

Update on Deliverable: Climate and Disaster Risk Assessment Training

Description of deliverable (as seen on the Sendai website):

Part of NRC's program is a certificate course on Climate and Disaster Risk Assessment (CDRA) which comes in 3 phases: Training that includes lectures, demonstrations, and hands-on exercises; Coaching and mentoring; and Integrated risk mapping. It involves both physical and social dimensions for a holistic approach on risk assessments. These will ensure partners identify risk baselines and targets through scorecards and to chart resilience roadmaps from prepare, adapt and transform stages. With risk assessments and geospatial databases as final output, these will contain a combination of thematic layers categorized as Hazard, Exposure, Vulnerability (HEVs) at different scales with respect to space and time. Generated and presented maps should be according to pillars and sub-pillars of the resilience framework and scorecard. The output for this will be the Manila Observatory's CDRA Training Module.

Output of deliverable:

In October 2018, representatives from the National Resilience Council's partner local government units (LGUs) and their respective academic partners took part in the Climate and Disaster Risk Assessment (CDRA) Training Workshop organized by NRC, Ateneo de Manila University, and Manila Observatory. The 5-day training program enabled LGUs to establish resilience baselines through their scorecards and chart resilience roadmaps along NRC's Prepare, Adapt, and Transform stages.

Participating institutions include the local government units of the province of Bataan, the cities of Cagayan de Oro, Iloilo, Iriga, Naga, Ormoc, and Zamboanga, and their academic partners, Bataan Peninsula State University, Xavier University-Ateneo de Cagayan, University of the Philippines-Visayas, Ateneo de Naga University, Visayas State University, and Ateneo de Zamboanga University.

The workshop was successfully able to do the following:

1. Build a shared understanding of the tools and their applications towards resilience
2. Establish the foundation for a resilience-oriented Management Information System (MIS)
3. Utilize space and ground-based mapping tools to develop and visualize the risk profile of the LGU
4. Integrate the physical and social variables in the HEVRI analysis

The resource team was comprised mainly of experts in both the physical and social sciences such as Dr. Gemma Narisma, Dr. Emma Porio, Dr. Rosa Perez, Dr. Noralene Uy, Dr. Celine Vicente, and Ms. Jessica Dator-Bercilla to name a few. They discussed a wide range of topics including but not limited to CDRA; climate and hazard analyses; geophysical and geomorphological hazards; risk mapping; multi-dimensional exposure, vulnerability, and adaptation analyses; and the social dimensions of risk and resilience.

The workshop concluded with a presentation of the participants' expected outputs, namely:

1. Pre-MIS
 - a. Risk mapping research questions
 - b. HEV matched variables for risk mapping
 - c. Data gathering strategy for spatial databases and maps
 - d. Risk mapping methods to apply responding to research questions
 - e. Outline risk mapping project and data gathering proposal
 - i. Work program (i.e. Gantt chart with synchronized activities, milestones, expected outputs and timelines)
 - ii. Preliminary activity-based budgets
2. Integrated risk maps according to NRC pillars and sub-pillars



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NRC Partner LGUs Trained at Climate and Disaster Risk Assessment Certificate Course

From 8-12 October 2018, 42 participants from 8 local government units and 6 academic institutions underwent the Climate and Disaster Risk Assessment (CDRA) Training for the National Resilience Council (NRC) Resilient LGU Program at the Manila Observatory (MO) in Quezon City.



NRC LGU and academic partners with members of the National Resilience Council and Manila Observatory, including: NRC Executive Director Ms. Malu Erni; MO Executive Director Dr. Gemma Narisma; Geomatics for Environment and Development Laboratory Head and overall CDRA Training Coordinator Dr. May Celine Vicente; Christian Aid Climate Change Advisor for Asia and the Middle East Ms. Jessica Bercilla; NRC Program Manager Ms. Marilou Suplido; SM Supermalls Corporate Compliance Manager Ms. Simonette Lat; and Ateneo de Manila University lecturer and Coastal Cities at Risk 2 Project (CCAR2) Manager Dr. Noralene Uy.

(Not in photo: CCAR2 Head and MO Senior Research Fellow Dr. Emma Porio; MO Senior Research Fellow Dr. Rosa Perez; MO Regional Climate Systems Laboratory Head Dr. Faye Cruz; and ADMU Environmental Science Department Lecturer Mr. Raymond Rodolfo)

The 5-day training introduced CDRA as a comprehensive analysis that integrates complex and dynamic data—which makes use of space-based methods such as remote sensing and geographic information systems (RS-GIS)—with social variables for a holistic approach to risk assessments. For its first phase, it was a combination of lectures and hands-on exercises to build among the NRC partners an understanding of the tools used towards resilience, to capacitate them in conducting comprehensive assessments that cut across several factors of climate and disaster risks and integrate the physical and social variables in analyzing hazards, exposures, vulnerabilities and risk indexing (HEVRI). To complete the certificate course on CDRA, participants will also undergo two more phases: coaching and mentoring; and production of their own integrated risk maps.



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(CCAR2) Head and MO Senior Research Fellow Dr. Emma Porio discussing the social dimensions of risk and resilience on the first day of the CDRA training.

The first two days consisted of lectures on CDRA, the different tools for analysis as well as the importance of social dimensions to risk assessments. For the succeeding days, MO research staff guided participants in using the GIS tools for integrated risk mapping, which participants used in developing CDRA proposals for their respective organizations. The partners were also guided in formulating baselines and targets through scorecards, and evidence-informed resilience roadmaps to become prepared, adapted and transformed communities.



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MO Research Staff John Edward Perez assists NRC partners in using QGIS.

LGUs in attendance were Bataan Province, Cagayan de Oro City, Iloilo City, Iriga City, Naga City, Ormoc City and Zamboanga City. Meanwhile, the academic institutions were: Ateneo de Naga University; Ateneo de Zamboanga University; Bataan Peninsula State University; University of the Philippines Visayas; Visayas State University; and Xavier University.

The training is an initiative of NRC, a science and technology-based evidence-informed public-private partnership capacitating the local government in disaster resilience, in partnership with MO, a Jesuit scientific institution focused on advancing its mission in environmental and pre-disaster science, and Ateneo de Manila University (ADMU), a private Jesuit research university.

Photos courtesy of the Manila Observatory.