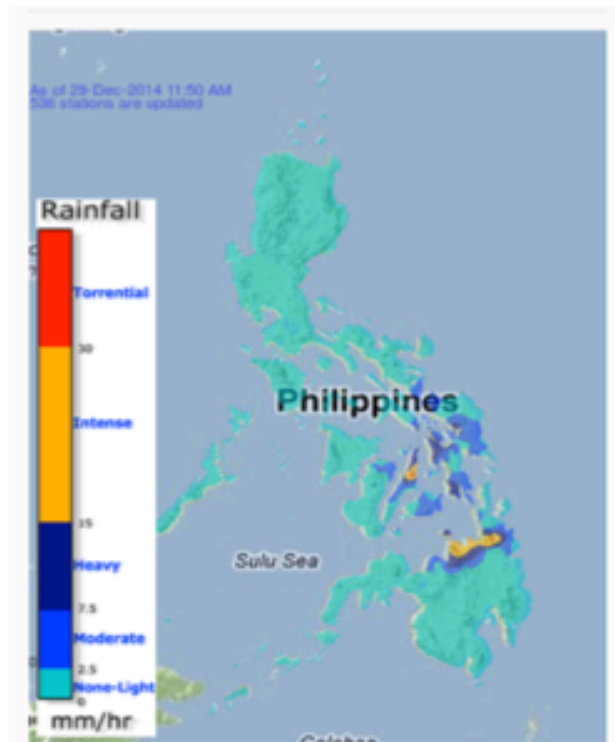
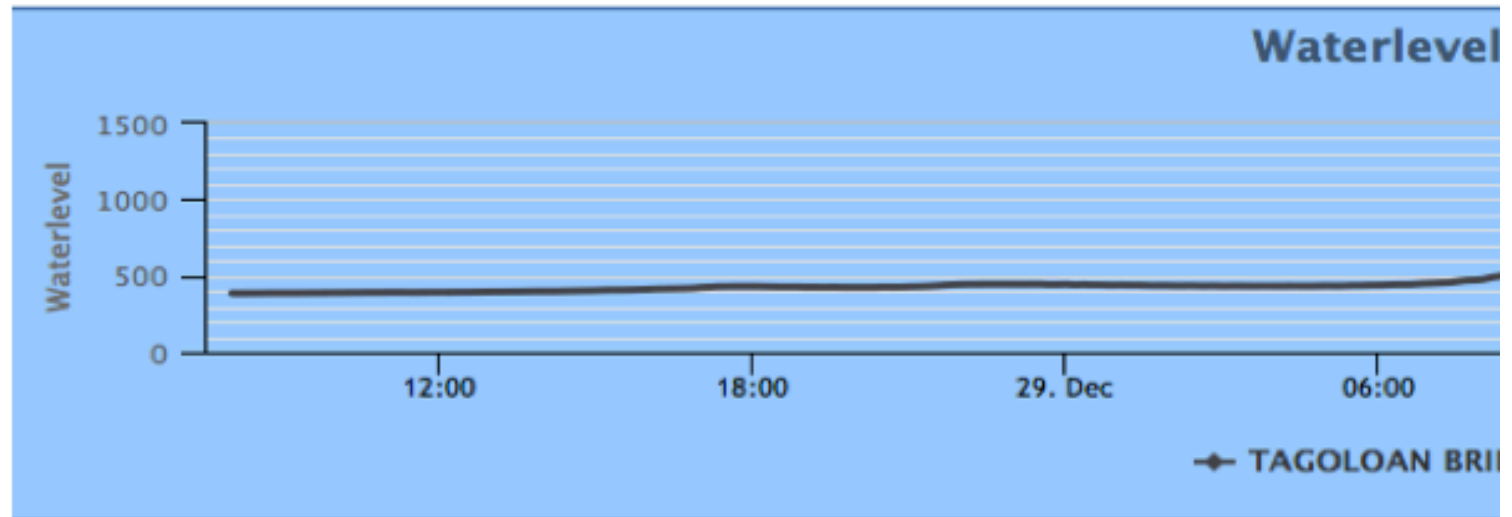






## Bubunawan Bridge, Bukidnon Stream Gauge





●●●●● Globe 11:39 AM

< Recents Info

### Eric Tagoloan

December 29, 2014

12:14 PM	Outgoing Call	1 i
12:13 PM	Canceled	
12:12 PM	Canceled	

mobile  
(0906) 326 3215

FaceTime

Notes

## Tweets

# RESPONSE



**mario** @ohohmario

3h

Good after noon po

[Collapse](#) [Reply](#) [Retweet](#) [Favorite](#) [More](#)

**680**

RETWEETS

**680**

FAVORITES



5:43 PM - 6 Dec 12 · Details

Reply to @ohohmario



**Anica Bianca Ordan** @anicaordan

3h

[@ohohmario](#) Good afternoooooon Mario Baby! I love youu! <3

[Expand](#)



**mika** @inspiritmika

3h

[@ohohmario](#) hi

[Expand](#)



★ **TWINKLE** ★ @superstaaarr

3h

[@ohohmario](#) Hi Mario! Chan Rak Khun! :) ♡

[Expand](#)

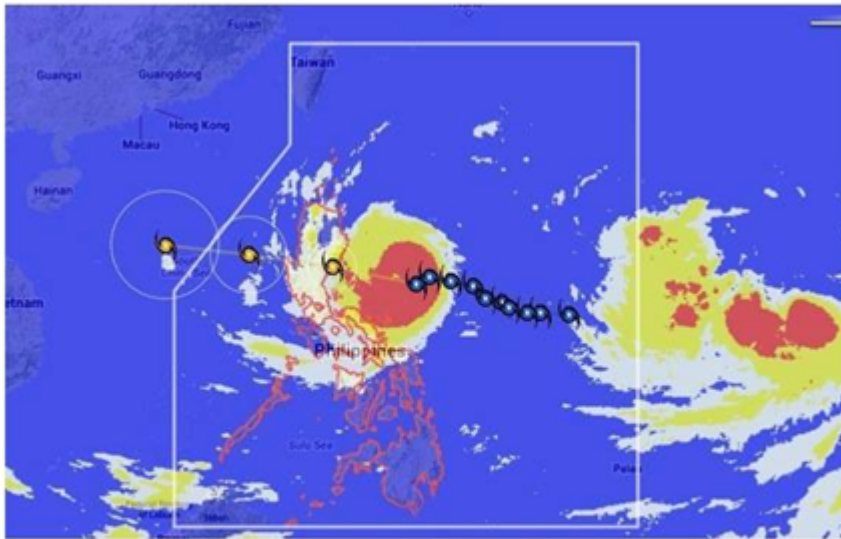


**Mahar Lagmay**

@nababaha

Forecast track & satellite image of typhoon #SantiPH . Paki share din po ito sa inyong mga kaibigan at mga kababayan [pic.twitter.com/75VuzARmtb](http://pic.twitter.com/75VuzARmtb)

10/11/13, 8:06 AM



29 RETWEETS 2 FAVORITES



**Mahar Lagmay**

@nababaha

Forecast track & satellite image of typhoon #SantiPH. Ang mag-retweet nito ay gaganda ang love life. [pic.twitter.com/VEqIvZrJsm](http://pic.twitter.com/VEqIvZrJsm)

10/11/13, 8:21 AM

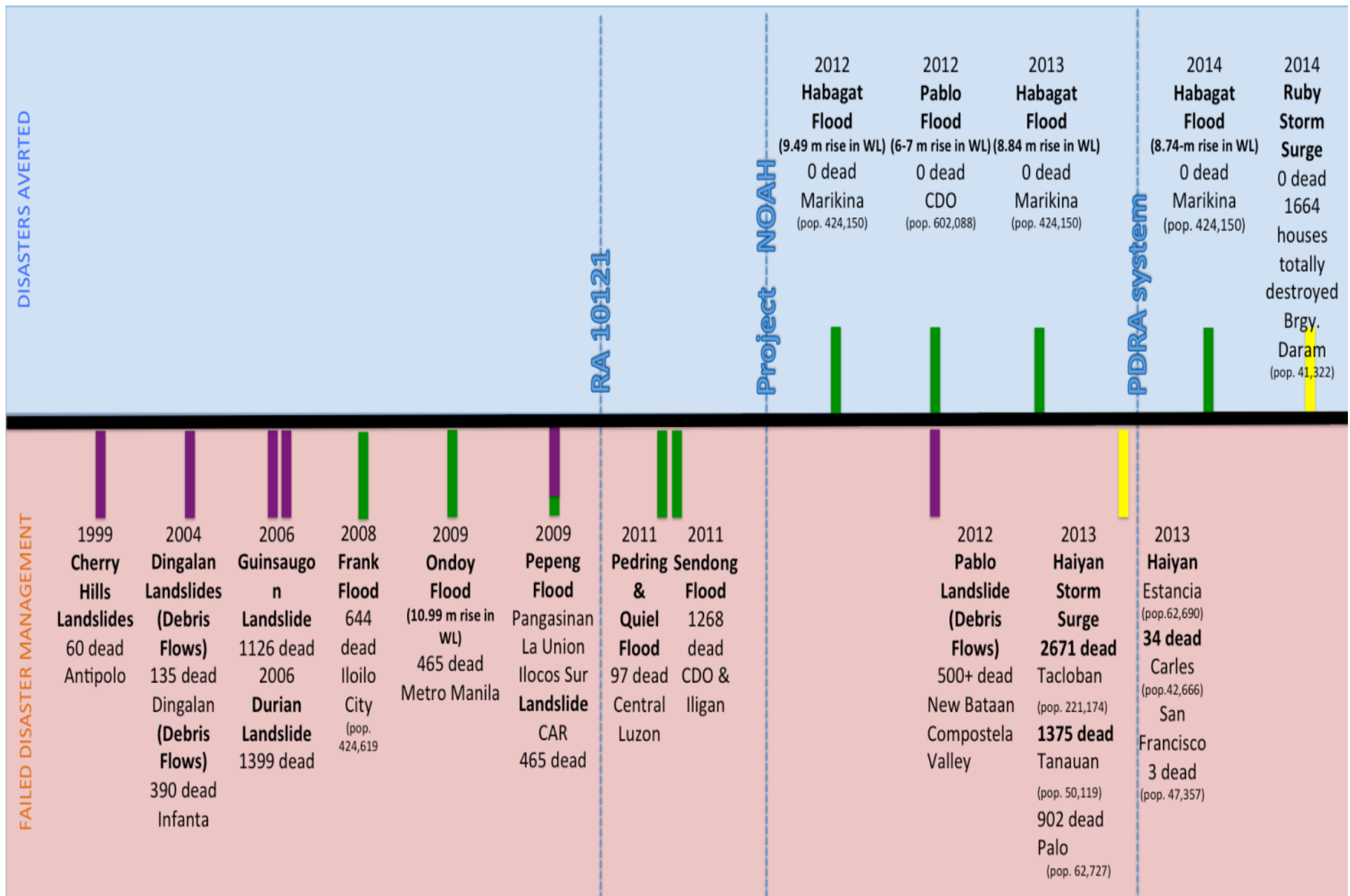


90 RETWEETS 12 FAVORITES

# FAILED DISASTER PREVENTION AND MITIGATION VS. DISASTERS AVERTED

DISASTERS AVERTED

FAILED DISASTER MANAGEMENT





油井 亀美也 Kimiya.Yui

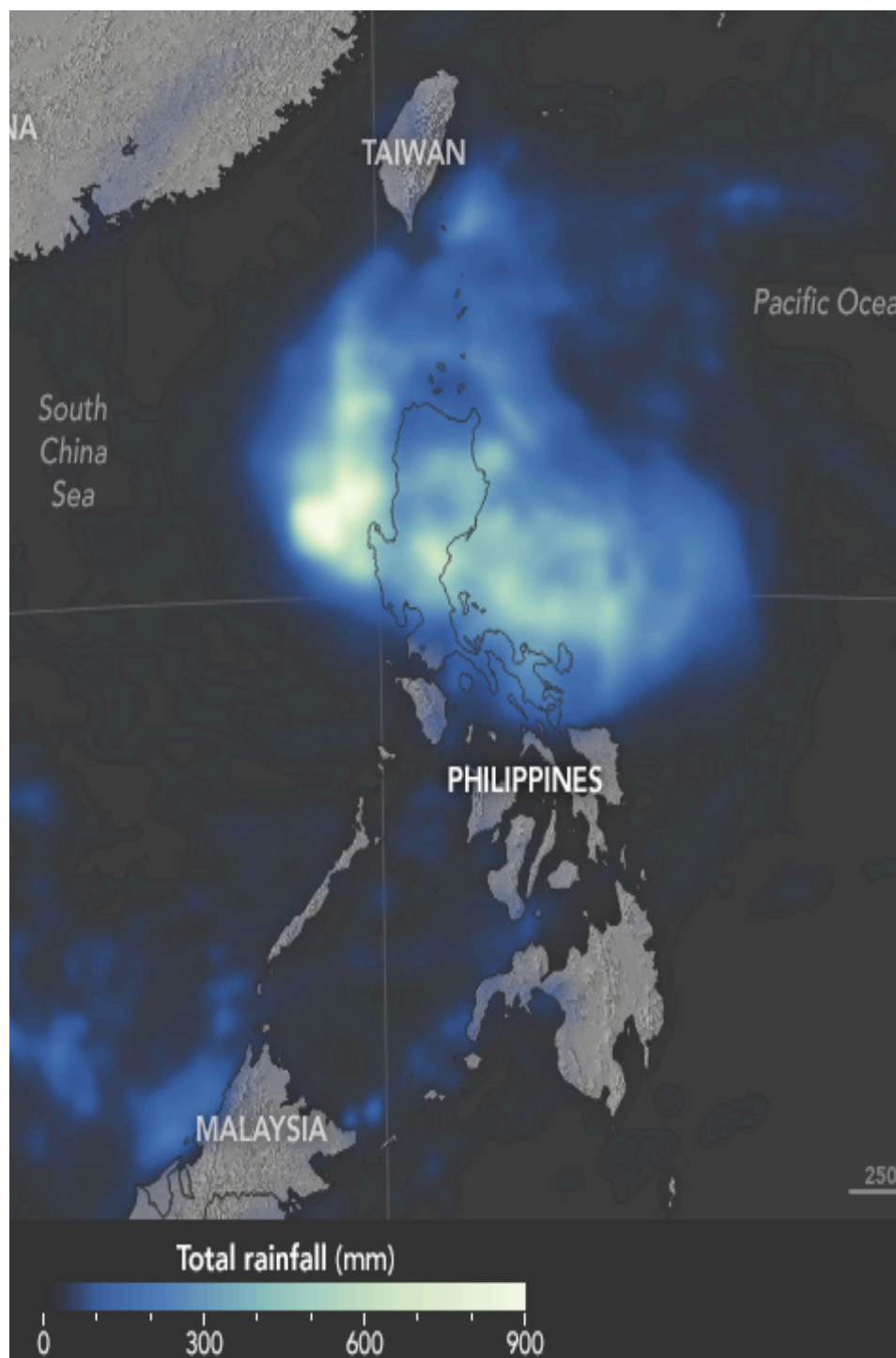
@Astro\_Kimiya



+ Follow

Another typhoon "Koppu"... I am worried about people in the Philippine... 台風24号。この台風の雲下で苦しんでいる人達がいる事を思うと、悲しくなります。。

[View translation](#)





Source: Interaksyon



GABALDON, NUEVA ECIJA



## BAGSIK NI LANDO

MARAMING KALSADA, HINDI PA RIN MADAANAN  
DAHIL SA BAHÁ AT LANDSLIDES



SOCIAL MEDIA | ebook: [facebook.com/typatrol.absbn](https://facebook.com/typatrol.absbn)



Typhoon Pablo on 4 December 201