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mayon, best teacher to volcano logists

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**L**EGAZPI CITY, Albay — Mayon Volcano might be a destructive natural force that costs the government multi-million liability whenever it erupts; but it has so far produced world-class Filipino volcanologists.

"Mayon is a very interesting volcano among the volcanos that we have. Actually, Mayon is a good laboratory volcano for researchers in the science of Volcanology," said Dr. Renato Solidum, head of the Philippine Institute of Volcanology and Seismology (Phivolcs).

He explained that just like in any other field of science, there are theories and techniques that have to be proven and tested in order to gather as much data as possible that would be used to improve what scientists know about volcanoes. These data lead to better understanding and more educated predictions based on the behavior of volcanoes.

And Mayon Volcano, according to Solidum, is providing them with all of that.

"If you want to test methods for study, you want a volcano that is always erupting," said Solidum.

For instance, he said, if volcanologists

have several theories about another active volcano in the Philippines — like, for example, Taal Volcano in Batangas — it would be difficult to prove anything if it is not erupting. What they have, according to Solidum, are minimal scientific and historical data of Taal's previous eruptions.

But in the case of Mayon Volcano, Solidum said Filipino volcanologists have voluminous records and data about an open-system volcano.

Open system volcano, like Mayon, is where magma usually go up every time.

As a result, Solidum said Mayon has helped them expand their knowledge and test new theories and methods because it regularly erupts.

The end result is that Filipino volcanologists have been contributing a lot of scientific research on open-system volcanoes to the international community of volcanologists.

#### Foreign scientists

Solidum said Mayon has been a good host to a lot of foreign volcanologists over the years.

He said that Filipino volcanologists are even the one initiating the invitation to the international group of volcanologists to study Mayon with them.

\* VOLCANO

\* PHIVOLCS

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And in return, interested volcanologists of other countries have helped them finance the purchase of high-end modern instruments and software that are now being used in the monitoring of Mayon.

"Some of the instruments that are in Mayon Volcano are a result of collaborative budgets," said Solidum.

These instruments, according to him, have helped Filipino volcanologists to formulate new methods in studying volcanos.

"There are techniques that we are employing on Philippine volcanos that some countries have not even applied," said Dr. Paul Alanis, one of Phivolcs' senior volcanologists.

"We have also acquired electromagnetic instruments that some countries with volcanos have not even used yet," he added.

#### New breed

At present, Phivolcs has some 60 volcanologists monitoring eight active volcanoes throughout the country - including Bulusan in Sorsogon and Kanlaon in Negros Oriental.

The new recruits, he said, are being rotated to study other volcanoes in the country, including closed-system volcanos like Pinatubo in Central Luzon.

"We are doing the rotation of our staff so that the new ones will have the opportunity and experience to learn from the volcanos, to learn from us senior volcanologists," said Solidum.

#### Best teacher

Experience, they say, is the best teacher; and the adage, according to Solidum, is true in the field of volcanology.

"Even if you have a University degree,

even if you have post graduate study degrees, it is still incomplete if you do not experience eruptions because what is written in the books are incomplete, sometimes generic," said Solidum.

"So we really have to develop more people with experience because this profession is very important in a country like ours," he added.

#### Residents trust Phivolcs

Amid the muddling of "fake volcanologists" in social media based on what they see, feel and smell in the course of the series of eruptions at Mayon, residents who survived the 1993 Mayon eruption are still putting their trust on state volcanologists.

Rafael Abellano, 57, of Barangay Matanag, this city, told The Manila Bulletin that the lessons of the Feb. 2, 1993 Mayon eruption would prove that they should not be complacent with the current behavior of Mayon or draw assumptions based on what they see.

He said that although many of them have been living beside Mayon for almost five decades, they may know a lot about its behavior, but only Phivolcs officials have enough knowledge make the correct analyses.

"May nakikita kami, naamoy at nararamdaman sa Mayon. Alam namin kung nag-aalburuto yan o hindi. Pero mas naniniwala kami sa Phivolcs. Pinag-aralan nila yun, samantalang kami ay hindi (We can see, smell, and feel Mayon. We know when it is restless or not. But we believe more in Phivolcs. They've studied that, we haven't)," said Abellano, who grows coconuts, tomatoes and radish on Mayon's slopes.

Evelyn A. Echaluze, 50, also of Barangay Matanag, lost his father and three

family members during the eruption in 1993. She said losing her father and counting him among the 77 others killed in just a second has made her realize how dangerous living with Mayon could be.

"I was 24 when it erupted and emitted pyroclastic materials that drifted to Bonga Channel," she recalled in Filipino. "My father was caught tending to his farm, when it erupted. A lot of lives and property were gone in an instant," she added.

Echaluze said she is aware of various analyses aired on social media and recognizes some of them as just traditional beliefs. She said she trusts the proper authorities, so whenever they say that people should evacuate, she follows.

#### Damage to agri

The National Disaster Risk Reduction and Management Council (NDRRMC) said that close to P200 million worth of agriculture has been damaged in the province of Albay as a result of Mayon's restiveness over the past few weeks.

NDRRMC Executive Director and Office of Civil Defense (OCD) Administrator Ricardo B. Jalad, said of the P189,434,666.00 worth of damage, P181,382,970 was incurred on rice, P7,573,696.00 on corn and P478,000 on Abaca.

Jalad also said that a total of 10,279 farmers were affected by the disaster, but luckily there have been no casualties.

He said of the number of affected farmers, 347 are from Tabaco City, 29 in Bacacay, 36 in Malilipot, 135 in Sto. Domingo, 32 in Legazpi City, 279 in Daraga, 345 in Camalig, 1,122 in Guinabotan, 1,254 in Ligao City, 1,345 in Polangui and 2,087 in Oas. (With a report from Francis T. Wakefield)