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work for you

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PAGASA confers Wind Vane Award to DOST Secretary Montejo, eight others

By **Maria Luisa S. Lumioan**
 S&T Media Service, *DOST-STII*



DOST Secretary Mario G. Montejo receives the Wind Vane Award from DOST-PAGASA Acting Administrator Vicente Malano and Deputy Administrator Flaviana Hilario.

For his continued commitment to improve weather forecasting capability in the country and to instill the value of disaster risk reduction and management, Department of Science and Technology (DOST) Secretary Mario G. Montejo was conferred the Wind Vane Awards by the DOST-Philippine Atmospheric Geophysical and Astronomical Services Administration (DOST-PAGASA) recently at the PAGASA Main Office Building.

Montejo believes in developing our country’s technological self-reliance especially when it comes to disaster risk reduction and

management. Under his leadership, DOST was able to develop its own automated weather stations and rain gauges, increase the coverage of flood early warning systems, and develop high resolution maps via the use of Light Detection and Ranging (LiDAR), among others.

Now on its tenth year, the Wind Vane Awards is conducted annually to recognize the contribution and support of individuals and organizations to DOST-PAGASA’s efforts in disaster risk reduction and management. The awarding ceremony was one of the highlights of PAGASA’s 150th year anniversary and World Meteorological Day Celebration.

Other Wind Vane awardees for this year include: Department of Interior and Local Government Sec. Manuel Roxas II, National Disaster Risk Reduction and Management Council Undersecretary Alexander Pama, Former PAGASA Chief Claro Doctor, Rice Watch and Action Network Secretariat Coordinator Hazel Arandez-Tanchuling, Legazpi City Mayor Noel Rosal, UNTV reporter Reynante Pelayo, Cagayan de Oro CDRMO Mario Verner Monsanto, and the Philippine Australia Human Resource and Organisational Development Facility. *(Ma. Luisa A. Lumioan, S&T Media Service, DOST-STII)*

Scientist bag Environmental Award from DOST-NAST

By Maria Luisa S. Lumioan
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Because of their contributions in protecting the environment via their research projects, Forester Arsenio B. Ella of Department of Science and Technology-Forest Products Research and Development Institute (DOST-FPRDI) and Ateneo de Manila University Assistant Professor Dr. Severino G. Salmo III bagged the NAST Environmental Science Award (NESA) organized by National Academy of Science and Technology held last April 22, 2015 at the New World Manila Bay Hotel, Malate, Manila.

Ella has worked with indigenous peoples in Palawan and Sierra Madre in protecting Almaciga trees by introducing a sustainable way of harvesting resin from the trees.

Collection of resins is an important source of income for indigenous peoples in the said areas. However, traditional methods of resin tapping such as deep cutting, over tapping and frequent rechipping have resulted into the premature death of Almaciga trees, Ella explained.

Almaciga resin, also known as Manila Copal, is used in the manufacture of paints, varnishes, printing ink, shoe polish, floor wax, incense, and caulking material for boats among others. The Philippines is the

second largest producer of the resin next to Indonesia. According to the Philippine Forestry Statistics, the country exported an average of 140,200 kilos of almaciga resin valued at US\$165,200 in 2004-2013.

Based on his previous studies, Ella recommends to tap only trees with a diameter at breast height of at least 40 cm and the first tapping point should be more than 30 cm above the ground. The cut should be about 2 cm wide and 30 cm long and not beyond the bark, using a razor-sharp broad-bladed bolo or a large knife. He further recommends gatherers to wait after five days before tapping again.

This scientific tapping method not only prolongs the life of the trees but also increases the production of quality resin in the long run according to Ella. He added that the resin gatherers increased their harvest from 16 percent to 33 percent per month resulting in increased income.

Apart from providing training in the proper tapping of Almaciga trees, Ella and his team also lecture communities on climate change.

Dr. Salmo on the other hand advocates the protection and proper reforestation of mangrove forests for the protection of

fisheries and to help lessen the impact of typhoons in coastal areas.

He pushes for the planting of right mangrove species at the right sites to ensure that they will survive. He recommends the planting of *avicennia* species on the shores, as this species is more adapted to the area and thus more resilient to typhoons.

However, in practice, *rhizophora* species, which naturally thrive in the inner mangroves, are being used in reforestation efforts.

His recommendations are evidenced by the study he conducted in 2009 in Bani and Anda, Pangasinan wherein the *rhizophora* species planted along the coasts were heavily damaged by typhoon Emong while the *avicennia* species survived.

"Just a single event was enough to destroy the mangroves (*rhizophora*). Remember we have around 20 typhoons in a year," he said.

The winners will each receive a research grant from DOST amounting to P1 million and cash prize from NAST and the Department of Environment and Natural Resources.

Formerly called NAST-Hugh Greenwood Environmental Science Award, NESA started in 2001 through the efforts of former NAST President and National Scientist Perla D. Santos Ocampo through the help of Dr. Hugh Greenwood, a philanthropist and founder of Children's Research Fund in the United States.



Forester Arsenio B. Ella of DOST-FPRDI (second from the left) and Dr. Severino Salmo III of Ateneo de Manila University (third from left) receive the NAST Environmental Science Award from NAST President William G. Padolina (rightmost), National Scientist Angel C. Alcalá (second from right) and DENR Undersecretary Jonas R. Leones (left). The two scientists are cited for their outstanding scientific and technological research works on almaciga and mangrove conservation respectively. Each of them will receive P1M worth of research grant from DOST Secretary Mario G. Montejo and cash prizes from DOST-NAST and DENR. (S&T Media Service)

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DEPED takes up science of disaster preparedness

By Allan Mauro V. Marfal
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In a rare set-up where educators sit down to listen to lectures, disaster preparedness experts from the Department of Science and Technology discussed the science of weather and geological hazards to DepEd officials and staff.

This happened in the recent “Iba na ang Panahon: Science for Safer Communities” forum at the Department of Education Central Office in Pasig City.

The Philippines has been prone to many natural calamities, experts told the educators, but casualties and damage of properties can be minimized or avoided if people know how to prepare for disasters.

DOST Assistant Secretary Raymund E. Libro said that this can be done even in classroom environment where students at a young age get educated on the possible effects of a super typhoon or an earthquake to people’s lives. Students also need to learn how to respond to said calamities to save lives and protect properties.

“Dahil sa paiba-iba na ang panahon, mahalaga sa mga institusyon kagaya ng mga paaralan na maging matibay ang pundasyon nila pagdating sa mga bagong impormasyon hinggil sa mga posibleng sakuna na maidudulot ng mga bagyo at lindol sa ating mga buhay,” Asec. Libro said.

Asec. Libro added that DepEd should be in the forefront and take the lead in seeking ways to enhance the knowledge of teachers and students on the impact of natural calamities, which may result to a better decision-making.

Meanwhile, DOST-Philippine Volcanology and Seismology Director Renato Solidum recommended that teachers can ask their students to prepare an earthquake evacuation plan, as a form of assignment, to assess the students’ level of awareness and knowledge on earthquakes.

“Total, ang mga guro naman natin ay mahilig magbigay ng mga assignment, bakit hindi sila magbigay ng assignment na gumawa ang pamilya niyo ng earthquake evacuation plans (Since our teachers are fond of giving assignments, why don’t they give an assignment to pupils to prepare their family earthquake evacuation plans),” Solidum said. “Sa pamamagitan rin nito, marerealize din ng mga magulang kung gaano kahalaga ang mga ganitong uri ng preparasyon at ipatuloy nila ang pagtuturo sa kanilang mga anak (Through this, parents will realize the importance of



Department of Science and Technology (DOST) Assistant Secretary Raymund E. Libro (middle) and Philippine Institute for Volcanology and Seismology (PHIVOLCS) Director Dr. Renato Solidum (first from right), together with Department of Education (DepEd) Assistant Secretary Robert M. Agustin (first from left) during Iba na ang Panahon: Science for Safer Communities forum held last March 30, 2015 at the DepEd office in Pasig City. The said event is part of DOST’s information and education campaign on the latest information, tools, and technologies that would give participants a better understanding of the possible impact of hazards in different communities around the country. Early this year, DOST also conducted same campaign at the House of Representatives in February and Senate of the Philippines in March. **(S&T Media Service)**

this kind of preparation and they will continue teaching their children.)”

Dr. Solidum stressed that teachers would also benefit from this because they too have their own families who need to be safe during natural calamities such as earthquake.

“It is about repetition and exposure to certain practices as well as building a culture, (which means) being always mentally-prepared during these situations,” Solidum said, “(These) are the answers on how to minimize, if not prevent, the loss of many lives and properties.”

He also reminded the importance of compliance to the National Building Code. Solidum explained that compliance would assure that your structures are resistant to strong earthquakes.

“It is not enough that people are prepared for disasters,” he stressed. “Buildings should also be safe structurally.”

Iba na ang Panahon: Science for Safer Communities is DOST’s information and education campaign of DOST on disaster preparedness. In the campaign legs, experts discuss and explain weather and earth science concepts and introduce tools to help communities prepare for disasters. Tools include websites that give accurate forecast in a few hours lead time and hazard maps that enable participants to identify hazards that their communities are prone to.

It started in 2014, with DOST and the Department of Interior and Local Government as partners in a 17-leg nationwide campaign providing local chief executives and disaster risk reduction managers with better understanding on the hazards in their own localities. The DepEd leg is the third this year after the campaigns at the House of Representatives and the Senate.

DOST chief names Cauayan in Isabela as “Smarter City”

By **Hazel May C. Natorilla**
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The Department of Science and Technology (DOST) Secretary Mario Montejo declared Cauayan in Isabela, Cagayan Valley as the first Smarter City in the region and the first among 144 cities in the country. Sec. Montejo made the pronouncement during the recent Region 2 leg of DOST’s “Science Nation: Agham na Ramdam” nationwide roadshow.

Cauayan City is also the first local government unit in the region to unite all its barangays in implementing Juan Time – a DOST campaign for the synchronization of all watches, clocks, and time setting devices in the country, including office bundy clocks, to abide with the Philippine standard time. Juan Time likewise aims to promote a culture of punctuality among Filipinos.

Under the DOST Smarter Philippines Program, a smarter city means that a city has put in place enough ICT (information communication technology) infrastructure that are “instrumented” through the merging of data, “interconnected” through networks, and “intelligent” through data trends.

Among Cauayan City’s ICT-based technologies are the Electronic Government Application System or eGAPS, a mobile app for iOS or android-based phones containing tourist information, and the Cauayan City Patrol, the Cauayan City Identification System which serves as a valid government ID, a systematic and computerized police clearance process, a mobile library with laptops and internet connection among others, and an interactive government website (<http://cityofcauayan.gov.ph/>) featuring e-services.



Secretary Mario G. Montejo that names the city as the first local government unit in Region 2 to adopt Juan Time. Photo also shows DOST Region II Director Dr. Urdujah A. Tejada (rightmost, front) and the 65 barangay chairpersons of Cauayan City. (Photo by Gerardo Palad, S&T Media Service, DOST-STII)

According to Sec. Montejo, an ICT-based, interactive system can help empower people as it aims to enhance comfort, productivity, profitability, and innovation. Achieving these goals result in synchronized action, which means faster, real-time response to present situations such as monitoring of abnormal situations, maintaining peace and order, and the like. In this scenario a city is considered “smarter.”

The Smarter City of Cauayan focuses on eight key areas: Smarter Farming, Smarter Micro, Small, and Medium Enterprises or MSMEs, Smarter Industries, Smarter Jobs, Smarter Government, Smarter Climate Change Adaptation, Smarter Scientists and Engineers, and Smarter Healthcare.

Meanwhile, DOST also awarded Cauayan with a trophy and a certificate of appreciation for being the first LGU in Region II to adopt the Juan Time campaign and for being the first city in the Philippines to install all its 65 barangays with precision timepieces synchronized with the Philippine Standard Time as prescribed under Republic Act No. 10535.

“We also use Juan Time as a means of information dissemination,” said Raena Consorcia M. Santos, information analyst of Cauayan City. What Santos means is that placed below the clock in all Cauayan barangay halls are DOST weather updates and other important information that people can read as they look to the clock for time.

For more information on how to become a Smarter City, please contact or visit your nearest DOST regional office.

in focus

DOST ROADSHOW HIGHLIGHTS SCIENCE IN LIVELIHOOD | Woven

bags and other products such as those made by The Sarakat Women Weavers of Cagayan and Loom Weavers Association of Kayapa in Nueva Vizcaya, were among those on exhibit during the Cagayan Valley leg of the Department of Science and Technology (DOST) nationwide roadshow dubbed “Science Nation: Agham na Ramdam” held in Tuguegarao City from March 24-26, 2015. The said weavers associations are beneficiaries of the DOST program called CEST or Community Empowerment through Science and Technology. CEST assists small enterprises by providing technology and innovation support, training, and consultancy to boost production and efficiency. Held at the Cagayan State University-Carig Campus’ Red Eagle Gymnasium, the exhibit was one of several activities during the roadshow which aims to highlight the fruits of the various DOST programs in every region of the country and showcase the key role of science and technology in livelihood and poverty alleviation. “Science Nation: Agham na Ramdam” makes its third and next stop in Butuan City, CARAGA region in May. **(Text by Espie Angelica A. de Leon / Photos by Henry A. de Leon, S&T Media Service, DOST-STII)**

