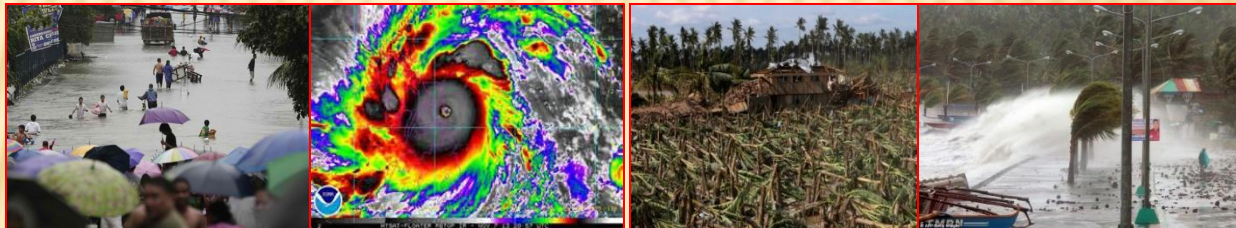




DISASTER RISK REDUCTION
J-POW Project 2nd Annual Seminar
28 January 2016

COMMUNICATING WEATHER HAZARDS



NATHANIEL A. CRUZ

GMA Network, Inc.



Early Warning System

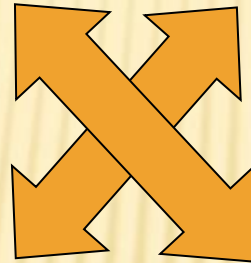
Empower individuals and communities, threatened by natural hazards, to act in sufficient time and in an appropriate manner so as to reduce the possibility of personal injury, loss of life and damage to property, or nearby and fragile environments

Early Warning System

Four Elements of an Effective EWS

RISK KNOWLEDGE

**MONITORING
AND WARNING
SERVICE**



**DISSEMINATION
AND
COMMUNICATION**

**RESPONSE
CAPABILITY**



Early Warning System

Dissemination and communication

- + *Communicate risk information and early warnings*
 - * Warning must reach all of those at risk
 - * People must understand the risks and warnings
 - * Information should be clear and simple
 - * All levels of communication must be identified
 - * One authoritative voice, one message



Early Warning System

- **Clear and simple to be understood by population at risk**
- **Timeliness**
- **Widest dissemination possible**
- **Site-specific**
- **Hazard-tailored warning**
- **Should reach lowest level of community**
- **Reliable communication**



BEHAVIORAL RESPONSE

“Multistage decision-making process.”

1. Hearing the warning.
2. Believing that it is credible.
3. Confirming the warning.
4. Deciding if it pertains to the recipient.
5. Determining if protective action is necessary.
6. Deciding if protective action is feasible.
7. Determining which action to take.



BEHAVIORAL RESPONSE

People often wait to act while *confirming* the message

- ✘ Various groups tend to turn for confirmation information.
- ✘ ***Social networks*** are critical resources for confirming the personal relevance of a message. This appears to be especially true for women and men and some racial and ethnic groups.



BEHAVIORAL RESPONSE

- ✘ To motivate the desired behavioral response, the message must be *personalized*
 - + If we want people to heed risk communications, then “warning messages must mean something to them”
- ✘ Message recipients enter a final decision-making stage if they need to act.
 - + Previous disaster experience will motivate compliance.
 - + Prior experience also serves as a framework for comparing one’s current opinion.



Role of Mass Media

- ✘ Assist in the dissemination of warnings, advisories, and bulletins from official sources to threatened communities.
- ✘ Assist in warning and empowering people to take practical steps to protect themselves from natural hazards.
- ✘ Translate highly technical information into simple, concise and understandable pieces of information ('laymanizing').
- ✘ Provide information on preparedness measures for future similar disasters (disaster prevention rather than response).

TROPICAL STORM “ONDOY” (SEP 2009)



SUPERTYPHOON "YOLANDA" (NOV 2013)



Hagupit ng Habagat (Aug 2012 , 2013 and 2014)





I M READY

- ✘ GMA News public service campaign, was launched in October 2010 in time for the first anniversary of Ondoy.
- ✘ A cohesive and comprehensive task-preparedness campaign with one primary objective – *to reassure and remind people to take precautionary measures against flood and rain-induced emergency situations.*

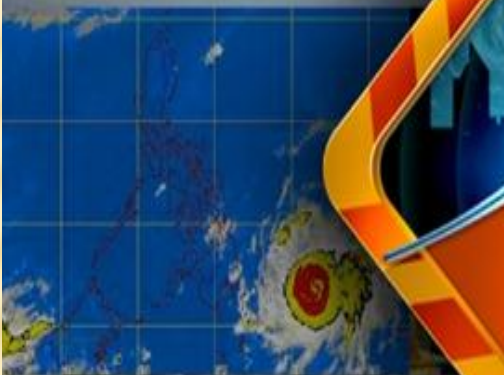


I M READY

- ✘ Instill a proactive attitude of preparedness by giving viewers practical tips on what to do before, during and after the rains.
- ✘ Provide information that will help people prepare for potential disasters brought about by the typhoon season.



BAHANG DULOT NG MAGOMMAG NA PAG-ULAN,
MAS MATINDI RAW KAYSA NOONG BAGYONG ONDOY



PAGKUKUMPARA SA BAGYONG ONDOY,
BAGYONG SENDONG AT BAGYONG PABLO



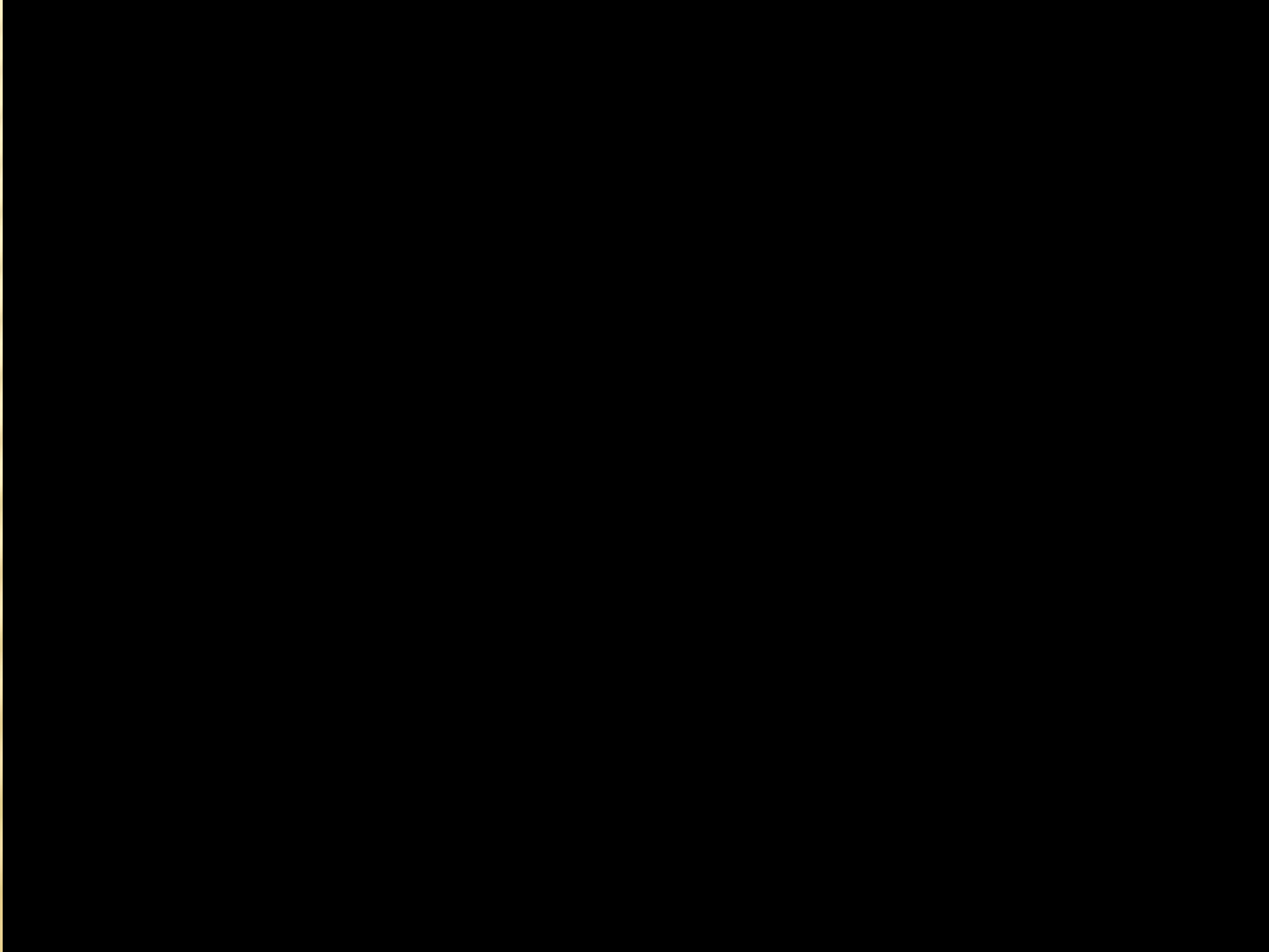
NEWS TV



MAS MARAMI ANG IBINAGSAK NA ULAN
NG HABAGAT KUMPARA SA BAGYONG ONDOY

DIRIGI <LOOP> <SPACE> MESSAGE <SPACE> ANG INTONG PANGALAN AT ADD

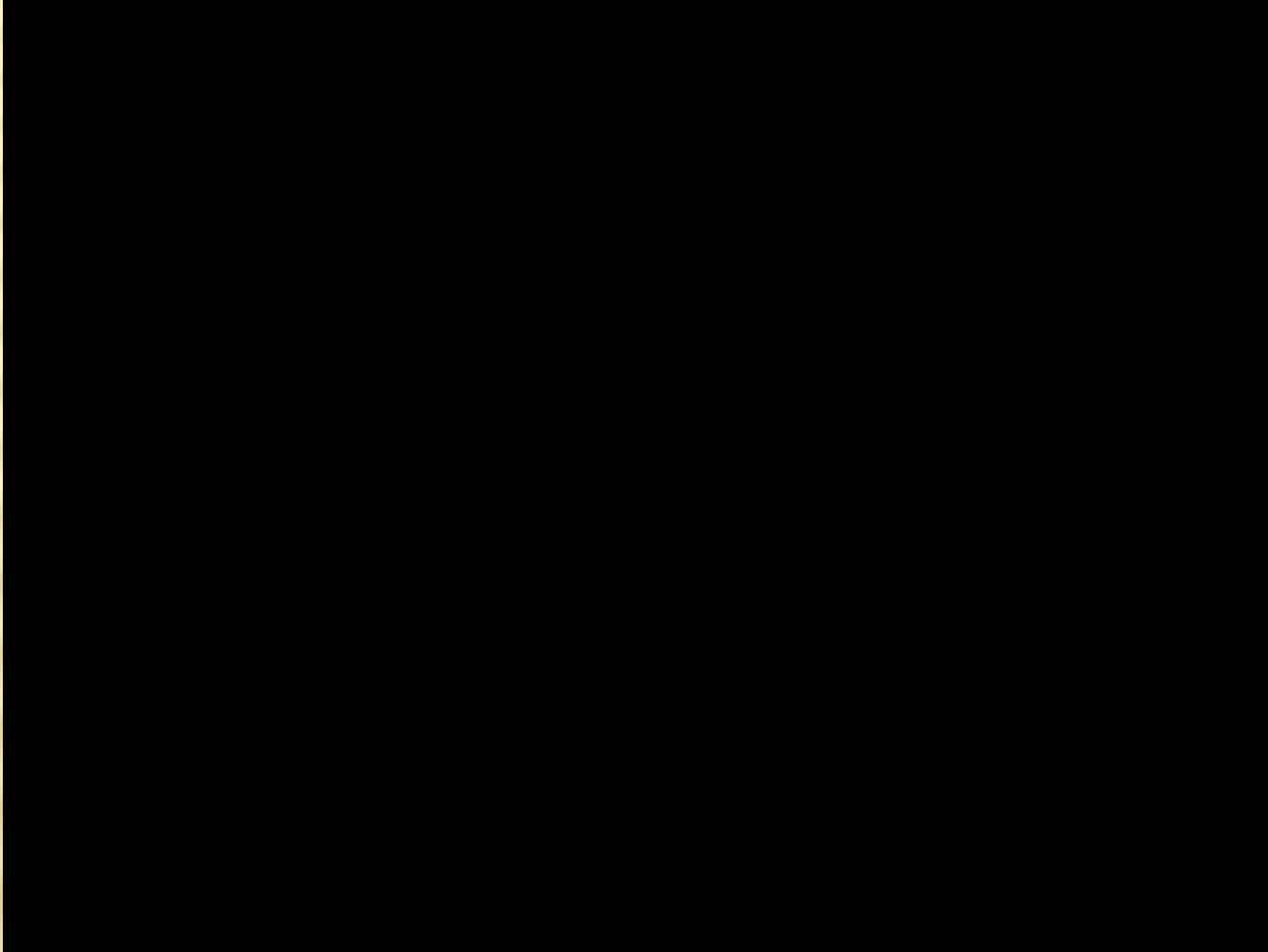
I AM READY



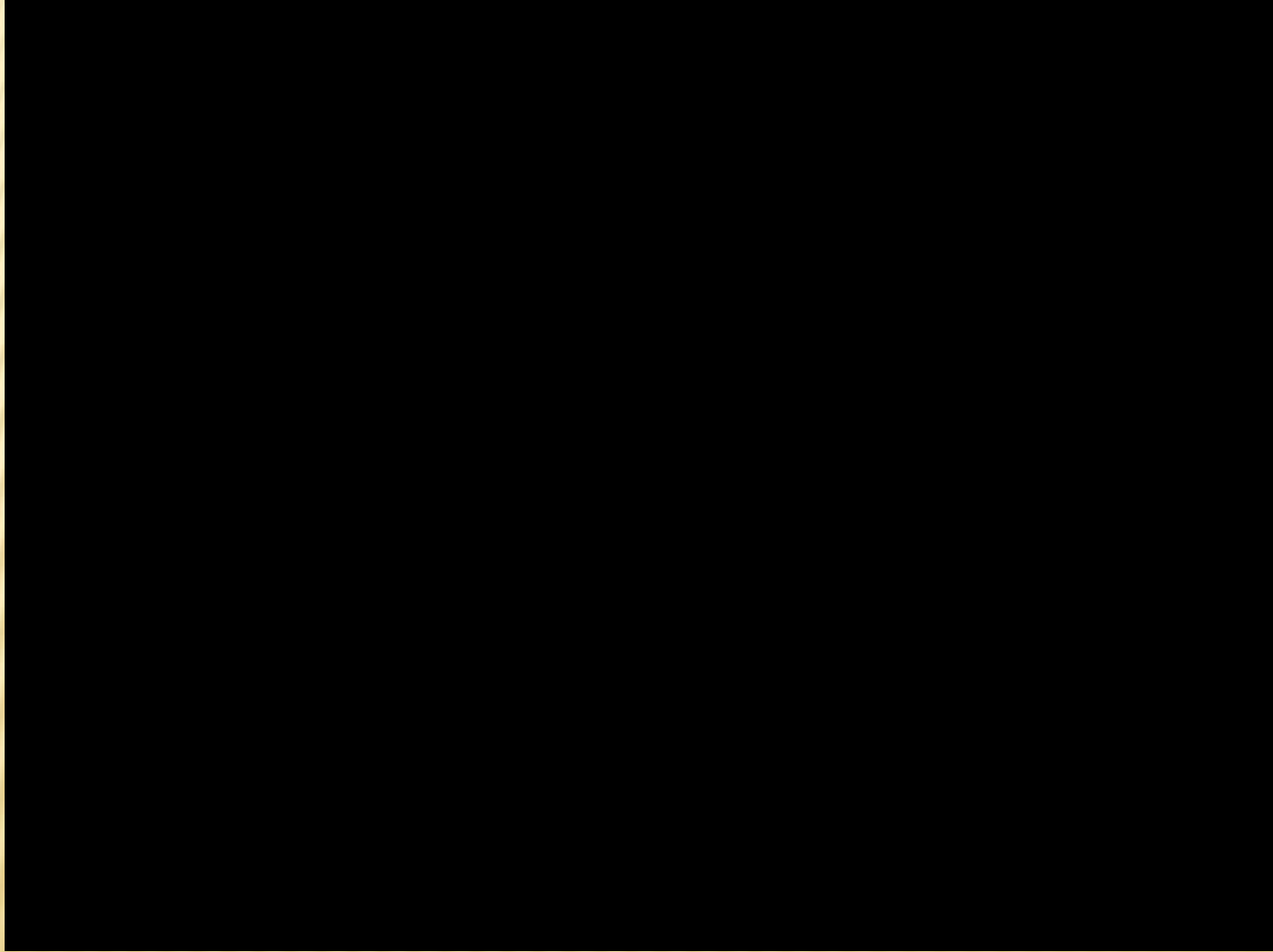
I AM READY



I AM READY



I AM READY



Enter a Place



Today is September 06, 2013

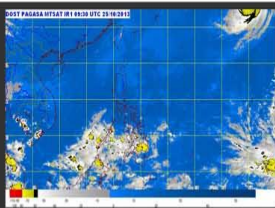
OVERVIEW

GMA ROADWATCH

GMA WEATHER

GENERAL FORECAST

Expect thunderstorm over #NegrosOriental (Mabinay, Manjuyod, Bais City, Bindoy, Ayungon) & nearby areas w/in 1-2 hours. All are advised to take precautionary measures against heavy rains, strong winds, lightning and possible flashfloods. Keep monitoring for updates. PAGASA-DOST Visayas.



LUZON VISAYAS MINDANAO

Blumentritt

Quezon City, Metro Manila
7 AM, September 20, 2013

FRIDAY	SAT	SUN	MON	TUE	WED	THU
 HIGH 23° LOW 26° SUNRISE 05:47 SUNSET 17:39 CURRENT	 25° 28°	 23° 26°	 23° 27°	 23° 27°	 22° 24°	 23° 27°
8 AM	9 AM	10 AM	11 AM	12 NN	1 PM	

 Temperature 23° Feels like 24° Rain Chance 12% Amount of Rain (mm/hr) 0 Wind Speed (mph) 8 Wind Direction NWN Humidity 93% Pressure (Millibars) 1002	 25° 25° 0% 0 8 NEN 93% 1002	 27° 26° 40% 0 9 N 95% 1001	 27° 29° 40% 0 5 SES 96% 1000	 22° 20° 100% 3 3 E 94% 999	 22° 20° 100% 7 8 W 90% 999	 21° 20° 100% 16 6 SWS 96% 999
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Light Moderate Heavy Intense Torrential

QUESTION OF THE DAY

Is Number Coding lifted today because of flood and bad weather?



Yes, it is. Thank you.

TODAY

TOMORROW

WHAT SHOULD I...

WEAR

BRING

DO

7 AM

2 PM

Temperature 23°
Feels like 24°
Rain Chance 12%



Monitor GMA Weather

8 PM

[display less](#)



WHERE ARE YOU GOING?

MTSAT

ACCUMULATED RAINFALL

RAINFALL CONTOUR

HUMIDITY

Airports

Beaches

Get-aways

Most searched destinations:

Boracay

Bohol

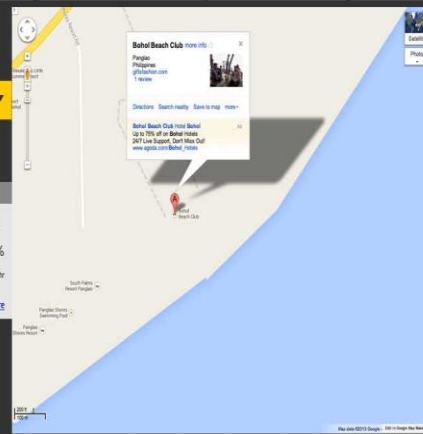
Cebu

Palawan

Cagayan De Oro

Bukidnon

Leyte



LATEST VIDEOS

WEBCAST ON 24 ORAS ON UNANG HIRIT



WORD OF THE DAY

MONSOON
HABAGAT

seasonal prevailing wind in the region of the Indian subcontinent and Southeast Asia, blowing from the southwest between May and September and bringing rain (the wet monsoon), or from the northeast between October and April (the dry monsoon)

ASK THE EXPERT



I M READY



Buy now

Experience the power of the new iPad mini 4 on Smart Bro



About Us | Contact Us



JUST IN: Chinese man pleads guilty to stealing protected seeds from US firms Jan 28, 2016 8:45am

GMAPUBLICSERVICE



HEALTH **WEATHER** GENERAL SAFETY TRIVIA TRAFFIC REMINDERS CONSUMER-RELATED EARTHQUAKE TAG-ARAW

Today is January 28, 2016
12:11:21 PM PST

OVERVIEW

GMA ROADWATCH

GMA WEATHER

iKNOW

Tropical Cyclone names within PAR for 2016

NAME	GENRE	WOMEN	PEOPLE	OBJECTS
BUTCHOY	GENER	LAWIN	QUINTA	VICKY
CARINA	HELEN	MARCE	ROLLY	WARREN
DINDO	IGME	NINA	SIONY	YOYONG
ENTENG	JULIAN	OFEI	TONYO	ZOSIMO

AUXILLIARY LIST:

#SabiNiMangTani: El Niño pero umuulan?

I an!..

POSIBLE PA RIN ANG MGA PAG-ULAN, YUN NGA LANG, MAY IBANG LUGAR KUNG SAAN KAKAUNTI SA KARANIWANG O HALOS WALANG ULANG BUMUBUHOS.

#SabiNiMangTani: May malakas bang

I an!..

POSIBILIDAD NA MAY MALAKAS NA BAGYONG PUMASOK SA PHIL AREA OF RESPONSIBILITY. PWEDENG MAG-LANDFALL PA ITO. KAYA DAPAT LAGING IMReady!

#SabiNiMangTani: Mainit na umaga, maulang

I an!..

MAULANG SA HAPON O GABI? DAHIL SA ALINSANGAN, NAGKAKARON NG SAPAT NA MOISTURE SA ATMOSPHERE. AT DAHIL SA MOISTURE NA 'YAN, NAGKAKARON NG MGA PAG-ULAN.

Trivia: Bagyong Ondoy by the Numbers

1,786 Isangkasalitan: Ninoy, Minors, Coastal and Southern Luzon, Visayas and Mindanao were flooded

464 DEAD

529 INJURED

37 MISSING

IMReady ba sa pagbaha ang iyong pamilya?

MAKIBAHAWALAY KAYO...
-ALAMIN KUNG PANO KAYO MAGKAKA...
-OSAP 'YANG MAY CARINA

TRAHA AND EMERGENCY KIT
-PAGKAIN, TUBIG, GABO, DAMIT NA...
-MAGKAKASAMA HANG 'YANG...
-SA 'YANG...
-MAGSAMA NG GABIT AT PAGKAIN...
-PAPA SA ALAGANG HAYOP

RIVER ASSESSMENT
-ALAMIN KUNG CROOD PROBE JARAN SA ANG...
-TUTULIHAN, ANG PAKAI AN AT...
-PINAASURADO, MGA PANGALANG...
-DINAGKARAN...
-ALAMIN ANG PINAKAMALAPIT NA...
-REUTERS

GAWING EOOD-PROOF ANG BANAY
-MAGKAKARON NG...
-PAGKAY SA...
-MAGKAKARON NG...
-MAGKAKARON NG...

IM Ready Tips

USEFUL TIPS THIS RAINY SEASON



1. Keep flash lights, candles and battery powered radios within easy reach.
2. Prepare foods that need not be cooked.
3. Secure domesticated animals in a safe place.
4. Stay inside the house and always keep yourself updated with the latest weather report.
5. Do not wade through floodwaters to avoid being electrocuted and contracting diseases.
6. Should you need to evacuate, bring candles/flashlight, battery power



KINAKAILANGANG TUMAWID SA ILOG O BAHANG KALYE

TANDAAN: Na kahit hanggang tuhod na tubig ay maaari ka nang tangayin ng umaagos na tubig. Kaya't tumawid lamang sa ilog o bahang kalye kung talagang kinakailangan.

Huwag nang tumawid kung: malabo na ang tubig, malakas ang agos, o naririnig ang mga batong gumugulong sa ilalim ng ilog.

Kung mag-isang tatawid, gumamit ng kahoy na pangtukod at para kapain ang mga butas gaya ng manhole sa ilalim ng tubig. Kung may mga kasama, gamitin ang mutual support method.

ANG MUTUAL SUPPORT METHOD

1. Tumawid ng magkakasama. Ang mga mas sanay tumawid ang nasa magkabilang dulo;
2. Kumapit sa sinturon o sa suotan ng sinturon ng katabi;
3. Lumakad ng dahan-dahan at isang hilera.



mountainsafety.org.nz



PAANO GAGAWING FLOOD-PROOF ANG INYONG BAHAY?

1. MAG-INSTALL NG MGA "CHECK VALVES" O ONE-WAY VALVE SA INYONG LABABO AT IBA PANG TUBO PARA HINDI DITO BUMULWAK ANG TUBIG MULA SA BAHA.
2. MAGTAYO NG FLOOD BARRIER O FLOOD SKIRTS NA HAHARANG SA PAGPASOK NG TUBIG BAHA SA LOOB NG INYONG BAHAY. PWEDE RING GAWAN NG KANAL ANG PALIBOT NG BAHAY.
3. MAGTANIM NG MGA "WATER-THIRSTY" NA HALAMAN SA PALIGID NG INYONG BAHAY TULAD NG KAWAYAN AT SAGING.
4. KUNG YARI SA KAHoy O CHIPBOARD ANG INYONG SAHIG, MAING PALITAN ITO NG SEMENTO AT CERAMIC TILES.
5. SIGURUHING WALANG BUTAS AT HINDI MAPAPASOK NG TUBIG ANG INYONG BUBONG AT MGA BINTANA.



EL NIÑO 101

BENEFICIAL EFFECTS OF EL NIÑO

LESS TROPICAL CYCLONE OCCURRENCE

CERTAIN CROPS THAT DO NOT REQUIRE PLENTY OF WATER SUCH AS CORN, MONGGO, WATERMELON AND MANGOES WILL FLOURISH

WINDOW OF OPPORTUNITY FOR SOME BUSINESSMEN SINCE THERE WILL BE HIGHER DEMAND FOR THIRST QUENCHERS, AIR CONDITIONERS, ETC.

NEGATIVE IMPACTS OF EL NIÑO

HIGHER CHANCE OF DROUGHT

POWER SUPPLY MAY BE ALSO BE AFFECTED ESPECIALLY AREAS DEPENDENT ON HYDRO-ELECTRIC POWER

PRODUCTION OF RICE AND OTHER WATER-LOVING CROPS WILL LESSEN

HEAT-RELATED DISEASES ARE MORE IMMINENT

SINCE THERE WILL BE LESS RAINS, THE EFFECTS OF POLLUTION AND OCCURRENCE OF RED TIDE WILL ALSO BE MORE PROMINENT



GMAWEATHER

YELLOW WARNING

7.5-15 mm NA
DAMI NG ULAN

POSIBLENG BUMAHA
SA MABABABANG
LUGAR

MAGMATYAG

SOURCE: PAGASA



ATHER

ORANGE WARNING

15-30 mm
NA DAMI NG ULAN

MAY BANTA NG BAHA

MAGHANDA SA
POSIBLENG
PAGLIKAS

SOURCE: PAGASA



GMAWEATHER

RED WARNING

30 mm PATAAS
NA DAMI NG ULAN

TIYAK NA BABAHA
KAILANGANG
LUMIKAS

SOURCE: PAGASA



I AM READY EXPLAINER AND WEBCAST



Sabi ni Mang Tani...



LAGING NARIYAN ANG POSIBILIDAD NA MAY MALAKAS NA BAGYONG PUMASOK SA PHL AREA OF RESPONSIBILITY. PWEDE NGANG MAG-LANDFALL PA ITO. KAYA DAPAT LAGING IMReady!

VIDEO_bagyo_av_final

BAGYO

VIDE
l.mov



JUST IN: LOOK: Fashion designer makes Maine Mendoza doll Jan 28, 2016 1:59am

IMReadyExplains: Tropical Cyclone Classifications [f](#) [t](#)

Today is January 28, 2016
7:45:08 AM PST

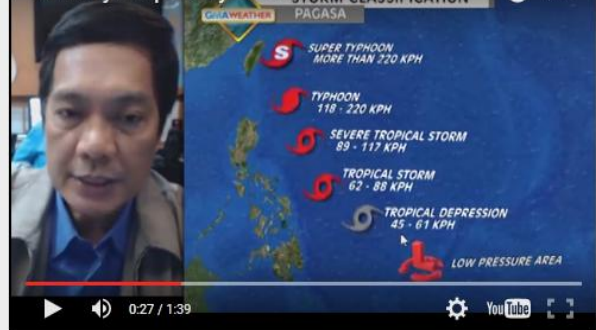
OVERVIEW

GMA ROADWATCH

GMA WEATHER

iKNOW

IMReady: Tropical Cyclone Classifications



VIDEO_el_nino_exp.mov



Challenges -

- **Laymanize**
- **Interactive graphics for different weather hazards**
 - **Wind and rainfall intensity**
 - **Storm surge**
 - **Init factor**
- **Most people hate numbers and graphs**
- **Use of social media (Facebook, Twitter, etc.)**
 - **More explainers**
 - **Regular webcasts**
- **Accurate forecast is not enough. Communication and understanding are the key elements.**

MARAMING SALAMAT PO!!!

