



Common Alerting Protocol in the Philippines

Rome, Italy – September 22-24, 2015

What is PAGASA?

- + **PAGASA** stands for **P**hilippine **A**tmospheric **G**eophysical **A**stronomical **S**ervices **A**dministration.
- + PAGASA as the National Meteorological and Hydrological Services (NMHS) of the Philippines shall be the “**authoritative**” voice in providing warnings to the public.
- + The Philippines, through the PAGASA is a member of the World Meteorological Organization (WMO), a specialized body of the United Nations

PAGASA on WMO Alert Hub

WMO Register of Alerting Authorities [home]

OID: 2.49.0.0.608.0 WMO Member: Philippines ISO 3166: PH PHL 608

Issuing Organization: Philippine Atmospheric Geophysical and Astronomical Services Administration

Hazard Categories: Met

Authorization Basis: As a matter of policy, the agency provides typhoon alerts and warnings which is provided to Disaster Risk Reduction Offices and the public through media and web portals and related warning institution.

CAP Feed URL: <http://publicalert.pagasa.dost.gov.ph/feeds/>

Forecasts URL: <http://www.worldweather.org/021/m021.htm>

Alerting Area (NWSE): 19 117 5 127

Map view of the typical area for this alerting authority.

125 -19336, 17.90405



Hazard Categories

Geo: Geophysical (earthquakes, volcanoes, tsunami, etc., includes landslide)

Met: Meteorological (weather, storms, etc. includes flood)

Safety: General emergency and public safety

Security: Law enforcement, military, homeland and local/private security

Rescue: Rescue and recovery

Fire: Fire suppression and rescue

Health: Medical and public health

Env: Pollution and other environmental

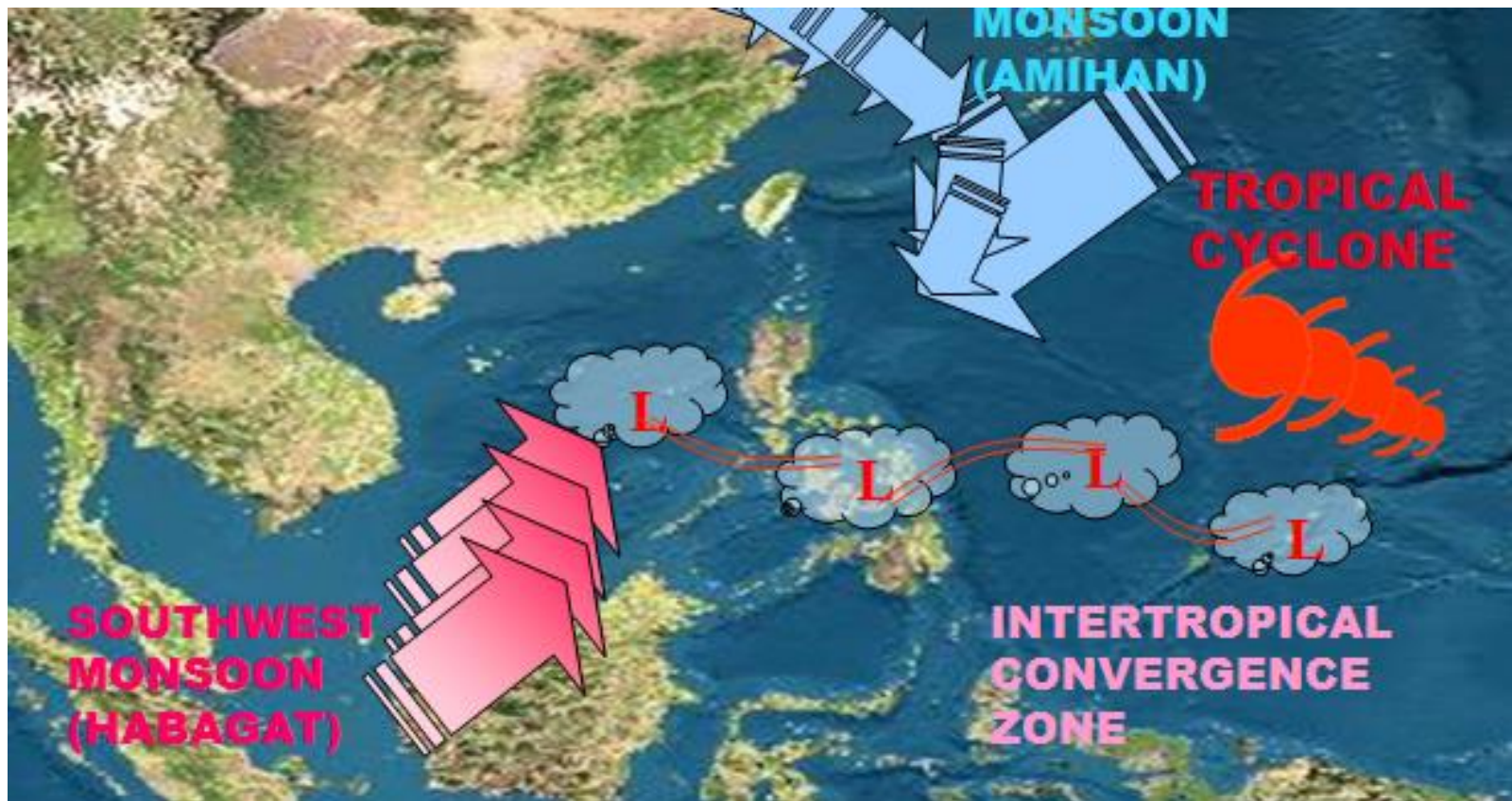
Transport: Public and private transportation

Infra: Utility, telecommunication, other non-transport infrastructure

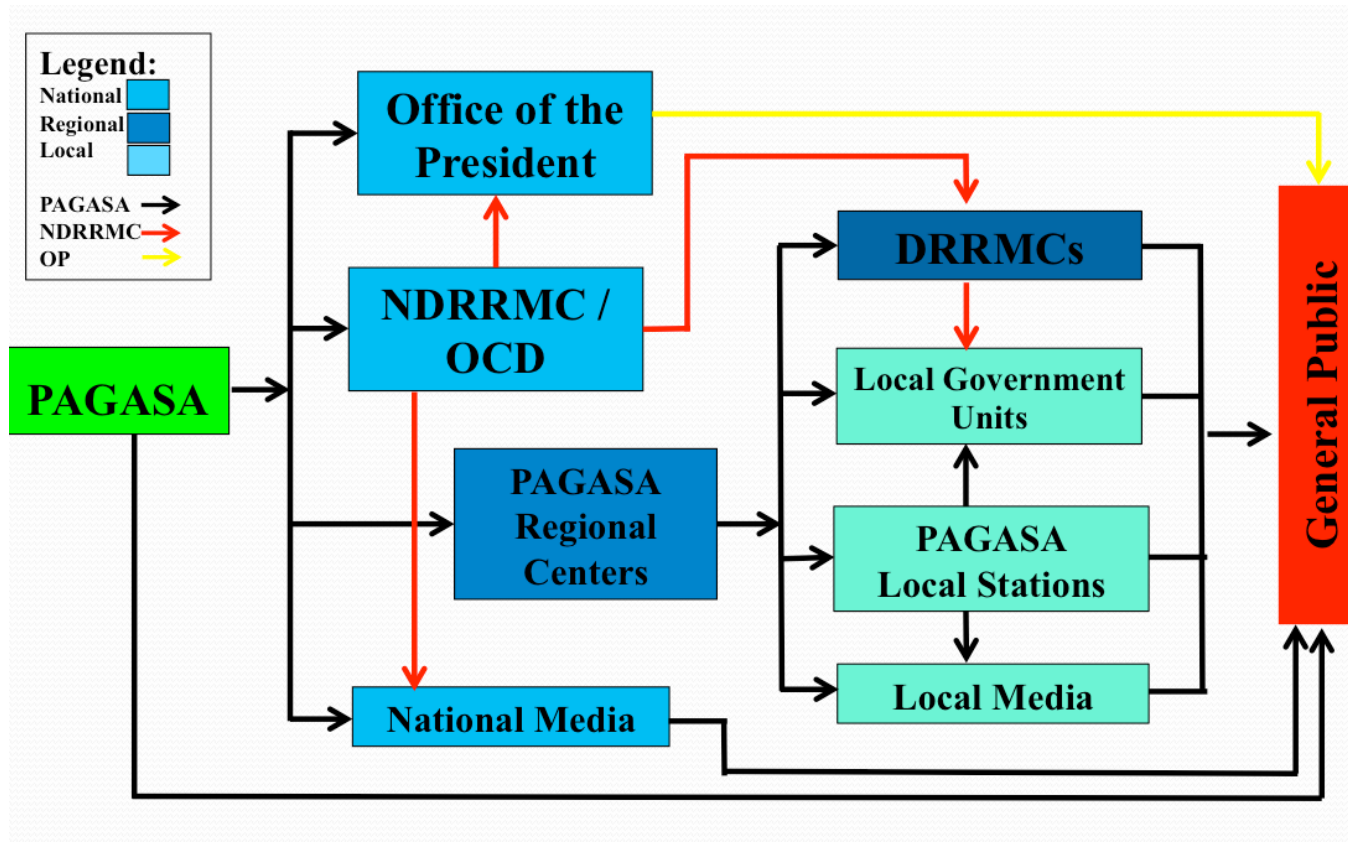
CBRNE: Chemical, Biological, Radiological, Nuclear or High-Yield Explosive threat or attack

Other: Other events

Weather Systems Affecting the Philippines



Information Dissemination Flow



PAGASA CAP Development

- + Initiated by Google on May 2014
- + PAGASA Created a Team for CAP



Development of Tool

Outputs:

1. PDF (Existing)
2. CAP Alert

Using the ff:



google.org Common Alerting Protocol Validator



CAPv.1 BETA **Home** Create CAP~ More.. ▾

References

Signal no. 1 Signal no. 2 Signal no. 3 Signal no. 4

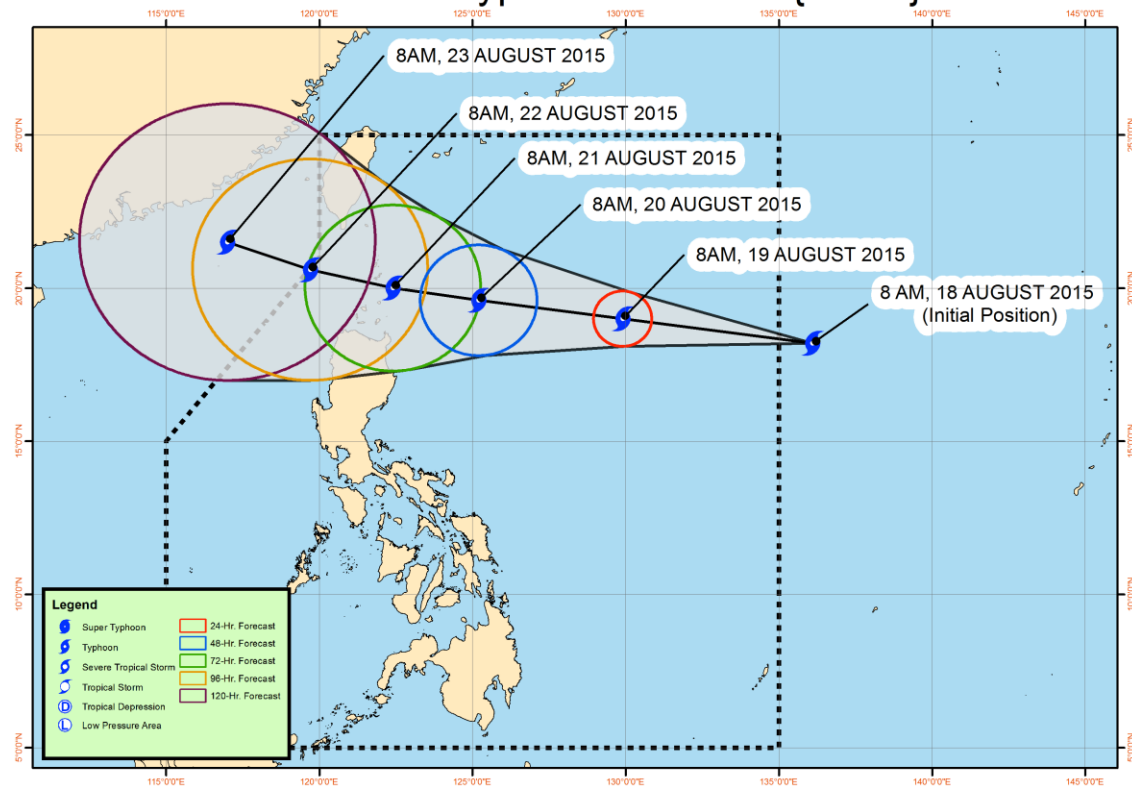
Headline

Select Province(s) - Signal No. 2

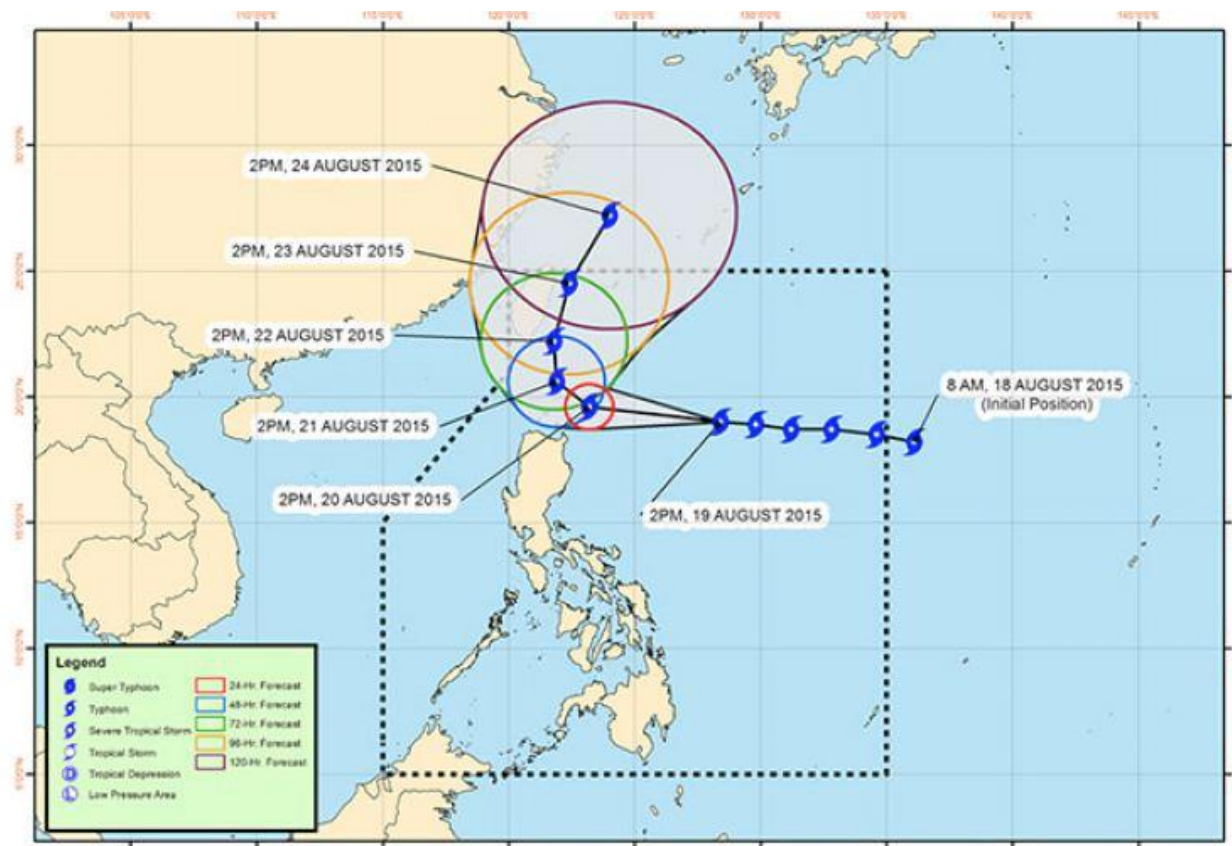
Description

CAP: Tropical Cyclone Alert

Track of Typhoon "INENG" {GONI}



CAP: Tropical Cyclone Warning



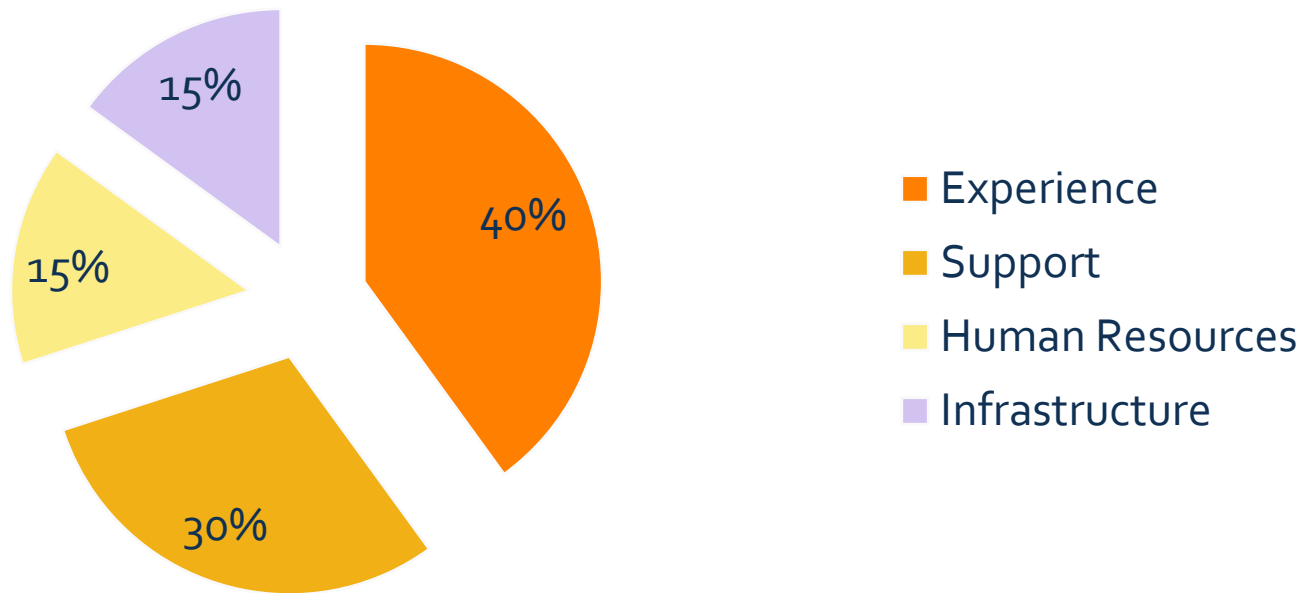
Next Steps..

- + Defining Static and Dynamic Content
- + Testing CAP Alerts with Google
- + Implementation
- + Launching of PAGASA CAP with Google in the Philippines on November 12, 2014



Challenges!

Challenges



Birth of CAP in the Philippines

www.google.org/publicalerts/alert?id=5b68b02b7674255&source=ya-sa&hl=en&gl=US

Public Storm Warning Signal 1 for Visayas, Mindanao

Active for next 5 hours, 3 minutes

Location: Western Luzon: Manila City; Negros Oriental; Negros Occidental; Siquijor; Surigao del Norte; Surigao del Sur; Davao del Norte; Davao Oriental; Compostela Valley; Agusan del Sur; Davao Islands; Cagayan; Misamis Occidental; Misamis Oriental; Bulacan; Zamboanga del Norte

Posted 1 hour, 53 minutes ago - PAGASA

How likely: ■ How soon: ■ How severe: ■

Location of epicenter: At 10:00 AM today, the center of Tropical Depression "QUEENE" was estimated based on available data at 210 km East of Hatanan, Surigao del Sur (8°N, 123.2°E).

Strength: Maximum winds of 45 kph near the center.

Movement: Forecast to move West at 24 kph.

Forecast Position:

Tropical Depression "QUEENE" is expected to make landfall over Surigao del Sur this afternoon and traverse the Northern Mindanao area tonight. By tomorrow morning, it is expected to be at 50 km North of Cuyayan City, and at 100 km West of Puerto Princesa by Friday morning. It is expected to be outside the Philippine Area of Responsibility (PAR) by Friday evening and at 710 km West of Puerto Princesa or over the West Philippine Sea by Saturday morning.

Recommended actions:

- Estimated rainfall amount is from 7 - 15 mm per hour (moderate - heavy) within the 300 km diameter of the Tropical Depression.
- Residents in low lying and mountainous areas of the provinces with P2/P3/P4 as well as the rest of Mindanao are alerted against possible flashfloods and landslides.
- Fishermen and those with small seacrafts are advised not to venture out over the eastern seaboard of Visayas and Mindanao.
- The public and the disaster risk reduction and management council concerned are advised to take appropriate actions and watch for the next bulletin to be issued at 5 PM today.

What to do:

- Inspect your house to see if repairs are needed.
- Clean up drainage systems.
- Harvest crops that can be yielded.

Precautionary measures:

- Monitor the latest Severe Weather Bulletin issued by PAGASA every six hours and hourly updates.
- In the meantime, business may be carried out as usual except when floods occur.

What is a Public Storm Warning Signal #1?


Ann: ■ ■ ■ ■ ■

A tropical cyclone will affect the locality. Winds of 30-60 kph may be expected in at least 36 hours or intermittent rains may be expected within 36 hours.

Other alerts in this area


Public Storm Warning Signal 1 for Visayas, Mindanao

PAGASA - updated 2 hours 49 mins ago



Public Storm Warning Signal 1 for Visayas, Mindanao

Location of epicenter: At 10:00 AM today, the center of Tropical



Philippines Crisis Map

Forecast by: Google Crisis Response

Search area:

Filter System

Public Alerts

Tropical Cyclone Forecast Track

Search area:

Legend

- 72 Hour Forecast
- 48 Hour Forecast
- 24 Hour Forecast
- Typhoon
- Tropical Storm
- Tropical Depression
- Low Pressure Area

Source: PAGASA

Clouds Imagery

Source: U.S. Naval Research Laboratory

Traffic alerts from waze.com users

Philippine Area of Responsibility

©2014 Google - Map data ©2014 contributors, Google - 100 km zoomed in - Terms of Use

Affected region

Expand map

Send feedback

CAP alert on HAGUPIT(Ruby)

Browser address bar: <https://www.google.com.ph/#q=pagasa+weather>

Search results for "pagasa weather":

- Philippine Weather
www.rappler.com/Weather-PH
Get The Latest Weather Result Today Stay Informed about PH Weather!
Rappler has 6,847 followers on Google+

Public Storm Warning Signal 3

Southern Luzon
5 hours ago – PAGASA

A tropical cyclone will affect the locality. Winds of greater than 100 kph up to 185 kph may be expected in at least 18 hours. Location of eye/center At 10:00 PM today, the ...

[More info](#)

In the news

Weather Bulletin Update

Pagasa - 4 hours ago
PAGASA Track as of 8 p.m., 07 December 2014. Satellite Image ... SEVERE WEATHER BULLETIN NUMBER SIXTEEN TROPICAL CYCLONE WARNING: ...

Daily Weather Forecast

Pagasa - 3 hours ago

Lagmay: PAGASA was spot on in Ruby forecast

ABS CBN News - 10 hours ago

[More news for pagasa weather](#)

PAGASA | Philippine Atmospheric Geophysical and ...

pagasa.dost.gov.ph/
Government agency for weather forecasting, flood control, astronomical observations, and time service.

Weather Bulletin Update

Tropical Cyclone Update. PAGASA Track as of 2 p.m., ...

Forecast Symbols and Terms

Home Weather Forecast Symbols and Terms. Transparency Seal ...

Browser address bar: <https://www.google.com.ph/#q=pagasa+weather>

Search results for "pagasa weather":

- Public Alerts

Public Storm Warning Signal 3 for Southern Luzon

Active for next 2 hours, 27 minutes - PAGASA

Posted 4 hours, 22 minutes ago

A tropical cyclone will affect the locality.
Winds of greater than 100 kph up to 185 kph may be expected in at least 18 hours.

Location of eye/center At 4:00 PM today, the eye of Typhoon "RUBY" was located based on all available data at 20 km West of Masbate City, Masbate or in the vicinity of Aroroy, Masbate (12.4°N, 123.4°E).

Strength Maximum sustained winds of 140 kph near the center and gustiness of up to 170 kph.
Forecast Movement: Forecast to move West Northwest at 10 kph.


Forecast Positions

- 24 hour (tomorrow afternoon): 60 km East of Calapan City, Oriental Mindoro or at 160 km South of Science Garden, Quezon City.
- 48 hour (Tuesday afternoon): 170 km Southwest of Science Garden, Quezon City.
- 72 hour (Wednesday afternoon): 400 km West of Science Garden, Quezon City.

Recommended actions

These areas will have stormy weather. Residents in low-lying and mountainous areas are alerted against flashfloods and landslides. Likewise, those living along the coast are warned on the occurrence of big waves associated with Storm Surge which may reach up to 3 meters.

- Expected third landfall: Sibuyan Island between 2-4 AM tomorrow and it will be associated with strong winds, storm surge and heavy to torrential rainfall.
- Estimated rainfall amount is from 10 ~ >30 mm per hour (heavy ~ torrential) within the 500 km diameter of the typhoon.
- "RUBY" and the Northeast Monsoon will cause rough to very rough sea conditions over the seaboard of Luzon and Visayas and over the northern seaboard of Mindanao. Fisherfolks and those using small sea craft are advised not to venture out over the said seaboard.
- Expected to Exit PAR: Thursday morning.



Alert area: Masbate, Marinduque, B...

Tweets related to this alert

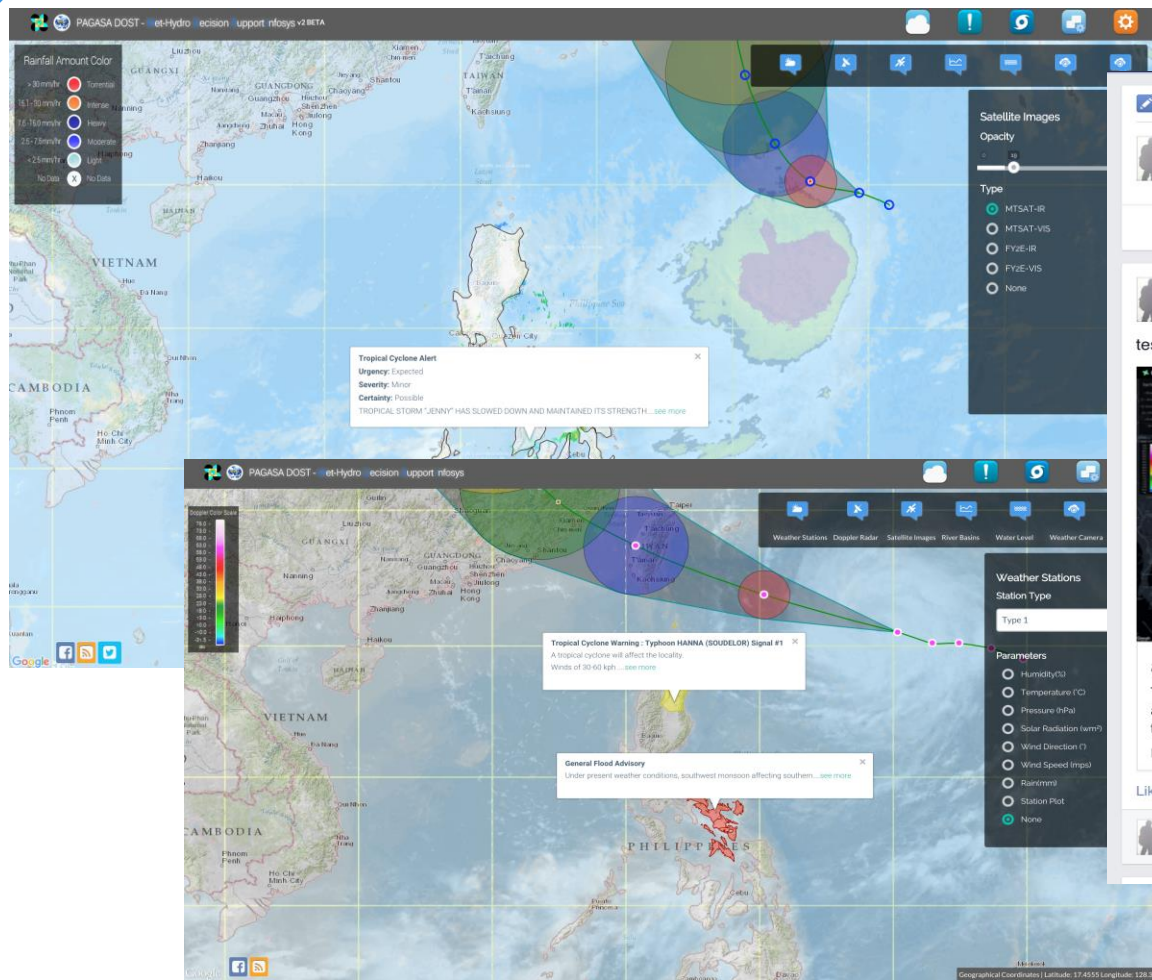
The WorldPost @TheWorldPost 7m
1 million evacuated as typhoon churns across Philippines huff.to/1w2z9Ek

Official Gazette PH @govph 23m
The Official Gazette has made available a map of evacuation centers in #RubyPH-hit areas: gov.ph/crisis-respons... pic.twitter.com/dckLs2bsgV
[Show image](#)

Fox News @foxnews 40m
2 dead, 900,000 evacuate as #typhoon slams Philippines fxn.ws/1AK9wUJ pic.twitter.com/8RRtUe9Dbz
[Show image](#)

Other alerts in this area

On-Going Activities within PAGASA



Update Status Add Photos/Video Create Photo Album

What's on your mind?

Only Me Post

8 mins · MDSI · [see more](#)

test

api.meteopilipinas.gov.ph

To enhance PAGASA's weather data gathering capabilities, radar dopplers, automatic rain gauges (ARG) and automatic weather stations (AWS) were installed throughout the country. These ARGs and AWSs are automated version of the...

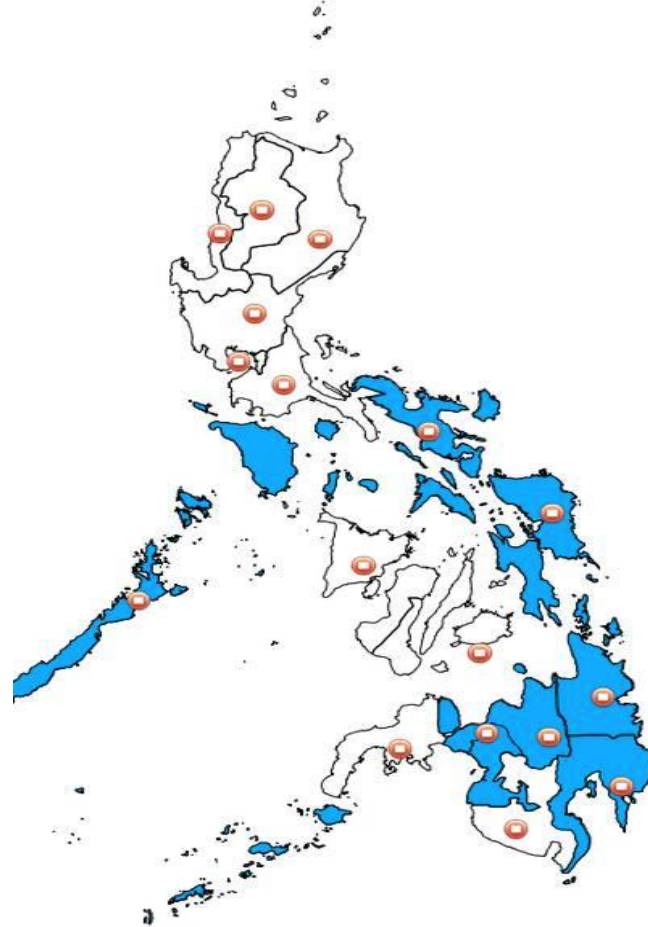
MET-HYDRO DECISION SUPPORT INFOSYS

Like · Comment · Share

Write a comment...


On-Going Activities within PAGASA

- + General Flood Advisory (GFA)
- + General Flood Bulletin (GFB)



General Flood Advisory Tool

PAGASA CAPHMDForecastingSettings



Republic of the Philippines
Department of Science and Technology
PHILIPPINE ATMOSPHERIC, GEOPHYSICAL AND
ASTRONOMICAL SERVICES ADMINISTRATION (PAGASA)
PAGASA Science Garden, Agham Road, Diliman, Quezon City 1100

General Flood Advisory

1

For

NCR (National Capital Region)

Issued at

6:00 pm, 24 September, 2015

Valid until the next issuance at

6:00 pm tomorrow

PRESENT WEATHER :

FORECAST 24 - HR RAINFALL :

WATERCOURSES LIKELY TO BE AFFECTED :

METRO MANILA remove

All rivers and streams in Metro Manila.

- Select Province -

PUBLIC WARNINGS :


People living near the mountain slopes and in the low lying areas of the above mentioned river systems and the Local Disaster Risk Reduction and Management Councils concerned

are advised to take necessary precautionary measures.

Prepared by :

Initials

Duty Hydrologists



REPUBLIC OF THE PHILIPPINES
Department of Science and Technology
Philippine Atmospheric, Geophysical and
Astronomical Services Administration (PAGASA)
PAGASA Science Garden, Agham Road, Diliman, Quezon City 1100

GENERAL FLOOD ADVISORY # 8

For REGION 6 (WESTERN VISAYAS)

Issued at 6:00 PM, 22 September 2015


(Valid until the next issuance at 6:00 pm tomorrow)

FORECAST WEATHER:

SOUTHWEST MONSOON AFFECTING VISAYAS AND MINDANAO.

FORECAST 24-HR RAINFALL:

RATE RAINS AND ISOLATED THUNDERSTORMS



TO BE AFFECTED:

AND ITS TRIBUTARIES PARTICULARLY PINANTAN, BAROTAC, AGAMAN, SIBALOM AND GUIMBAL.

• ANTIQUE RIVERS AND ITS TRIBUTARIES PARTICULARLY SIBALOM, IPAYO, CAGARANAN, PALAWAN, CAIRAUAN, DALANAS AND TIBIAO.

• CAPIZ RIVERS AND ITS TRIBUTARIES PARTICULARLY PANAY, MAMBUSAO, PANAY MALINAO, ALINGON AND BALANTIAN

• AKLAN RIVERS AND ITS TRIBUTARIES PARTICULARLY IBAYAY, AKLAN AND JALO.

• NEGROS OCCIDENTAL RIVERS AND ITS TRIBUTARIES PARTICULARLY MALOGO, SICABA, GRANDE, HIMOCAAN, DANAOS, UPPER TYABANAN, SIPALAY, LOWER BILABANGAN, UPPER ILOG, BINALBAGAN

PEOPLE LIVING NEAR THE MOUNTAIN SLOPES AND IN THE LOW LYING AREAS OF THE ABOVE MENTIONED RIVER SYSTEMS AND THE LOCAL DISASTER RISK REDUCTION AND MANAGEMENT COUNCILS CONCERNED ARE STILL ADVISED TO TAKE PRECAUTIONARY MEASURES

PREPARED BY:

RAB/EAC

Main Operation Center-Flood Forecasting and Warning Section (MOC-FFWS)


Hydrometeorology Division

Developed by ETSD-ICT © 2015

HMDGFA PAGASA-DOST Actual Public

General Flood Bulletin

PHAGASA CAP - Home - Forecasting - Settings



Republic of the Philippines
Department of Science and Technology
PHILIPPINE ATMOSPHERIC, GEOPHYSICAL AND ASTRONOMICAL SERVICES ADMINISTRATION
PAGASA
FLOOD FORECASTING BRANCH
Pampanga River Flood Forecasting and Warning Center, HMD NCR-PRSD
DMGC, Brgy. Malampis, San Fernando City, Pampanga

Flood Bulletin No. 1 Pampanga River Basin


Issued at 5:00 am, 20 September 2014

Valid until the next issuance at 5:00 am today

Average Basin Rainfall as of 5:00 am today:

PAST 24 HOURS 0 mm


FORECAST FOR THE NEXT 24 HOURS 0 mm



Pampanga_River_Basin.png [Browse](#)

Water Level Station / Location	River/Lake/Swamp Trend at Station	Flood Situation Message	Low-lying areas likely to be affected
San Isidro Station, Pampanga River	Now at 2.66m / slow increase to peak before noon today (3.20m Alert WL)	Flooding is possible	Jaen, San Isidro and Cabiao
Candaba Station, Candaba Swamp	Now at 5.87m still above 5.0m critical level / slow filling-up of swamp area but to level-off this afternoon	Flooding to persist and remain	Candaba(Pampanga); Portions of San Miguel & San Ildefonso (Bulacan) within the swamp area.
Arayat Station, Pampanga River	Now at 7.94m (Above 6.0m alarm WL) / to increase further (8.5m Critical WL)	Flooding to occur	Riverside areas of arayat, San Luis and San Simon
Sasmuan Station,	Now at 2.10m / to fluctuate (tide influenced)	Flooding is possible	Sasmuan, Lubao and Guagua





Department of Science and Technology
PHILIPPINE ATMOSPHERIC, GEOPHYSICAL AND ASTRONOMICAL SERVICES ADMINISTRATION (PAGASA)
Pampanga River Flood Forecasting and Warning Center, Hydro-Meteorology Division(NCR-PRSD)
Brgy. Malampis, San Fernando, Pampanga (Government Center) <http://www.pffwc.gov.ph>

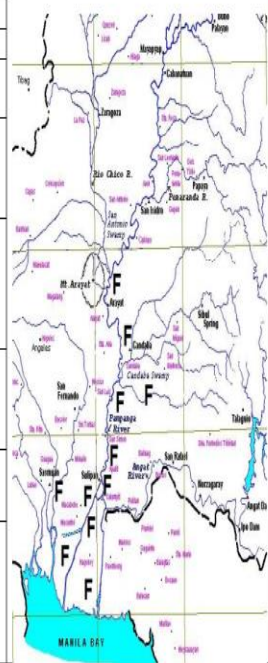
FLOOD BULLETIN NO. SEVEN (7) - PAMPANGA RIVER BASIN AND ALLIED RIVERS
ISSUED AT: 5:00 AM, 14 OCTOBER 2013
VALID UNTIL THE NEXT ISSUANCE AT 5:00 PM TODAY UNLESS THERE IS AN INTERMEDIATE BULLETIN

BASIN RAINFALL AS OF 5:00 AM TODAY:
PAST 24-HR = 4.3 MM FORECAST 24-HR = < 10 MM

BASIN EXPECTED RESPONSE:

WATER LEVEL STATION (STN)	RIVER/ SWAMP WATER LEVEL (WL) TREND AT STATION	FLOOD SITUATION MESSAGE	PARTICULAR LOW-LYING AREAS
ARAYAT STN, PAMPANGA RIVER	NOW AT 6.46 M / HAD LEVELED-OFF LAST NIGHT, A VERY SLOW RECESSON IS IN PROGRESS (CRITICAL WL IS 5.0 M)	FLOODING TO PERSIST	RIVERSIDE AREAS OF ARAYAT, CANDABA, SAN LUIS, SAN SIMON
CANDABA STN, CANDABA SWAMP	NOW AT 6.46 M / HAD LEVELED-OFF LAST NIGHT, A VERY SLOW RECESSON IS IN PROGRESS (CRITICAL WL IS 5.0 M)	FLOODING TO PERSIST	CANDABA SWAMP AREA; PORTIONS OF SAN MIGUEL AND SAN ILDEFONSO (BULACAN), SAN LUIS, SAN SIMON, AND APALIT (PAMPANGA)
SULIPAN STN, PAMPANGA RIVER	NOW AT 6.46 M / HAD LEVELED-OFF LAST NIGHT, A VERY SLOW RECESSON IS IN PROGRESS (CRITICAL WL IS 5.0 M)	FLOODING TO PERSIST	RIVERSIDE AREAS OF APALIT, MACABEBE, MASANTOL, CALUMPIT, HAGONOV
COASTAL FLOODING IN THE LOW-LYING AREAS (TIDE INFLUENCED AREAS) BY TOMORROW MORNING			
HAGONOV, PAOMBONG, MACABEBE, MASANTOL			
THE RESIDENTS AND THE LOCAL DISASTER RISK REDUCTION & MANAGEMENT COUNCILS (LDRRMCs) CONCERNED ARE ADVISED TO CONTINUE TO TAKE APPROPRIATE ACTIONS.			

PRFFWC - HTH / JRD



CAP on a MAP: Kickoff Workshop



CAP on a MAP: Implementers Training



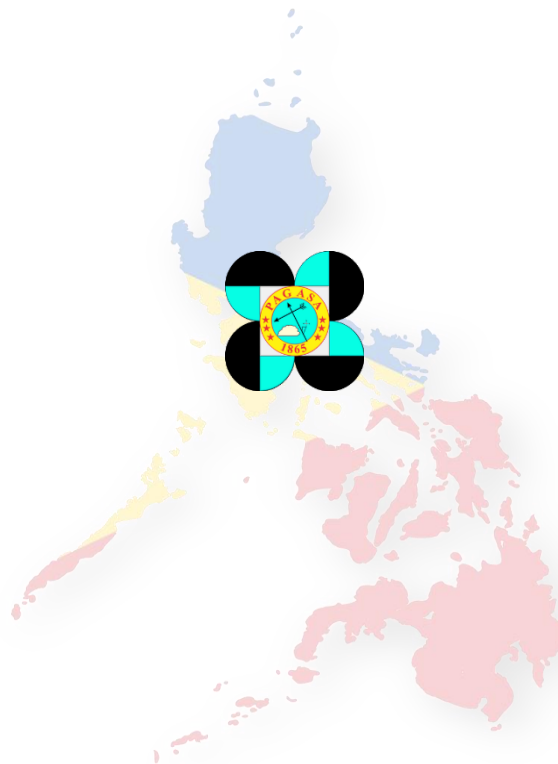
Future Development

- + Additional CAP alerts
- + Improving existing alerts
- + Inter-agency collaboration

CAP Development Team in Philippines



Thank you!



Tracking the sky...Helping the Country