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# THE COMPASS

DESTINATIONS ✦ EXPERIENCES ✦ ADVENTURES ✦ INSIGHTS ✦ PERSPECTIVES



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## THE WEATHER MAN

“A good weather forecast is like a good suit of armor. Like anything that has to do with probability, it might never be perfect.”

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## CAPITOL IDEAS

“Apart from the restaurants and new spaces is an entire neighborhood and community that can often get lost when talks of Kapitolyo arises.”

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## THE GOOD THAT WE DO

“The work is far from done, of course, but this is how we can start fixing the big things: little by little, and together.”



WHAT DO YOU DO WHEN  
EXTREME WEATHER—WHICH  
USED TO DEFINE THE OUTER  
EDGES OF POSSIBILITY AND OF  
CALAMITY—HAS BECOME THE  
NEW NORM?  
OUR SAFETY MIGHT  
LIE IN THE HANDS OF  
AMATEURS LIKE MAVERICK  
METEOROLOGIST MIKE  
PADUA. MEET THE  
WEATHER GEEKS WHO ARE AT  
THE FOREFRONT OF  
TYPHOON WARNINGS.

WRITTEN BY  
**NINA UNLAY**

PORTRAITS BY  
**FRANCISCO GUERRERO**

THE

WEATHER MAN



# HE CALLS THEM BY NAME: MARILYN, BASHANG, SENDONG, LANDO, AND YOLANDA

In 2004, the name of his frenemy was Unding. Back then, the people of Camarines Sur were just falling back into rest and routine, relieved that the worst tropical cyclone they'd experienced in almost a decade has left and continued on its course. The official weather forecast declared that it was heading up north. But in Naga City, this man thought otherwise.

Mike Padua has been obsessed with typhoons since he was five years old. Captivated by the science of weather, he spent his childhood propped up against windows, climbing roofs and plotting storms. Upon being asked when his fascination really began, he gives anecdotes instead of answers. And from his stories it can only seem like the truth—he talks about an uncle with a similar love and a map and tracking guide that he lent Mike, following the newspapers for reports in elementary school, plastering his wall with the collected clippings and studying them devoutly.

It followed him into adulthood. Mike is a weatherman. He's a quiet and reserved fellow, difficult to pin down, except when he's talking about the thing he loves most.

When he talks about the weather, enthusiasm emanates from his voice, his passion lit with the urgency that escapes the rest of the country but that has taken him since he was a boy.

At any other time, a man like Mike would've just been...well, a nerd with an unusual obsession. But today, in a

Philippines that has been caught flat-footed by Typhoon Yolanda—the storm known as Haiyan internationally, and which remains the strongest typhoon ever recorded at landfall, and the deadliest storm of the modern age—and in a world battered regularly by extreme weather events that are not supposed to happen in the first place, Mike is more than a curiosity: He is a necessity.

would return at 9PM," Mike recalls the details of the prediction that would later earn him the nickname Mr. Typhoon. He made several phone calls to PAGASA, which fell on deaf ears. After, he made a call to then-mayor Jesse Robredo, who with the help of Mike's forecast, pulled together a meeting with the disaster coordinating council, preparing for the worst.

Later that night, as predicted, Unding returned. The winds averaged as high as 80KPH, and the thunderclaps were as loud as bombs. An official warning was released hours later, when the typhoon was already raging at a nationally accepted Signal 3.

Typhoon Unding, internationally acknowledged as Koppu, is informally called a "looper," meteorologist slang that refers to the rare occurrence when a typhoon decides to double back on its course like on a rollercoaster's track. When it comes to probability, which is the crux of weather forecasting, it is a testament to how nature can play tricks, making it a lot harder to calculate without experience.

Mike has been giving his forecasts since 1997—earlier if you take into account the

occasional heads-up he'd give his elementary school teachers. As a young student, he gladly attended seminars on typhoon tracking given by the center of PAGASA in Naga City, and made friends with their staff members. "I bought this summary on typhoons from 1948 to 1978 from PAGASA, then I photocopied



**On that particular morning** in 2004, he woke up to unsettling satellite images. Armed with experience dated back to 1982, his own rooftop weather station and an office at the Naga College Foundation, he gave his own unofficial forecast. "It was already late in the afternoon when I said the typhoon

BY THE NUMBERS

## THE MOST DESTRUCTIVE TYPHOONS IN THE PHILIPPINES

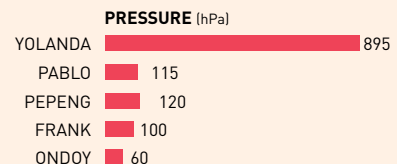
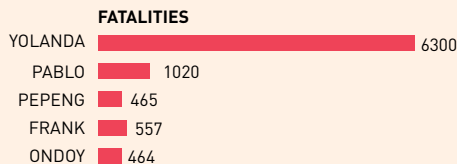
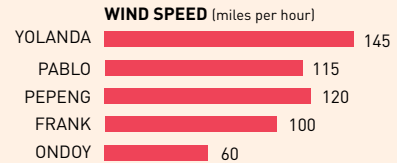
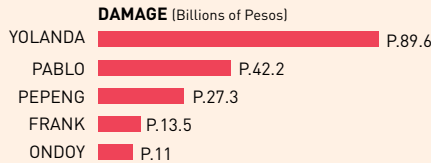
**1. YOLANDA** Nov. 2 - Nov. 13, 2013

**2. PABLO** Dec. 2 - Dec. 10, 2012

**3. PEPENG** Sep. 30 - Oct. 11, 2009

**4. FRANK** June 18 - June 23, 2008

**5. ONDOY** Sep. 25 - Sep. 27, 2009



### WHAT TO DO BEFORE A TYPHOON

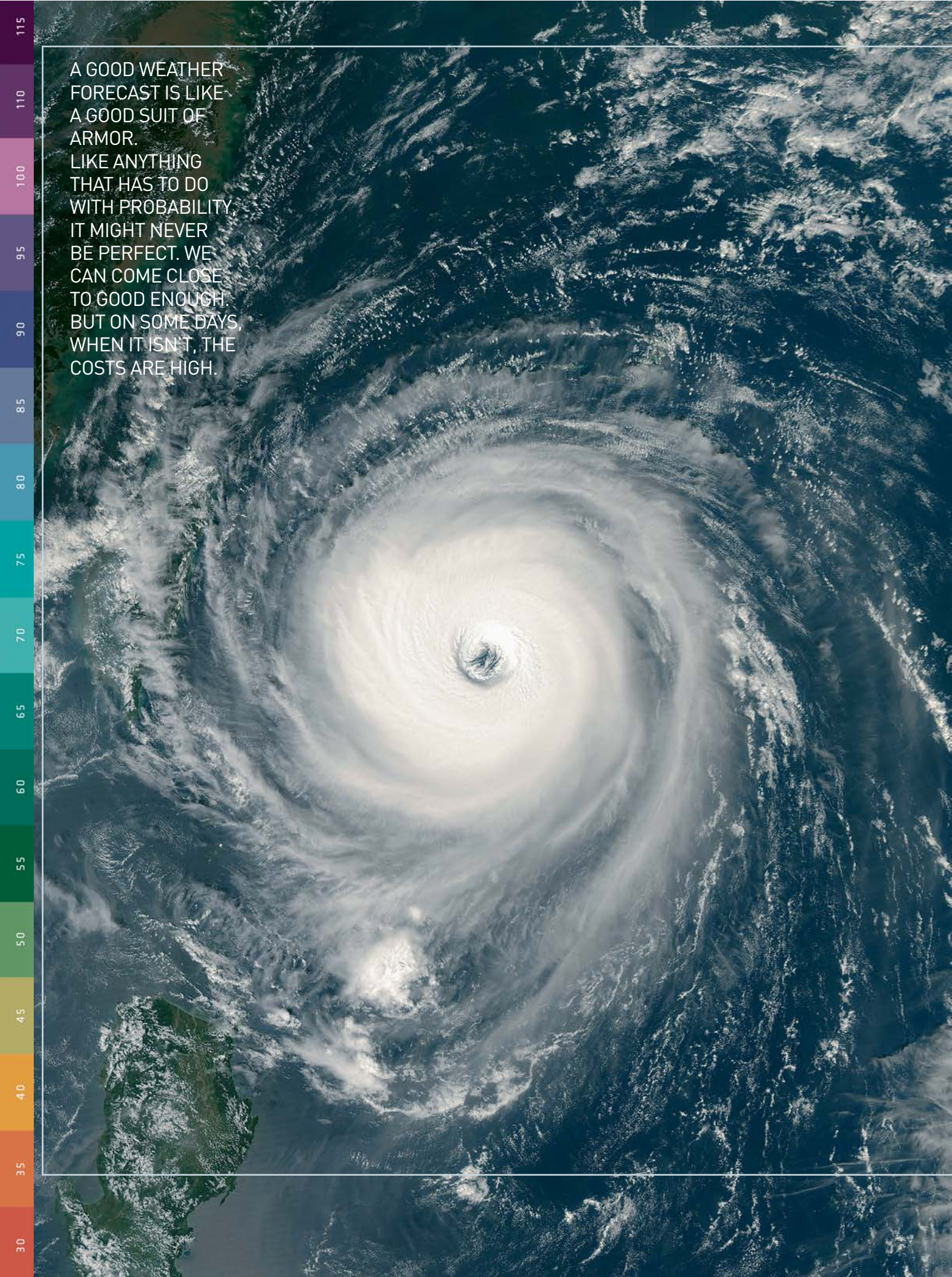
- Inspect your house if necessary repair is needed. (e.g., roof, doors, windows, ceilings)
- Before a typhoon strikes, you must clean up your home drainage system so it won't get clogged up.
- Store an adequate supply of food and water that would last for a few days. Canned goods are ideal especially if cooking is not possible.
- Put everything in your house in an elevated position especially items that generate electricity so that water won't penetrate into them in case floodwater rushes inside your house.
- If you are living in a lowland, hazard-prone and/or risk area, it is ideal to evacuate as early as possible.
- Always keep flashlights, candles, batteries and first-aid supplies available.
- It is important as well to have an available transistor radio (battery-powered, in case power supply will be unavailable) so you can be updated about the typhoon and its current location.
- Listen to your local radio, television, or visit [web.pagasa.dost.gov.ph](http://web.pagasa.dost.gov.ph) for storm advisories on the progress of the typhoon.

### WHAT TO DO DURING A TYPHOON

- Stay inside the house and keep calm.
- Monitor to your radio, television, or websites for updates.
- In case of flooding, turn off the main sources of electricity to prevent electrical accidents.
- Avoid wading through flooded areas to avoid water-transmitted diseases.
- Do not operate any electrical equipment during a flood.
- Do not use gas or electrical appliances that have been flooded.
- Keep an eye on lighted candles or gas lamps.
- Heed the advice of the local authorities if they ask you to evacuate your area. If there is a need to move to an evacuation center, follow these reminders:
  - Evacuate calmly.
  - Close the windows and turn off the main power switch.
  - Put important appliances and belongings in a high ground.
  - Avoid the way leading to or along rivers.

Source: weather.com

A GOOD WEATHER  
FORECAST IS LIKE  
A GOOD SUIT OF  
ARMOR.  
LIKE ANYTHING  
THAT HAS TO DO  
WITH PROBABILITY,  
IT MIGHT NEVER  
BE PERFECT. WE  
CAN COME CLOSE  
TO GOOD ENOUGH,  
BUT ON SOME DAYS,  
WHEN IT ISN'T,  
THE COSTS ARE HIGH.



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their reports from 1979 to 1983. Those were my comics.” In college, he took up geography in the University of the Philippines and put up typhoon tracking charts on the bulletin boards of the residence halls. I was a weird guy, he acknowledges; not everyone feels the attraction that pulls him to bring out a ladder and get on the roof.

But it was in the year 1997 that the Internet took off and Mike put up his own online weather-forecasting platform, now known as Typhoon 2000,

of PAGASA. He is also the forecaster behind Weather Manila. “In forecasting, there are two things you need to know: first is what the current state of the atmosphere is, and the next is what will happen.”

Early this year, NASA reported that 2014 was the Earth’s warmest since 1880; 2015 already has, overtaken it. Before the ink was dry on the COP21 Climate Change Conference in Paris, climatologists were already predicting that this year, 2016, will be hotter

that has to do with probability, it might never be perfect. We can come close to good enough. But on some days, when it isn’t, the costs are high. It becomes crucial to know when we should open up the umbrella or shut our doors. We need men on the inside, men who know when the skies are our enemy or our friend.

Every country has an official weather bureau like PAGASA, which reports to the greater powers, the World Meteorological Organization (WMO). But to date, no local university offers meteorology as an undergraduate course. The only meteorology courses offered are the MA and PhD program of the UP Institute of Meteorology, and this has been the case since 1968. Years ago, a partylist successfully pushed for the undergraduate program, but their victory was short-lived. After the partylist was disbanded, the program lost its footing and closed with only one batch of meteorologists.

Ideally, with more data and more forecasters, the accuracy in weather monitoring improves, but beyond our batch of rogue meteorologists, resources are scarce. Fortunately, all national weather bureaus send reports to the WMO and the information is made available to the public on official government websites. This is how ordinary citizens like Mike Padua, have been able to participate early on in the field of forecasting, and have learned to

## WEATHER FORECASTING IS ALL ABOUT DATA. WHERE AND HOW THE DATA IS COLLECTED IS ALSO PART OF THIS CALCULATION. A FORECASTER IS ONLY AS GOOD AS WHAT HE KNOWS

which was the first privately owned station that featured all the information on local typhoons. Today, it is still one of the most popular ports for information during times of crisis, reaching hundreds of thousands hits a day, and up to million when there’s a typhoon on its way. In fact, Typhoon 2000 preceded PAGASA’s official website, which was set up a few years after. “Tumulong nga ako doon eh,” Mike laughs. Prior to the launch of the PAGASA website, he had been collecting the data from PAGASA himself and then typing it up on his own time.

**Weather forecasting is all about data.** Where and how the data is collected is also part of this calculation. A forecaster is only as good as what he knows, which puts five-year-old newspaper-gathering Mike in perspective. The first step in weather forecasting is to understand what is happening all over the world, and not just in localized areas. “Local observation has almost nothing to do with the track of a typhoon,” says Dr. Gerry Bagtasa from the UP Institute of Environmental Science and Meteorology (IESM), the academic arm

still. Globally, the number of weather-related disasters has only increased in the past decades, and the number of those affected is greater in developing countries. “Climate change” has become a household phrase, just as it has become the new normal for everyone around the world.

Living in this new normal, we have heard over again in different ways that we are also living under the threat of a new atmosphere, vastly different from what it used to be. Before disaster hits, a forecast is just

## INFORMATION IS CURRENCY, AND WEATHER IS A PLAYING FIELD WHERE INFORMATION IS HIGHLY VALUABLE. IN MORE DEVELOPED COUNTRIES, CLIMATOLOGY IS A RELEVANT AND BOOMING BUSINESS.

a prediction, a warning. But after the rains have gone and the dust has settled, people come out of their houses, and they always have questions. Where did that come from? Why didn’t we know sooner? A good weather forecast is a like a good suit of armor. Like anything

take weather monitoring into their own hands.

**Information is currency,** and weather is a playing field where information is highly valuable. In more developed countries, climatology is a relevant and



booming business. After his successful forecast of Typhoon Unding, Mike was met with many cynics who accused him of doing it for the money. But in reality, there isn't an abundance of weather companies in the Philippines—ironic for a country with particularly turbulent weather. Locally, the business of weather is a fairly vacant arena. It was

own independent network. Currently, Weather Philippines has over 700 automated stations used to measure relevant factors like humidity, precipitation, and wind speed. There are pros and cons to having weather stations automated, but WPF currently holds the largest network of automated stations, which gives them an edge

of technology, stations were always manned, and information was communicated through phone or Teletype. It used to take a team of meteorologists to put together a five-day forecast. Nowadays, with just the right software, forecasts can be done up to two weeks in advance.

“When Ondoy and Pepeng happened several years back, there was a realization,” says Weather Philippines’ general manager Dave Valeriano. “We pour a lot of resources giving to those who are hit by the storms, when it might be more beneficial and effective if we already try to help the communities be more resilient and prepared. The question became ‘where do we start?’ and we decided that we would start with information.”

With their network and team of five meteorologists, Weather Philippines is capable of making more specific localized forecasts, which they provide to both local government units and private companies. When a typhoon is approaching, their team works around the clock, regularly making updates and

**CONTINUED ON PAGE 114**

## THE LANDSCAPE OF WEATHER MONITORING IN THE PHILIPPINES IS A PECULIAR ONE. THE ONE-VOICE POLICY DICTATES THAT THERE BE ONLY ONE OFFICIAL ADVISORY IN EVERY COUNTRY COMING FROM THE AUTHORIZED WEATHER BUREAU.

only three years ago that Mike, who was working independently at the time and funding Typhoon 2000 out of his own pocket, was recruited to work for the newly founded Weather Philippines (WPF), the first privately owned weather company in the country.

The concept of Weather Philippines is simple: they provide localized weather forecasts on their website and app, and they do so with their

in certain aspects of data collection. The information gathered exclusively by Weather Philippines is thrown to their international partner, one of the largest weather services providers in the world, MeteoGroup. MeteoGroup has equivalents of Weather Philippines in countries worldwide, which allows them to crunch more data and make their own forecasts.

Prior to the advent of this kind

### EXTREME WEATHER WEBSITES

## TYPHOON CHASERS AND HURRICANE HUNTERS

#### TYPHOON2000.COM

Typhoon 2000 is a one-stop for all the information on all the tropical cyclones covering the South China Sea and Northwest Pacific Basin. It gathers information from different meteorological agencies and then compiles and communicates that information in layman's terms.

#### WEB.PAGASA.DOST.GOV.PH

The official website of PAGASA houses weather advisories as well as disaster warnings. In times of thunderstorms and floods, updates will be posted here.

#### WEATHER-MANILA.COM

Weather Manila is a forecasting platform that gives information on different, and specific, places around the Philippines. They provide the outlook of the weather in a concise chart that details rain, temperature, wind and other factors.

#### WEATHER.COM.PH

This is the official website of Weather Philippines, where you can find localized information and regular updates. Along with the forecasts, there are also short clips available that give lectures on weather monitoring and storms.

