



# LUMEN DE LUMINE

THE NEWSLETTER OF THE MANILA OBSERVATORY

Vol.1 Issue No. 3 | October-December 2018

## What's Inside

Manila Observatory Delivers TALAB Session on Climate Justice **2**

MO Signs Memorandums of Agreement and Cooperation with NRC, SM Prime, Iloilo City, and NCDR, Taiwan **2**

Manila Observatory Touches Base with Bataan Province **3**

RCS Participates in Second RegCM Workshop in Hanoi, Vietnam **3**

Finding the Human Dimension to Air Pollution **3**

Manila Observatory is 153! **4**

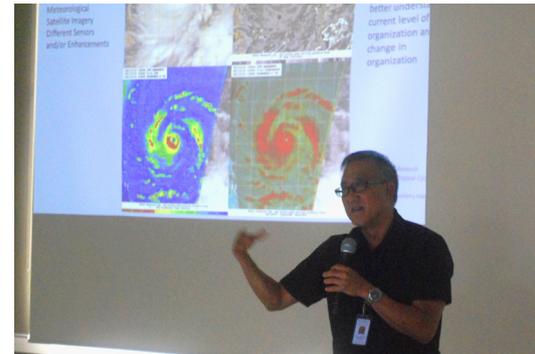
Accelerometers Installed in MO **4**

Friday Coffee Talks at Mirador **4**

## CAMP<sup>2</sup>Ex Chief Forecaster Gives Talk at Manila Observatory

Chief Forecaster of the Clouds Aerosols and Monsoon Processes Philippines Experiment (CAMP<sup>2</sup>Ex) and former technical advisor of the Joint Typhoon Warning Center (JTWC), Mr. Ed Fukada visited the Manila Observatory last 11-13 September 2018.

On 11-12 September, a workshop on fundamentals of tropical cyclones and synoptic meteorology including JTWC operational forecasting and its applications CAMP<sup>2</sup>Ex was conducted with the MO community, and graduate students from the Ateneo.



Mr. Ed Fukada during his public lecture on the Challenges of Tropical Cyclone Forecasting

Mr. Fukada also held a public lecture on the challenges in tropical cyclone forecasting on 13 September. Students from the Ateneo, and members of the community attended the event. Mr. Fukada was able to use Super Typhoon Mangkhut (Ompong) as an example for his talk as it made its way to the Philippines.

## Climate and Disaster Risk Assessment Training Held

The Manila Observatory hosted a Climate and Disaster Risk Assessment (CDRA) Training for partner local government units (LGU) of the National Resilience Council (NRC) last 8-10 October 2018.

For the first part of the training, 34 participants from LGUs and 11 from five academic institutions from the Province of Bataan and the Cities of Valenzuela, Naga, Iriga, Iloilo, Ormoc, Cagayan de Oro, and Zamboanga attended the foundational modules for CDRA. For the second part, only those who are handling the science and technology track of the Resilient LGU Program remained for the hands-on training.

Dr. Celine Vicente, head of the Geomatics for Environment and Development Laboratory was the overall training facilitator. With her, the Observatory also tapped the experts on geohazards, social science, and environmental science for a more holistic training.

After the training, the Observatory will also follow through with coaching and mentoring for the participants, to guide them in making their integrated risk maps.

All in all, the participants found the training to be very good, if not, excellent. Participants also expressed that the training could also be useful to their colleagues in the local level.



(LEFT) The Participants of the CDRA Training with MO and NRC Representatives (RIGHT) Participants working together on their outputs for the training

## Manila Observatory Delivers TALAB Session on Climate Justice

The Manila Observatory participated in this year's Talakayang Alay sa Bayan (TALAB) of the Ateneo de Manila University on 10 October 2018. Hosting a topic on climate justice, Dr. Gemma Narisma, Fr. Jett Villarin, and Dr. Antonio La Viña all sat together to talk about climate change and associated physical hazards and how it affects the exposed population and the vulnerable who are more susceptible to the impacts of the climactic and extreme weather hazards the world is experiencing.

The TALAB session was opened by a presentation of MO's Executive Director, Dr. Gemma Narisma on the state of the climate, how a 1.5 degree increase in temperature can make the vulnerable even more vulnerable in the future.

Climate Policy expert, Dr. Antonio La Viña discussed about the complexity of climate and environmental policy in today's context, and that there is a need to push for a new framing to climate change that encompasses not just the environment but also poverty and human rights.

Lastly, ADMU President and Climate Scientist Fr. Jett Villarin spoke about how faith looks into climate change. He highlighted that "sustainable development is not only focused on sustaining development but is also tied to conserving and developing creation and protecting what should remain constant, without losing our anchors on our way to transformation."



(L-R) Dr. Antonio La Viña, Climate Policy Expert; Fr. Jose Ramon Villarin, ADMU President and Climate Scientist, and Dr. Gemma Narisma, MO Executive Director and Climate Scientist

The event was attended by more than 400 students, staff of ADMU, and the public at Leong Hall, ADMU.

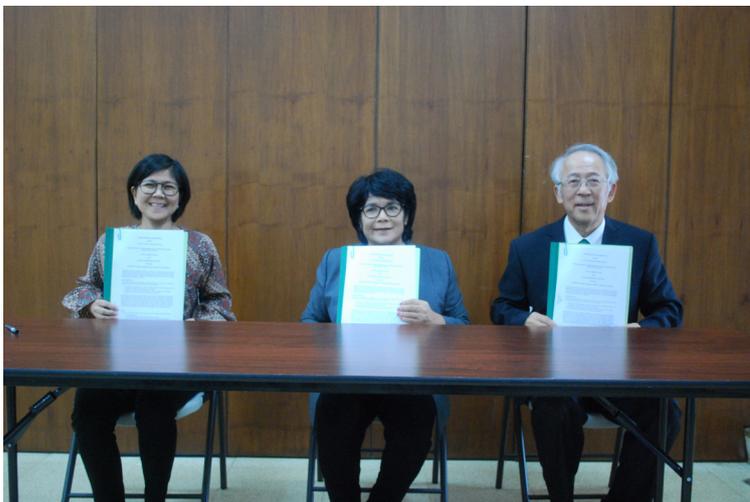
## MO Signs Memorandums of Agreement and Cooperation with NRC, SM Prime, Iloilo City, and NCDR, Taiwan

The Manila Observatory, represented by Executive Director Gemma Narisma, PhD signed a Memorandum of Agreement (MOA) and a Memorandum of Cooperation (MOC) for two initiatives for risk and resilience last 19 October 2018 at the Manila Observatory.

Dr. Hongey Chen, Director of the National Science and Technology Center for Disaster Reduction (NCDR) in Taiwan along with Ms. Ma. Antonia Yulo-Loyzaga, President of the National Resilience Council were present in the signing of agreements.

The MOA is between MO, NRC, Asia Pacific Economic Cooperation Emergency Preparedness Capacity Building Center, and SM Prime Corporation to foster knowledge sharing, capacity building, advocacy, coordination, and cooperation for disaster recovery and resilience.

For the MOC, Iloilo City along with MO, NRC, and the NCDR will strengthen the joint efforts in improving regional resilience against natural hazards.



(LEFT) Dr. Gemma Narisma, Ms. Ma. Antonia Yulo-Loyzaga, and Dr. Hongey Chen sign MOA and MOC for partnerships. // (RIGHT) MO, NRC, and NCDR teams

## Manila Observatory Touches Base with Bataan Province

Senior Scientists of the Manila Observatory through the National Resilience Council has sat in meetings with the 1Bataan Resilience Team to talk about how the Observatory can help them in their projects aimed at resilience.

On 10 September 2018, Drs. Gemma Narisma, James Simpas, Obiminda Cambaliza, Faye Cruz, Julie Dado, and Celine Vicente visited Bataan to be able to discuss what the Observatory has been doing specific to the areas of air quality and climate science. This exposure trip presented an opportunity for the team to see Bataan's Disaster Risk Reduction Command Center and air quality monitoring van.

A follow-up meeting was conducted last 2 October 2018 in the Manila Observatory with the core members of the 1Bataan Resilience Team to expose them to what the Observatory does and explore the next steps for the possible partnership.



1Bataan Resilience Team with NRC and MO Scientists during the 02 October exposure at Manila Observatory

## RCS Participates in Second RegCM Workshop in Hanoi, Vietnam

The Regional Climate Systems Laboratory participated in the Second Training Workshop on Regional Climate Modeling in Southeast Asia held in Hanoi, Vietnam last 22-26 October 2018.

The workshop is organized by the International Centre for Theoretical Physics, this is the second workshop in Southeast Asia on regional climate models. The topics involved climate and climate change over the region, regional climate modeling, hands-on workshops, and discussions about the Coordinated Regional Downscaling Experiment (CORDEX) and future developments in RCMs.

MO Executive Director, Dr. Gemma Narisma and RCS Laboratory Head Dr. Faye Cruz served as resource persons while graduate students JC Peralta and Shane Visaga participated in the workshop.



RCS Research Assistants and Graduate Students Shane Visaga and JC Peralta (second and first from right) along with fellow Filipino participants at the CORDEX SEA Workshop in Hanoi, Vietnam

## Finding the Human Dimension to Air Pollution

Dr. Candice Lung, Research Fellow at the Research Center for Environmental Changes, Academia Sinica in Taiwan, partner of the Air Quality Dynamics and Instrumentation Technology and Development Laboratory spoke in the Manila Observatory about her work in atmospheric science and public health last 21 November 2018.

For the first part of her talk, Dr. Lung talked about her journey from majoring in atmospheric science and switching to public health for her post-graduate degrees. She is one of the first scientists who started tackling the culture-related community air pollution sources and health in Asia. She points out that there is a need to contextualize this to what the people in the continent are doing because using emission factors of the West cannot illustrate the situation in Asia primarily because of the difference in activities.

One of the highlights of her talk also is about seeing her research results become a basis for policy measures for limiting air pollution sources specifically in places of worship and around pockets of high activity to preserve human health.

Dr. Lung's visit is part of the transdisciplinary project, "Building Urban Resilience: A systems approach to analyzing social and personal health risks of jeepney commuters and drivers to PM<sub>2.5</sub> in Metro Manila, Philippines."



Dr. Candice Lung (center-front) with MO scientists, graduate students, and under-graduate students from the fields of atmospheric science, physics, environmental science, and health science

## Manila Observatory is 153!

The Manila Observatory celebrated its 153rd anniversary on 27 September 2018. The community and partners were invited to a mass presided by Fr. Jun Viray, Provincial Superior of the Society of Jesus in the Philippines. The mass was co-celebrated by Fr. Tony Basilio of the Ateneo de Davao and member of the MO board of trustees.

As part of the anniversary, the Observatory also opened Café Mirador to the public. It is envisioned to be a place where people can freely discuss and engage ideas. Just like its namesake, Mirador Hill, where the Observatory once operated after the world war, the café also sits on a vantage point looking out to the field and the Solar Building.

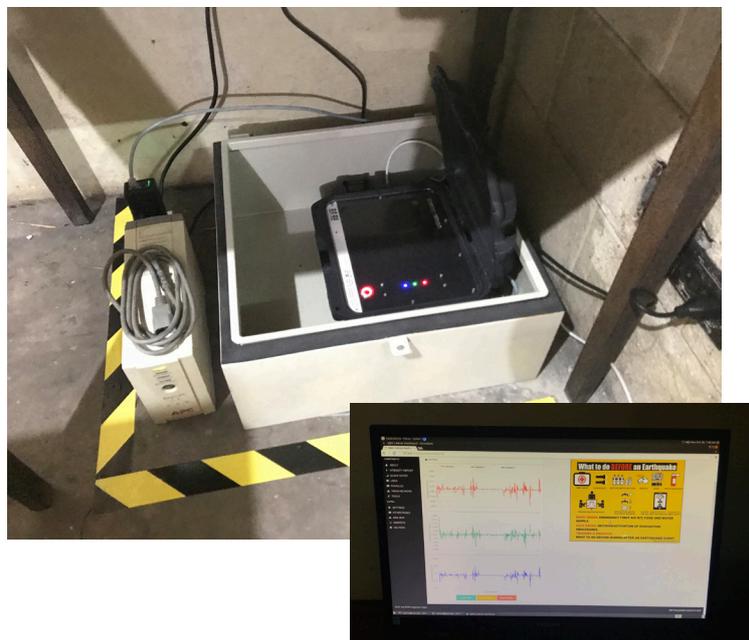
The Observatory also set-up exhibits showcasing banner programs and projects of the different laboratories.



### Accelerometers Installed in MO

Through a research grant from the Department of Science Technology-Technology Application and Promotion Institute, Tekton Geometrix partnered with the Solid Earth Dynamics and Upper Atmosphere Dynamics laboratory in installing an accelerometer in the Manila Observatory to observe local ground shaking intensity.

This instrument will be able to assess if it is safe to enter the building after an earthquake. This will also monitor daily ground shaking activities. The instruments are installed in the basement of the main building of the Observatory and in the Seismic Vault.



### Friday Coffee Talks at Mirador

To foster ownership of what the Observatory does, coffee talks, or “kumustahan” are done in Café Mirador to keep the community updated with what research and administrative staff are doing.

For the first talk, Drs. Obiminda Cambaliza and James Simpas, co-heads of the Air Quality Dynamics and Instrumentation Technology and Development Laboratory talked about the new instruments MO is acquiring. This was also an opportunity to introduce their new project, a collaboration with Academia Sinica in analyzing personal and social health risks of commuters and jeepney drivers in relation to their exposure to PM<sub>2.5</sub>.

The second coffee talk was about what the Solid Earth Dynamics laboratory is currently engaged in. In this session, Mr. Randell Teodoro discussed the partnership with Tekton Geometrix that involves installing accelerometers in the Observatory premises.

#### LUMEN DE LUMINE EDITORIAL BOARD

Editor-in-Chief

**YSABEL ANNE LEE**

Advisers

**GEMMA TERESA NARISMA & RANDELL TEODORO**

Writers and Contributors

**YSABEL ANNE LEE, ANGELA MAGNAYE**

Photography

**YSABEL ANNE LEE, CYBIL ESCOBAR, SHANE VISAGA**

*Lumen de Lumine (Light from Light) re-echoes the ancient Apostolic Credo confessing aloud the belief in Christ. This also represents the physical sun that enables the Manila Observatory to find its way in this world of sense and delve into the knowledge of its mysteries, and so does the Divine Son of God that enables us to find our way in the spiritual world. Fr. dela Costa reiterated this in the Observatory's 100th anniversary; with the serene and imperturbable faith, "all the paths of knowledge, wherever they may wind... lead in the end to that Love that draws all men, all creation, to itself."*