

Learning from Typhoon Yolanda Experiences to Save Future Lives

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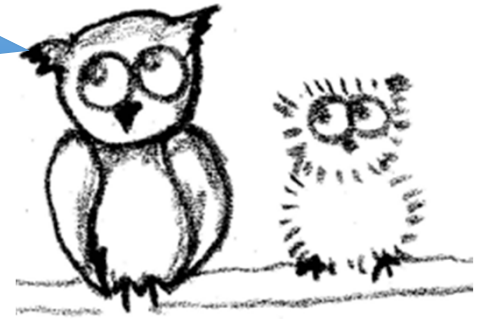
INTRODUCTION



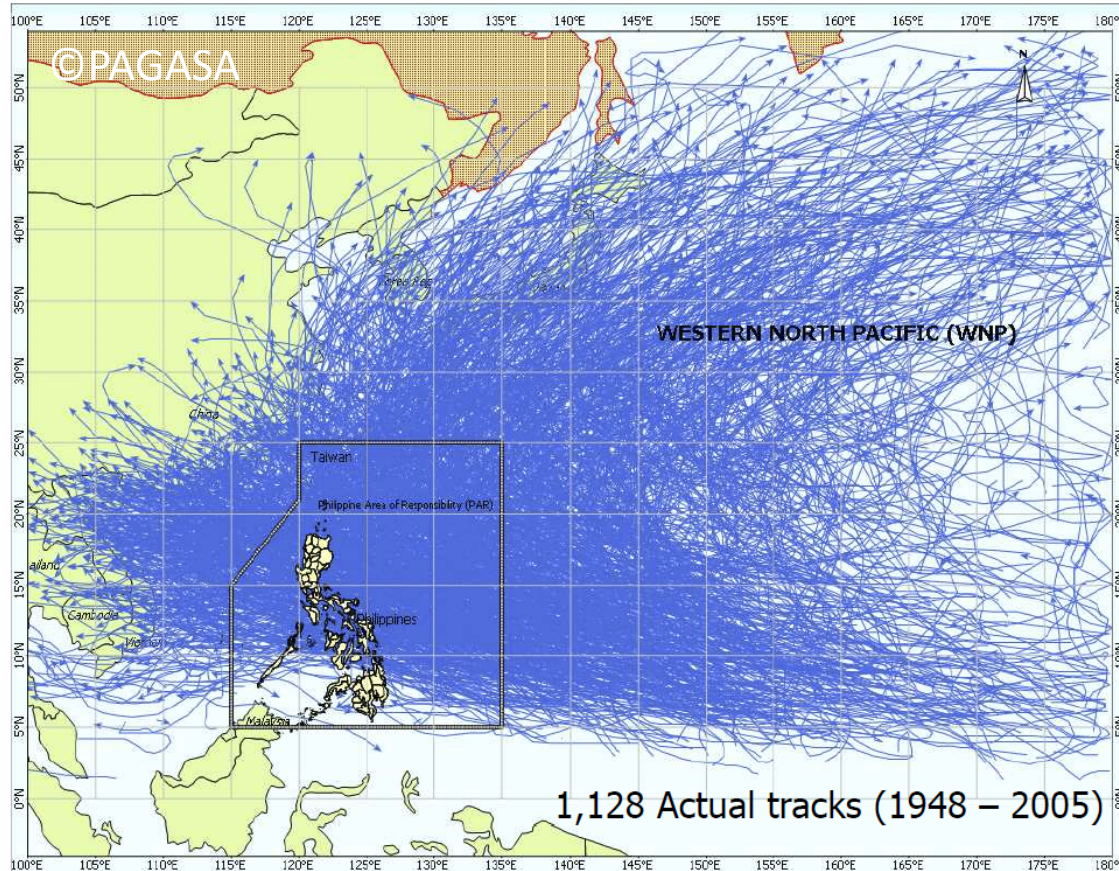
Affected by the 2011 Tsunami



What is a Typhoon?



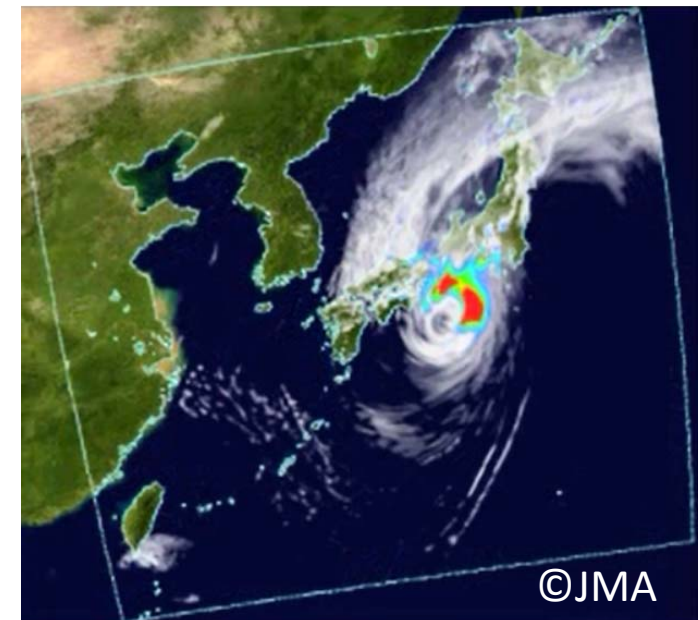
Annual average of 20 Typhoons



Source: PPT of Lourdes V. Tibig (PAGASA) during the Climate Change Adaptation Capacity Assessment Roll-out. BSWM Convention Hall, Quezon City, 20 July 2009

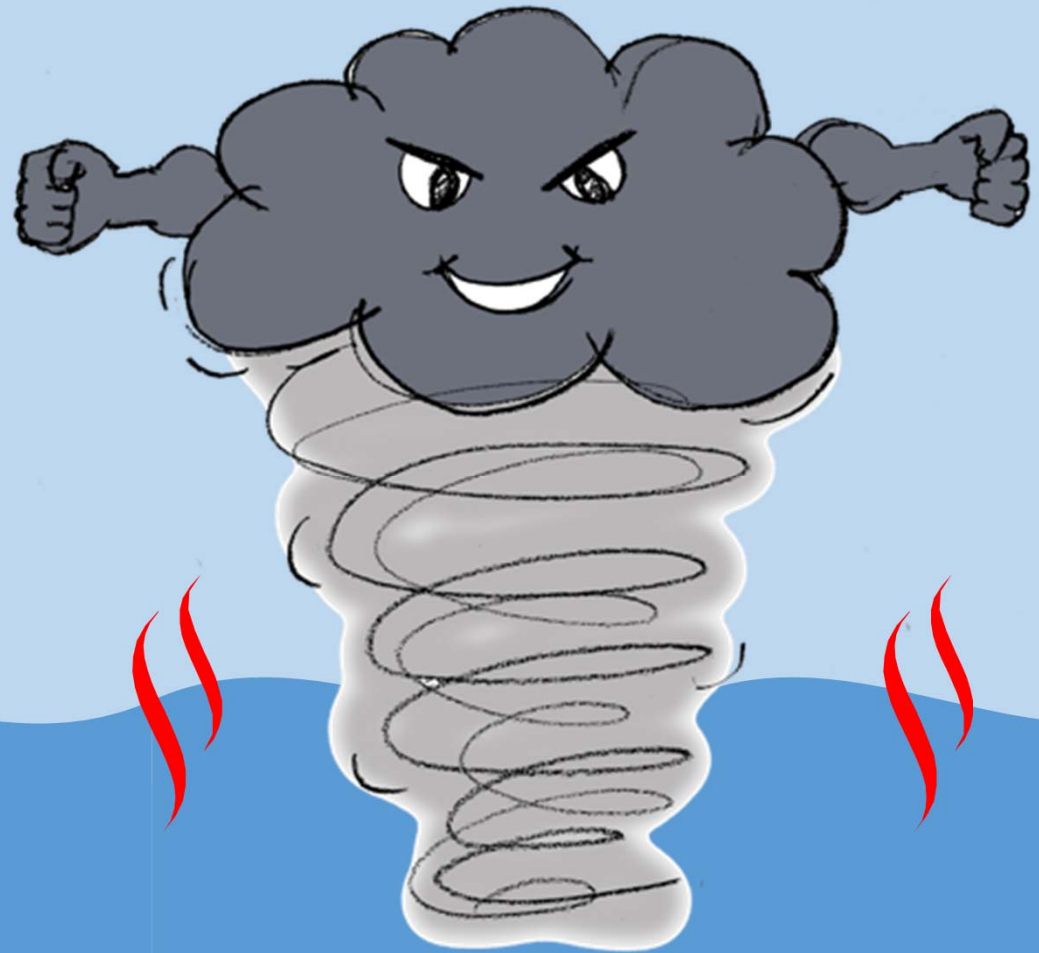
Japan is also expected to be attacked by super typhoon

Many typhoons attack the Philippines



Future Projected super typhoon (JMA)

A: Typhoon is a rotating, organized system of clouds and thunderstorms that starts over tropical waters, and brings strong wind and heavy rainfall.



Typhoon Yolanda

We have many typhoons every year....



Why did Typhoon Yolanda make such big damage to Tacloban?

Why did so much damage occur by Yolanda?



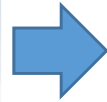


Answer 1: Because of strong wind made by super typhoon

Before



©PAGASA



After Radar is Gone!!



Radar designed to withstand **100 m/s** wind was destroyed

10 – 20 m/s



©JMA

30 – 40 m/s



©JMA

100 m/s = Super Express Train!!





Answer 2: Because of storm surge made by super typhoon



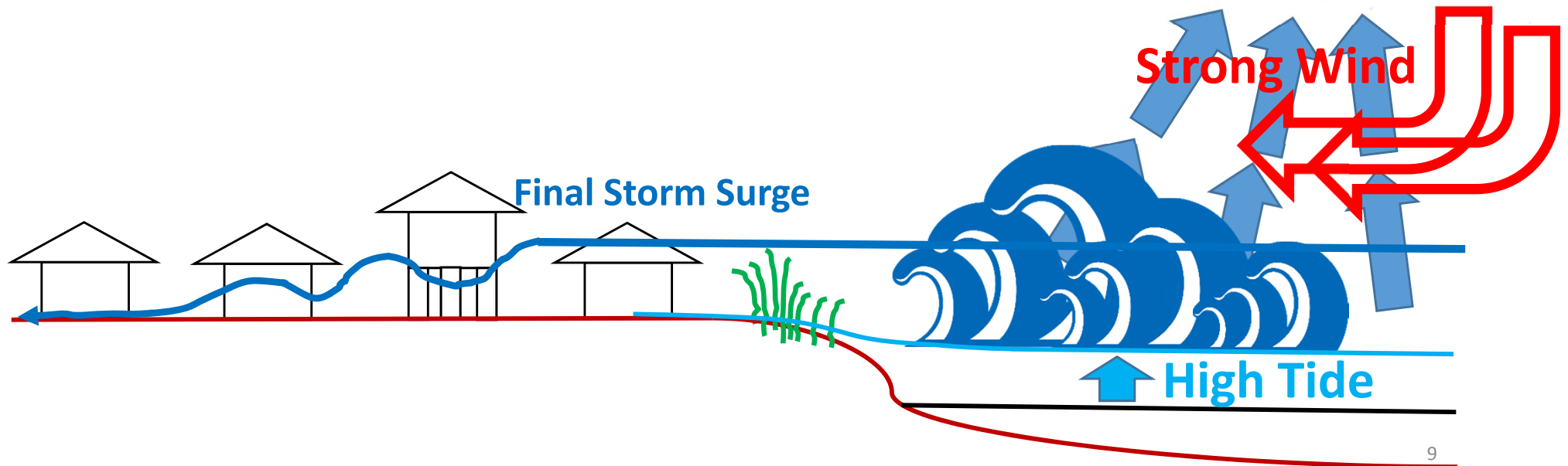
Storm Surge



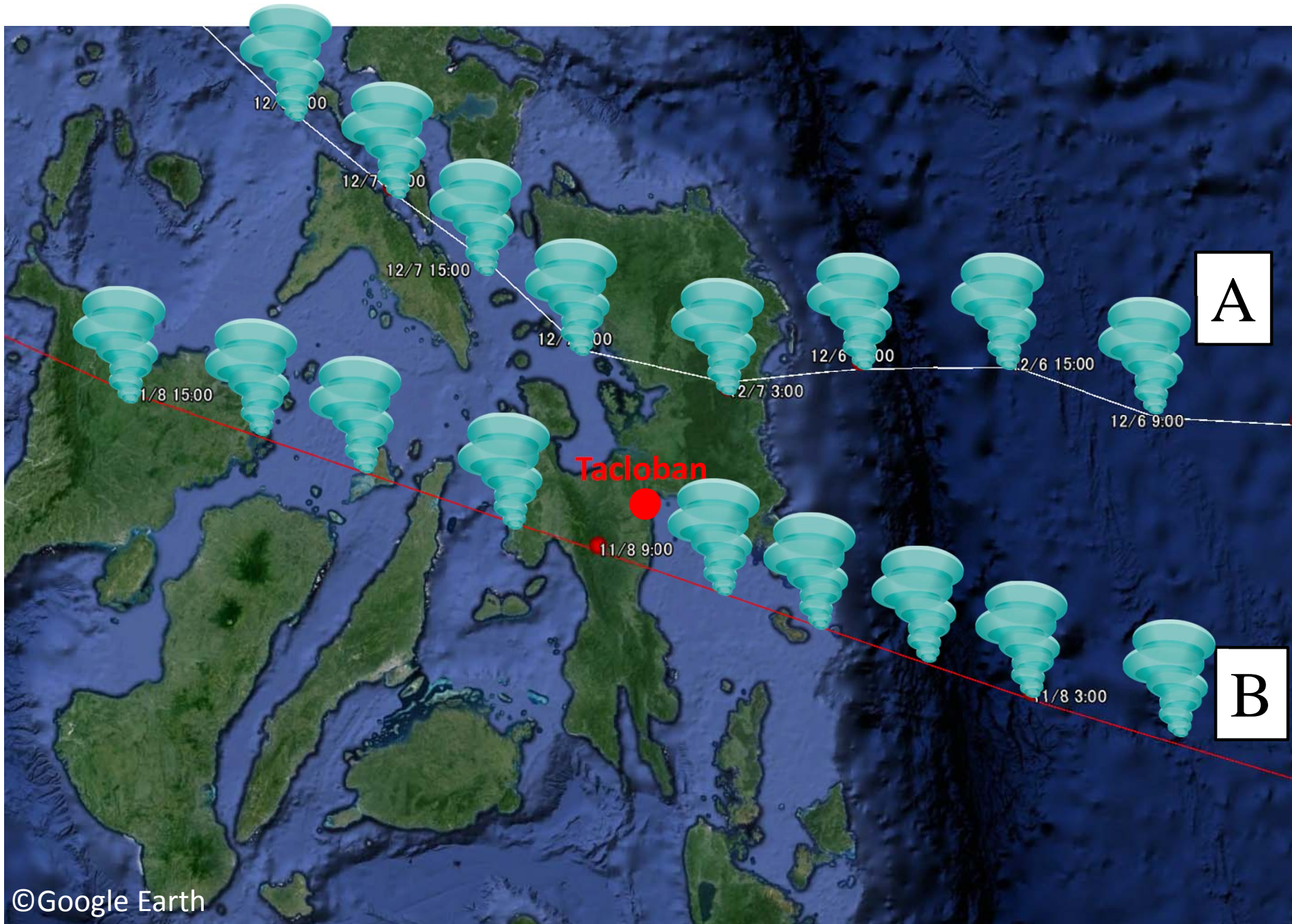
Storm surge is **high tide and large waves** produced by strong wind and low pressure during typhoons



Storm surges behave like tsunami.

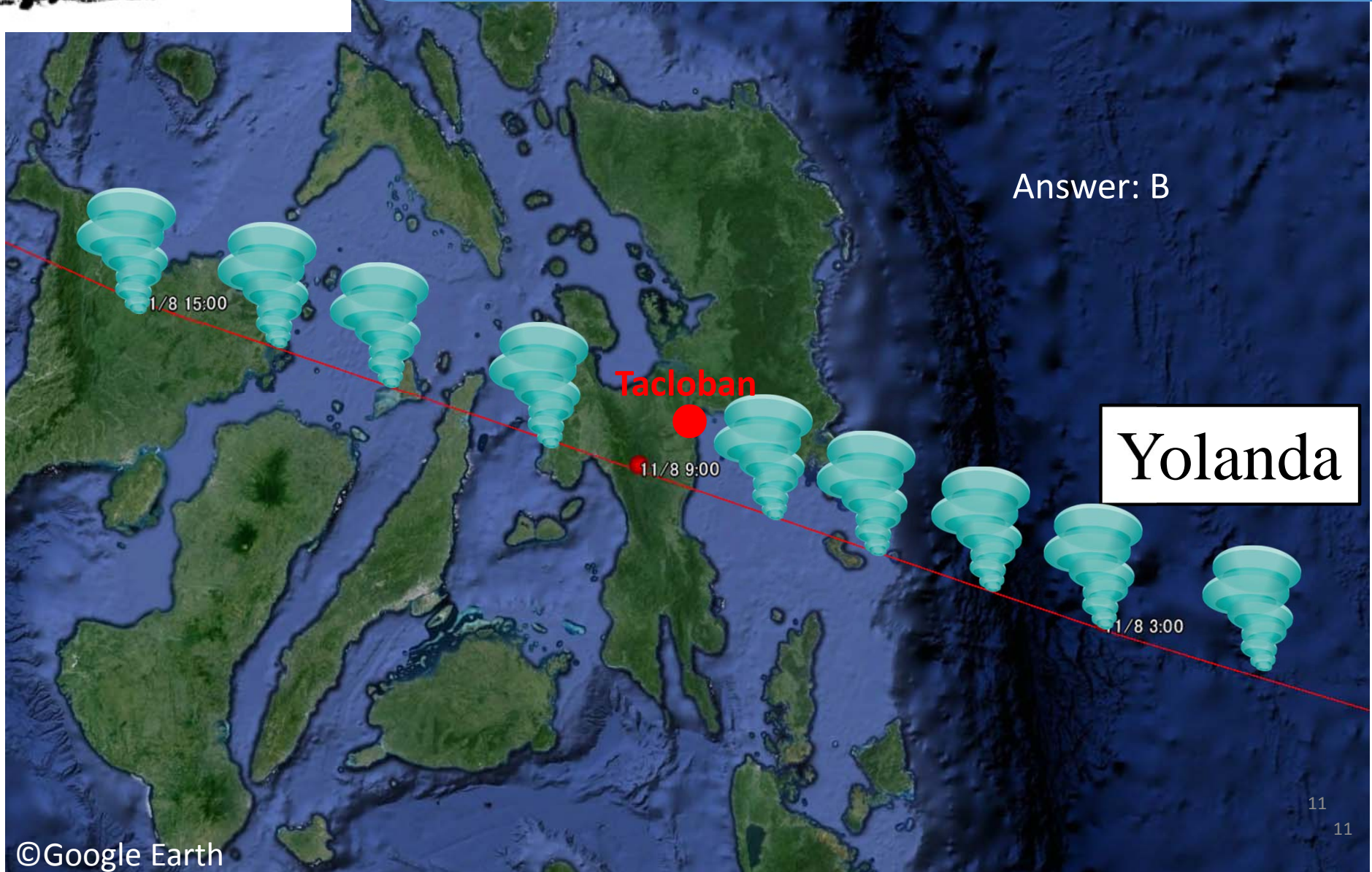


Q: What was the route of Typhoon Yolanda? A or B?

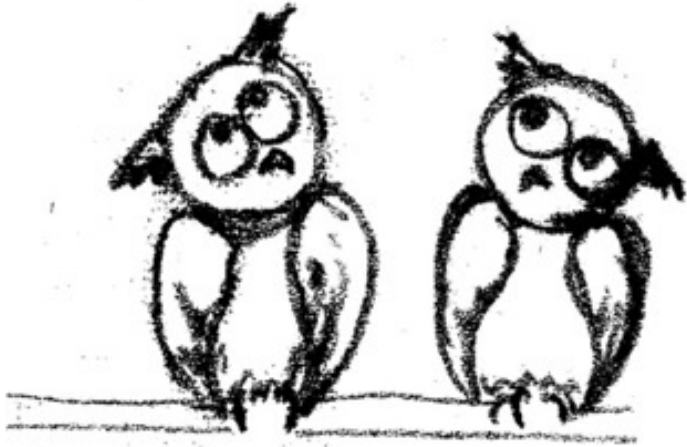




Answer 3: Because the storm surge directly attacked Tacloban

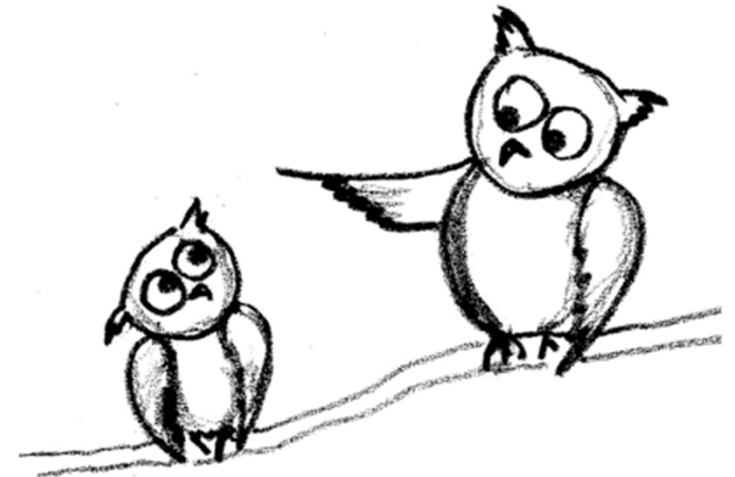


Typhoon Yolanda



Do you think that a typhoon like Yolanda could come to Tacloban again?

Yes, Yolanda was not the first super typhoon. In the Philippines, similar typhoons with storm surge occurred in 1897 and in 1912. Another typhoon like Yolanda could come again in the future.



Typhoon Yolanda

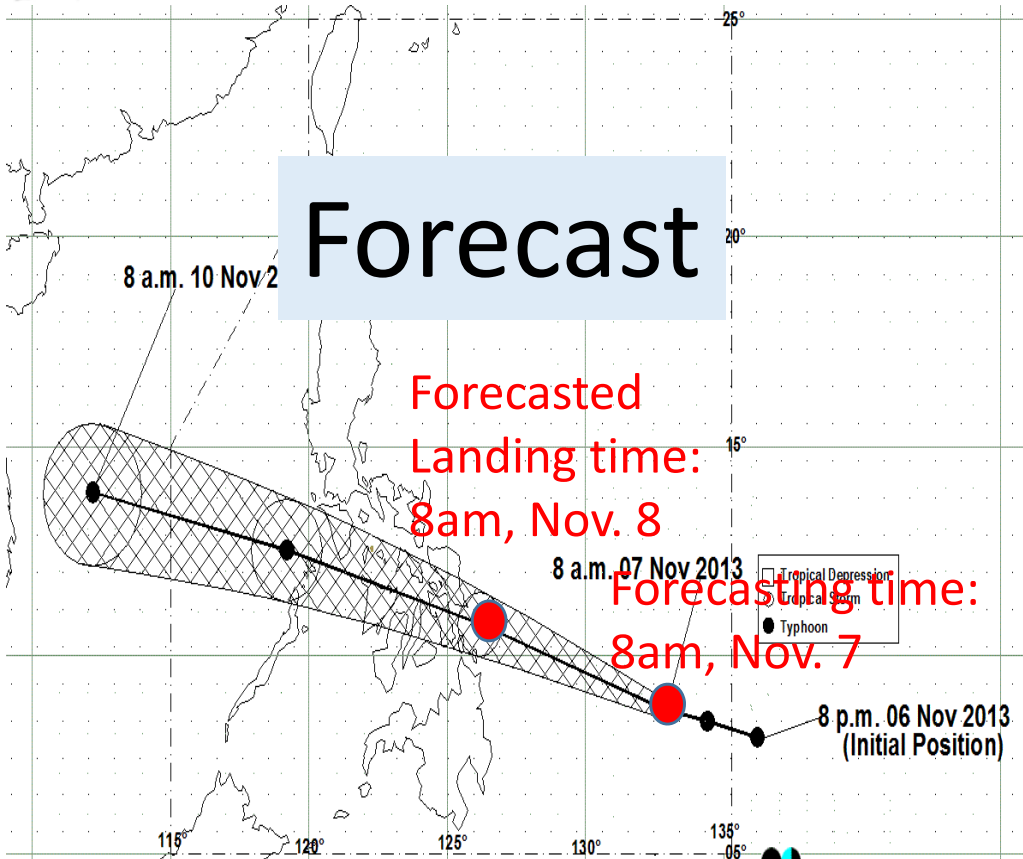
What could we do to survive from such a typhoon like Yolanda?



Can we predict a typhoon coming?



YES WE CAN!



Forecast

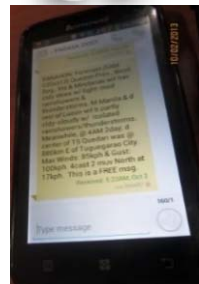
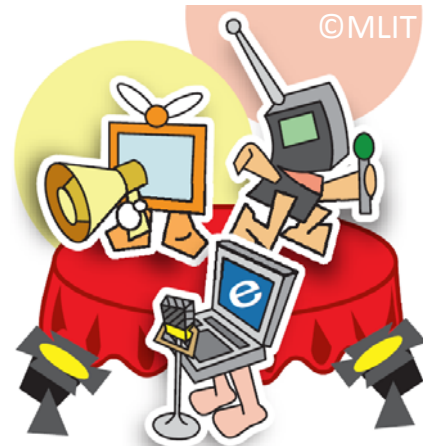
Actual route



coastal areas under signal #3 and #2 are alerted against storm surges which may reach up to 7-meter wave height.

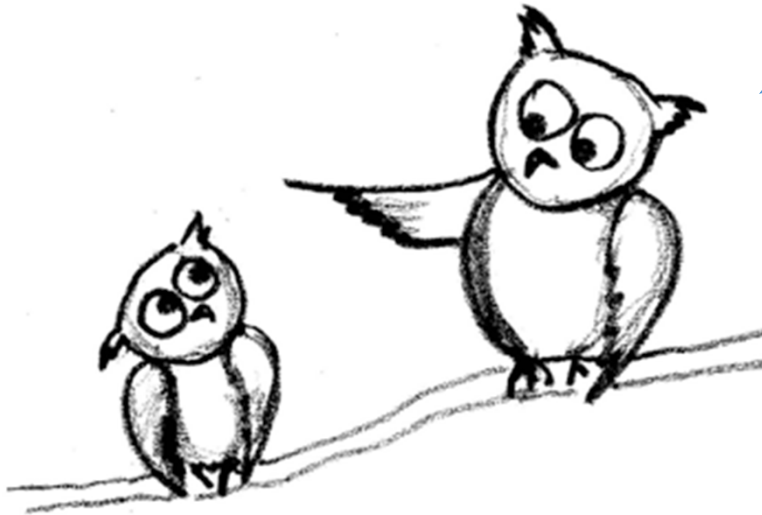
This was the warning where Yolanda is coming, but people didn't understand. Track of Typhoon YOLANDA was predicted in advance, and weather agency issued a warning, but people did not understand the message

Very IMPORTANT to collect Typhoon Information in ADVANCE



- ❑ Weather news tells you BEFORE the typhoon comes,
 - ❑ when a typhoon is coming, and how big it is
- ❑ You can get this information from TV, RADIO, INTERNET, CELL PHONES, etc. in ADVANCE!!!

What to do when I know a typhoon is coming!!



Earlier evacuation saves your
life!

Listen to and follow
Evacuation Warning.



How should we evacuate?

Keep away from the river and the sea

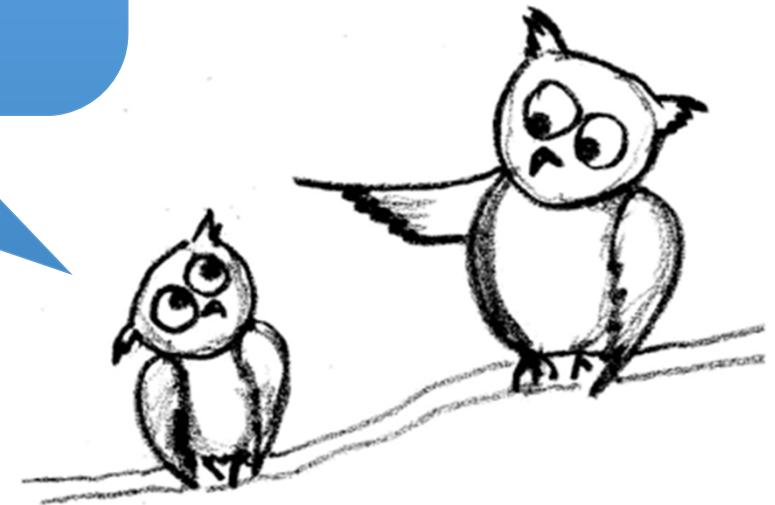


Avoid strong wind and heavy rainfall



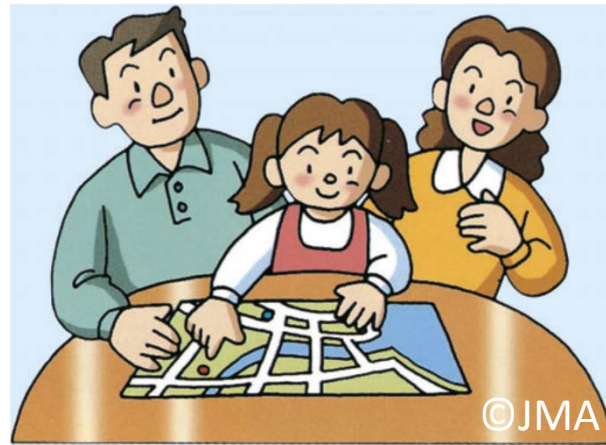
Evacuate to "TALL" and "STRONG" buildings!!!

Where did you evacuate
when Typhoon Ruby
(Hagupit) came?



Find the designated
evacuation place by
discussing with your family
and teachers.

Before a typhoon is coming, prepare in advance!



Discuss with your family and teachers

Participate in evacuation drill

Prepare an evacuation bag at home



Evacuation drill gives us preparation opportunity¹⁹

Summary

Typhoon Yolanda caused big damages by storm surge and strong wind

We can predict a typhoon coming

A Super Typhoon like Yolanda could come to Tacloban again

Important to discuss with your family about how to prepare for another typhoon in advance



References

Some of figures used in this handbook was copied from following materials:

- Ministry of Land, Infrastructure and Transport and Tourism Hokkaido Regional Development Bureau, Japan
http://www.hkd.mlit.go.jp/zigyoka/z_jigyou/gijyutu/mizubousai.html
- Ministry of Land, Infrastructure and Transport and Tourism, Japan
<http://www.mlit.go.jp/river/kaigan/main/kaigandukuri/forKids/INDEX0.htm>
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<http://www.jma.go.jp/jma/kishou/books/takashio/>
- World Handbook on Local Disaster Management Experiences for beginners, ICHARM, Japan
http://reliefweb.int/sites/reliefweb.int/files/resources/handbook_on_local_disaster_management_experiences.pdf
- PAGASA: Role of PAGASA in Disaster Risk Reduction and Management

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- Translations from English to Tagalog was made by Mr. U-Nichols A. Manalo of Tohoku University.
- If you need a PPT file with animations of the handbook, please contact us.
- The characters presented in this handbook were drawn by Dr. Elizabeth Maly.

