



Case Study 28

HR/OD Intervention Focus: Disaster Risk Reduction

A New Perspective on Research

The Philippine Institute of Volcanology and Seismology (PHIVOLCS) aims to “to make the community safe and resilient to volcanic related hazards,” and this goal was foremost in the mind of PHIVOLCS geologist and senior research specialist Maybelline Cahulogan when she

applied for the Australia Awards Scholarships (AAS). As part of the organisation's Geology and Geophysics Research and Development Division, she needs to constantly gain new knowledge and work towards self-improvement. Thus, she could not pass up on the chance to pursue graduate studies abroad. In addition, the offer was also a chance for her to meet the organisation's requirement for its employees to have a master's degree.

Fortunately, Cahulogan found it easy to apply for the scholarship and fulfil the requirements for acceptance into the Master of Natural Hazards and Disasters program of the Australian National University (ANU). She credits the PAHRODF and her division at PHIVOLCS for the assistance they have extended to her. She also found their level of involvement in her REAP highly encouraging. She narrates, “Before I went to Australia, they required me to submit the REAP. So from the start, the office was so involved with what I will be studying in Australia. From Day 1, I already consulted with them [regarding] what to undertake, what research I will embark on in Australia.”

In particular, she was happy to receive technical support from her supervisors while she was working on one course requirement. “One of my reviewers for the research paper I submitted to complete the course was our director. He was very involved and he knew the progress with regards to my research,” she says. She also gives credit to ANU and her advisers for the support she received from them, including the funding she needed to acquire the seismic profile sections from the Department of Energy which she needed for her research paper.

From research paper to REAP

Cahulogan's REAP came about as a result of an exploratory research she did on using seismic reflection sections to locate faults in the Cotabato Basin and assessing risk in Sultan Kudarat by analysing remote sensing images. The resulting REAP, she explains, will allow PHIVOLCS "to know if there are possible earthquake generators" in those areas. She further adds: "There could be other means to identify structure beneath the ground and which would supplement the earthquake epicentres which are recording in those areas." PHILVOLCS currently gathers and utilises aerial photos to determine active faults, but in her REAP, Cahulogan hopes to dig in and map active faults or earthquake generators by studying land forms – an approach she describes as geomorphological.

Cahulogan's proposal to focus on Mindanao for her research was immediately approved because previous seismic studies in the country were mostly focused on Luzon and Visayas. In fact, she managed to finish 50 percent of her REAP while she was at ANU. However, she thinks presenting her study to her superiors and colleagues and convincing them of its validity may prove to be a challenge. She remains confident that her project will gain ground, though, especially because the preliminary results of her exploratory study have already been presented in an international conference abroad in 2012.

Presently, she is preoccupied with priority projects such as mapping faults in the whole of Mindanao using aerial photos. However, she hopes that with the approval of her project and its eventual implementation, this new technique of using deep-seated land forms taken from seismic profiles and remotely sensed imageries can be added to supplement the methods

currently used by PHIVOLCS. "Siguro (Probably) it will just be part of a methodology, of a system wherein we could just get those seismic profiles to aid or to assist us in identifying those earthquake generators," she says.

Gaining a new perspective

Cahulogan shares that other than the new technical knowledge she has gained from her studies in Australia, she has also learned more about the social sciences and the importance of taking a multidisciplinary approach. She was awakened to a new mindset and for this, she credits the AAS. "When I came back, I had a broader sense of what you call purpose," she reveals. "I came to realise that the technical part should really be seen as useful down to the community level," she adds. She believes the scholarship program instilled in the scholars – particularly those whose jobs are highly technical – the importance of engaging stakeholders in the community and allowing them to be part of the big picture.

She clearly sees how this new perspective is more aligned to PHILVOLCS strategic direction of becoming a service institution, and she now finds more meaning in the exercise of mapping active faults. Whereas she once thought that the fruit of her work would only end up in a paper presented to her organisation and other international scientific organisations, she has now become more involved in information, education, and communication campaigns. Although she was already doing this prior to the scholarship she was merely doing it routinely, as her heart was not into it.

For everything that her AAS journey has contributed to her personal and professional development, Cahulogan is grateful. She thanks PAHRODF for the opportunity to take up her

preferred specialisation and is looking forward to taking similar opportunities for growth in the future. She is also hopeful that scholars taking up highly technical studies would be given two years to obtain their degrees, as she felt that the 12 months given to her was not enough.

Maybelline Cahulogan finished her Master of Natural Hazards and Disasters from the Australian National University (ANU) in 2012. Her REAP focused on Mindanao Fault as Revealed by Seismic Reflection Sections in Cotabato Basin and Risk Assessment in Sultan Kudarat Province Using Remotely-Sensed Imageries