



Making science
work for you

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DOST chief eyes “storm chaser” technologies to step up weather forecasting

By JOY M. LAZCANO
S&T Media Service, DOST-STII

You may have seen storm chasers only in the movies, but now it is for real. The Department of Science and Technology (DOST) Chief himself revealed his plans to form a “storm chaser” team to complement DOST’s existing weather monitoring systems. DOST Secretary Mario G. Montejo disclosed this during the Mindanao Cluster Science and Technology Fair at the SMX Convention Center in Lanang, Davao City.

“Last year, we started the storm chaser technologies or the mobile radar to be deployed near the areas where the typhoon will hit... for additional weather monitoring for incoming weather disturbances,” explained Sec. Montejo.

The need for storm chasers surfaced because weather conditions are getting more adverse, as exemplified by Typhoon Pablo, a Category 5 super typhoon which generated winds of 175 mph (280 km/h).

Storm chasers are individuals pursuing any weather condition. They are armed with various weather tracking instruments from basic photographic equipment to satellite based tracking systems and live data feeds to vehicle mounted weather stations and hail guards. Storm chasers take on such perilous job in the pursuit of scientific studies.

In a separate interview, Sec. Montejo said that the Department has identified a group from the Philippine Atmospheric and Geophysical, Astronomical Services Administration (DOST-PAGASA) to form the core who will go to various



Photo by Inquirer.net

areas prior to the expected typhoon landing.

Also, the Secretary reiterated the use of high performance supercomputers to complement the high-volume data for complex weather modeling.

DOST targets a six-hour lead-time weather forecast during typhoons to provide a more significant time for the local government to implement its evacuation plans.

He also informed media that the DOST-DREAM Program or the Disaster Risk and Exposure Assessment for Mitigation (DREAM) is currently working on the PHIL-LiDAR I, an expansion program to map the remaining 257

floodplain areas which are not covered in the 20 priority river basins. It will cover 22,000 square kilometers of flood prone areas within the country, an arduous task which will run from 2014 up to 2016.

Unlike the DREAM-LiDAR, Phil-LiDAR I will involve 14 State Universities and Colleges (SUCs) in developing flood models for the Project NOAH website. These SUCs will complement the existing DREAM Team in developing Discharge Modeling which predicts possible flooding in specific areas. Also, the SUCs will help develop the real-time inundation. *(S&T Media Service, DOST-STII)*

Project NOAH mobile app wins international award

The Department of Science and Technology’s (DOST) flagship program for disaster risk reduction and mitigation called Nationwide Operational Assessment of Hazards or Project NOAH once again showed its multi-faceted benefits when its mobile app ARKO recently grabbed an award

conferred only to a select few by the World Summit Awards Mobile Content 2014 (WSA Mobile).

The ARKO mobile app was chosen as one of five winners under the e-Inclusion and Empowerment category, besting hundreds of participants from all over the world. This



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Power coops anchor disaster preparedness plans on DOST-Project NOAH

The continuous supply of electricity is the main concern of electric cooperatives (ECs) in the country, during times of natural calamities like strong typhoons or habagat (southwest monsoon) episodes. that topple down power lines and put entire communities in darkness. Similarly, this is every housewife's nightmare, when electricity is out and she has to prepare the day's meal.

Because of these fortuitous events, the National Electrification Administration or NEA, the government agency overseeing the electric cooperatives consulted the Department of Science and Technology (DOST) and the Nationwide Operational Assessment of Hazards or Project NOAH for information regarding the changing weather patterns, natural hazards and their impact and disaster preparedness. The consultation is an important input in the formulation of the NEA's contingency plans.

During NEA's 45th anniversary celebration recently, DOST Assistant Secretary and co-project leader of Project NOAH Raymund E. Liboro presented to more than a thousand representatives of ECs the DOST's disaster preparedness programs aimed at addressing the problems brought about by climate change.

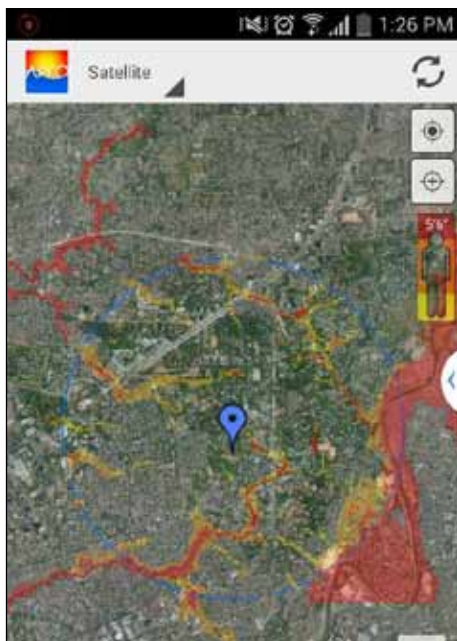
Asec. Liboro emphasized that the ECs serve as the vital "lifelines" that will keep the community going and act as the important link in restoring normalcy after devastation by strong typhoons or earthquake. Thus, they have to prepare for the worst scenarios. It is

then important for them to get the correct and timely information about the hazards. Aside from this, they must also know what they should do before, during and after a calamity in order to minimize the ill-effects of disasters.

"Project NOAH is a digital platform of weather and hazard information that provides us a six-hour lead time before the occurrence of flood thereby allowing us ample time to prepare," Asec. Liboro informed the group. "Likewise, with this tool we can track the

path of the typhoon and anticipate the extent of possible damage strong winds and heavy rainfall may cause."

NEA Administrator Edita S. Bueno said that by tapping Project NOAH, they hope to sustain the success of the Sitio and Barangay Energization Program. She further underscored the need to synchronize their work plans with those of DOST in developing initiatives and strengthening capabilities of the member ECs in adapting to the risks involved. **(S&T Media Service)**



**NOAH mobile ...
from page 1**

prestigious international award recognizes the best mobile content solutions in the world where it shows innovativeness, creativity and impact.

"ARKO serves as a vehicle to deliver important information regarding floods to ensure the safety of our communities-at-risk and this app proves one thing; it shows that Filipino talent is world class," said DOST Secretary Mario G. Montejo.

Overall, ARKO was one of 40 winners of WSA Mobile from a total of 456 projects submitted by 98 countries.

"The creation of the ARKO mobile app for Project NOAH is one clear example of the innovativeness and ingenuity of our Filipino scientists and software engineers

who developed a very important tool in disaster preparedness by providing information about floods that will enable our communities to prepare ahead of time," reiterated Montejo.

Other winners alongside the Philippines' ARKO are the following: ColorADD from Portugal, Braille Board from Palestine, SnooCode of Ghana, and LIVOX of Brazil.

The winners of WSA Mobile, which works in cooperation with the United Nations' World Summit on the Information Society and in collaboration with UNESCO, UNIDO and UN GAID, will be invited to receive their awards in Abu Dhabi on February 1-3, 2015 to coincide with the WSA Mobile Global Congress. **(S&T Media Service)**

DOST shores up support to local inventors

Believing in the potential of local inventors to contribute to the country's intellectual and economic wealth, the Department of Science and Technology commits to enhance its services that support inventors.

"We are continuously looking for better ways to serve our clientele, including inventors," DOST Secretary Mario G. Montejo said. As such, Sec. Montejo instructed Dir. Edgar Garcia, head of DOST's Technology Application and Promotion Institute (TAPI), to facilitate 100 patent applications for the year. Patent is an intellectual property right granted exclusively to inventors "to exclude others from making, using, offering for sale, or selling the invention" throughout the country. TAPI is DOST's lead agency in supporting local inventions and DOST's arm for technology transfer and commercialization per Executive Order No. 128, which is also formerly known as Philippine Invention Development Institute prior to post-EDSA reorganization.

Inventions, whether products or processes, are conceptualized to solve specific technological problems. And when patented, inventions contribute to the increase of the Global Competitiveness Index of the country.

To achieve the target number of patent filings, Garcia and his team explored creative ways to increase patent filings, such as partnering with patent professionals like the Association of PAQE Professionals, Inc. (APP) and the Innovation and Technology Support Office network of the Intellectual Property Office of the Philippines. The APP is the country's only all-patent agents association.

As well, Dr. Garcia enhanced TAPI's other services. "For instance, we expanded our Intellectual Property Rights Assistance Program to cover not only patent and utility model applications but also other intellectual property rights," Garcia said.

Other intellectual property rights include industrial design, trademark, and copyright.

"We also upgraded many of our assistance programs from loan assistance to full grants," Garcia added. He also explained that most of TAPI's assistance programs, such as on intellectual property protection, are for free, including professional services. "But applicants should show intentions that they deserve government support," Garcia said.

"(The validation for government support) is needed to ensure that our taxpayers' money is well-spent, aside from meeting our quality requirements," Montejo explained.



Photo by Joy M. Lazcano

Moreover, DOST's assistance to inventors as well as innovators include the availability of all DOST technologies and services of DOST agencies, such as the Advanced Device and Materials Testing Laboratory or ADMATEL and Food Innovation Centers where inventors can enhance their creativity. Support to National Inventors Week

By virtue of Proclamation No. 285, the National Inventors Week is celebrated every third week of November featuring local and foreign exhibits of inventions and various symposia. The NIW serves as "venue for the exchange of ideas and information including facilitation of market opportunities to encourage the generation, promotion and development of Filipino inventive capabilities," as stated in the Proclamation.

According to TAPI, it has stopped conducting the National Invention Contest during the NIW since 2009, and instead has been holding the National Invention Contest and Exhibits (NICE) as a separate activity. TAPI tried to provide financial support to the conduct of NIW but after several incidents, the Institute "decided that no direct financial assistance would be extended to the Filipino Inventors Society Producers Cooperative (FISPC), or to any inventor organization per se," according to TAPI Officer-in-Charge Marion Ivy Decena.

In an official communication, Decena revealed that TAPI, in support to the NIW celebration, proposed to conduct and fund several fora to be participated in by all inventor associations. However, the FISPC, organizers of the 2014 NIW, failed to comply to basic requirements such as topics and

resource persons, thus, the funding request for the NIW fora was not processed.

Yet despite some failed attempts for funding, Sec. Montejo assures of DOST's continued support to inventors. Montejo himself was a multi-awarded inventor prior to his appointment as DOST secretary.

"DOST will never leave our fellow inventors behind, especially if they have good and novel products," Montejo said. "However, we also need to address the problem of having too many inventor organizations."

Too many groups lead to disunity and pursuit of individual agenda, Montejo told, and cited the NIW celebration as an example of an inventors' event which is being celebrated by different inventors' organizations in separate ways.

The DOST Digest is published by the
Science and Technology Information Institute-
Department of Science and Technology
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DOST eyes Next Wave Cities to ease traffic woes

The Next Wave Cities, a program of the Department of Science and Technology (DOST)'s Information and Communications Technology (ICT) Office, is one way to help solve Metro Manila's worsening traffic situation.

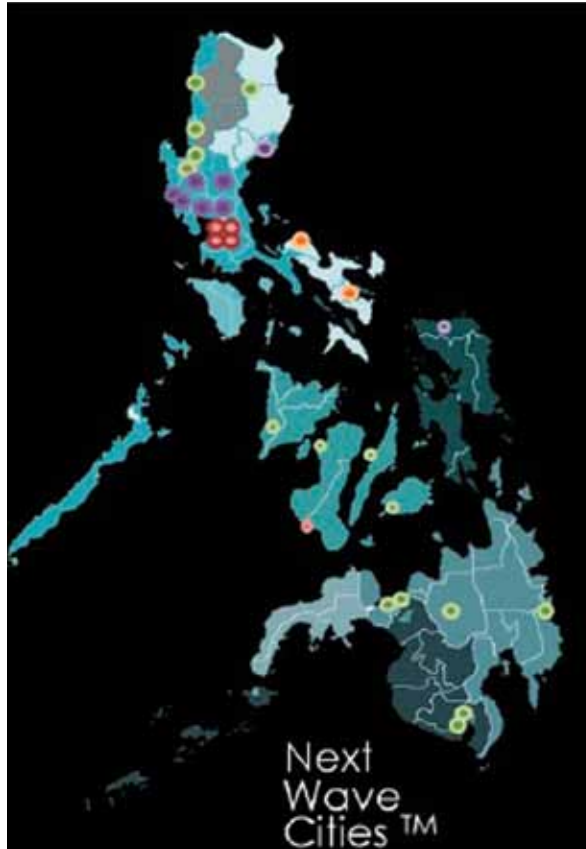
This is according to Monchito Ibrahim, deputy executive director of DOST's ICT Office, who attributed the daily traffic in Metro Manila to the many companies that still choose to operate in Eastwood, Makati, Epifanio de los Santos Avenue, and other major commercial destinations in the metro.

"This is why many Filipinos in the rural areas still opt to migrate to Metro Manila to take advantage of these job opportunities," said Ibrahim. "This leads to a scenario where office workers go to the same commercial districts, use the same mode of transportation at the same period of time, thus causing heavy traffic during rush hours."

"Through the Next Wave Cities Program, the DOST-ICT Office managed to introduce and recommend places in the regions that are ideal for IT-BPM operations," Ibrahim explained.

The DOST-ICT Office provides to industry investors extensive reports on the competency of these Next Wave Cities, such as number of quality educational institutions, infrastructures, and crime rate, according to Ibrahim.

The positive business environment offered by the identified Next Wave cities encouraged the establishment of IT-BPM hubs in the provinces instead of Metro Manila. Talent and office locations are already available, Ibrahim said, such that investors who decide to have IT-BPM operations in the



provinces get less competition and avoid the so-called pirating of talent.

"We want the local residents in the countryside to have decent employment opportunities, wherein they can earn salaries that are enough to support their needs without leaving their families," he said.

Ibrahim revealed that the number of full-time IT-BPM employees in the provinces has

increased from more than 63,000 in 2010 to more than 300,000 as of August 2014.

ICT Office also conducts Stepping-Up the Value Chain, an awareness program that aims to promote other IT-BPM career opportunities aside from call centers or voice services to the provinces. These include game and software development, animation, healthcare information, accounting and finance, and engineering outsourcing services.

"We want them to present various options. If you are a nursing graduate and you are finding difficulties in searching for a job, particularly in other countries, you can use your expertise in healthcare information services. If you are an IT or multimedia arts graduate, you can maximize your creative skills in various IT-BPM services such as animation, game and software development," Ibrahim said.

The Next Wave Cities program concentrates on bringing Information Technology-Business Process Management (IT-BPM) companies and opportunities to the provinces. As such, it helps avoid the heavy flow of office workers in Metro Manila's business hubs and decongest traffic in these places while giving more opportunities to those who want to build IT careers in the provinces. **(S&T Media Service)**



YET ANOTHER DREAM AWARD COME TRUE. The Department of Science and Technology's (DOST) 3D mapping project called Disaster Risk Assessment, Exposure and Mitigation-Light Ranging and Detection Technology (DREAM-LiDAR) received the prestigious Asia Geospatial Excellence Award during the Inaugural Ceremony of the Asia Geospatial Forum 2014 held in Jakarta, Indonesia last Nov. 25. A component of the Nationwide Operational Assessment of Hazards (Project NOAH), the DREAM-LiDAR addresses and helps mitigate the effects of flooding disasters in the country by collecting precise geospatial data using LiDAR technology to more accurate flood inundation maps. The project is led by Dr. Eric Paringit (rightmost) of the University of the Philippines Diliman who received the award with DOST Asst. Secretary Raymund Liboro (center). Also in photo is Dr. Fidel Nemenzo, UP Diliman Vice-Chancellor for Research and Development. **(S&T Media Service)**