

16 October 2022, Sunday



DENR

NEWS ALERTS

NEWS CLIPPINGS

STRATEGIC COMMUNICATION AND INITIATIVES SERVICE

Strategic Communication and Initiatives Service
SUMMARY OF DENR NEWS ALERTS
 16 October 2022

NEWSPAPER	TITLE	SPECIFIC ISSUES
Top stories		
<p>Phil. Daily Inquirer, p.1 by Delfin T. Mallari Jr and Dempsey Reyes</p>	<p>Green group welcomes dam project suspension</p>	<ul style="list-style-type: none"> ● Kalikasan People’s Network for the Environment (Kalikasan) praised the decision of the DENR to suspend the construction of the Kaliwa Dam project in the Sierra Madre mountain range. ● Undersecretary Ernesto Adobo said that the ECC for the project had been put on hold by the department because it had not yet complied with zoning requirements. ● Environment Secretary Ma. Antonia Yulo-Loyzaga clarified that an ECC had been issued but pointed out that it came with a “condition”—the free and prior informed consent (FPIC) from the indigenous peoples (IPs) to be affected by the project. ● The construction of the dam was awarded to the Chinese company, China Energy, under an official development assistance agreement between Manila and Beijing. ● Several groups opposing the project fear that the construction of the dam will endanger more than 100,000 lives.
<p>The Manila Times, p. A7 by Ire Joe V. C. Laurente</p>	<p>Complaints filed vs energy projects</p>	<ul style="list-style-type: none"> ● Protect the Verde Island Passage (Protect VIP) and the Center for Energy, Ecology and Development (CEED) filed a complaint against the issuance of an ECC for the project of the AG&P-Linseed to build a liquefied natural gas (LNG) import terminal facility in Batangas City and the San Miguel Corp.-

		<p>Excellent Energy Resources Inc. (SMC-EERI) that is constructing a 1.75 gigawatts (GW) LNG power plant in the same vicinity.</p> <ul style="list-style-type: none"> ● The group said the projects pose a threat to the biodiversity of the VIP and the livelihood of the people who depend on it. ● The complaint cited three violations of the project: <ul style="list-style-type: none"> ○ companies' continued construction despite failure to secure coconut tree-cutting permits from the Philippine Coconut Authority (PCA); ○ failure to secure tree-cutting permits from DENR; and ○ failure to secure a land conversion order from the Department of Agrarian Reform (DAR), which would warrant the cancellation of the environmental compliance certificate for the projects. ● Accdg to Protect VIP, DAR issued a cease-and-desist order against SMC-EERI and AG&P-Linseed on Aug. 8, 2022 for the companies' violation.
<p>Business Mirror, p. A6 by Nikko Balbedina</p>	<p>Bishop to gov't: Act more on IP's ancestral land claims</p>	<ul style="list-style-type: none"> ● Bishop Valentine Dimoc, chairman of the Catholic Bishops' Conference of the Philippines' Episcopal Commission on Indigenous Peoples (CBCP-ECIP), called on the government to pay more attention to legitimate ancestral land claims by Indigenous peoples (IPs) saying "Many indigenous groups still do not have their CADT [certificate of ancestral domain title] and are still struggling."
<p>Business Mirror, p. A7 by Jonathan Mayuga</p>	<p>Increased collaboration, awareness</p>	<ul style="list-style-type: none"> ● Executive Director Theresa Mundita S. Lim of the Asean Centre for Biodiversity (ACB) cites

	crucial to tackling biodiversity, climate concerns	<p>direct and indirect benefits humans obtain from nature like the provisioning services brought by forests and trees - aid in healing damaged ecosystems, provide livable conditions, reduce the effects of noise, control floods and droughts, reduce climate change, and control infectious diseases.</p> <ul style="list-style-type: none"> ● However Lim pointed out that ecological services provided by forests are threatened by deforestation, pollution, and biodiversity loss. ● She also said that climate change is likely to result in biodiversity loss, forest degradation and reduction, and migration and extinction of species. Adding that endangered plants and animals are the most common components in almost all Asean Heritage Parks (AHPs) that are sensitive to climate change.
Business Mirror, p. A5 by Samuel Medenilla	Marcos Jr. pushes for more incentives for Balik Scientists	<ul style="list-style-type: none"> ● Marcos said scientists will be playing a crucial role to cope with the international “primordial problem” which is climate change. He hopes that science could provide the answers for climate change mitigation and adaptation.
The Manila Times, p. 1 by Bella Cariaso	Only 2% of PH coral reefs remain healthy - watchdog	<ul style="list-style-type: none"> ● Haribon Foundation Chief Operating Officer Anna Varona said that only 2 percent of the country’s coral reef remains healthy, adding that there are 5 trillion plastics in the world’s surface water. ● Varona also said that the presence of so many plastic particles in the marine environment indicates that plastics have already entered our food chain, noting that "When you are a lover of seafood, most likely you have 70,000 particles of microplastics... in your system, every year on an average."

		<ul style="list-style-type: none">• Varona lauded the passage of Republic Act 11898 or "Extended Producer Responsibility (EPR) Act of 2022" making firms responsible for plastic packaging.• DENR said that the country generates at least 2.7 million metric tons of plastic wastes, adding that 20 percent of plastic wastes end up in the oceans.
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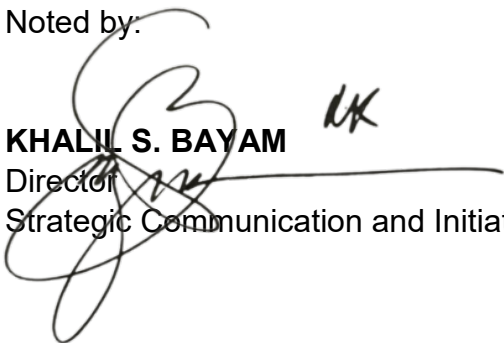
ROBELYN CEBALLO

Development Management Officer III

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KHALIL S. BAYAM

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DAM BE DAMNED Dumagat children cross the Kaliwa River at Sitio Queborosa in Infanta, Quezon province, in this Aug. 19, 2019, photo not knowing whether trees around it would be submerged if authorities allow work on a dam project, now halted, to resume.
—RICHARD A. REYES



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Green group welcomes dam project suspension

By Delfin T. Mallari Jr.
and Dempsey Reyes
@Team_Inquirer

LUCENA CITY—An environmental group praised the decision by the Department of Environment and Natural Resources (DENR) to suspend the construction of the controversial Kaliwa Dam project in the Sierra Madre mountain range.

“This is a victory and one step forward in the decadeslong resistance to the destructive dam,” Jon Bonifacio, national coordinator for the Kalikasan People’s Network for the Environment (Kalikasan), said in a statement Saturday.

But he said Kalikasan would continue its calls for “the full stop to the dam’s construction, the cancellation of its onerous contract and the junking of all future plans to build a large dam in any part of the Sierra Madre mountain range.”

The Kaliwa Dam, to be built on the ancestral land of the Dumagat-Remontado communities in Rizal and Quezon provinces, is one of the Duterte administration’s China-funded big-ticket projects under its “Build, Build, Build” program.

The P12.2-billion New Centennial Water Supply Project includes the construction of a 60-meter-high concrete gravity dam on Kaliwa River that will have a reservoir surface area of 291 hectares.

Touted as the solution to an expected water shortage in Metro Manila and nearby provinces, it will have a maximum gross reservoir volume of 57



‘WE’RE AGAINST IT’ Members of the Dumagat-Remontado communities opposed to the dam project make their sentiments known to visitors in Barangay Magsaysay, Infanta, Quezon province, in this photo taken in August 2019. —RICHARD A. REYES

million cubic meters and a discharge capacity of 600 million liters a day.

ECC on hold

During a Senate hearing on the proposed budget for the DENR on Oct. 11, Undersecretary Ernesto Adobo said that the environmental compliance certificate (ECC) for the project had been put on hold by the department because it had not yet complied with zoning requirements.

An ECC must be secured by proponents of a project to certify that it will not cause any significant negative environmental impact.

Environment Secretary Ma. Antonia Yulo-Loyzaga, however, clarified that an ECC had been issued but pointed out that it came with a “condition”—the free and prior informed consent (FPIC) from the indigenous

peoples (IPs) to be affected by the project.

The FPIC is a requirement under the Indigenous Peoples’ Rights Act of 1997, which prevents, among others, the IPs from being relocated without their consent.

“There is no consent from the IPs in the area and therefore, it (ECC) cannot be acted on,” Loyzaga said.

Early this year, several leaders and elders of three Dumagat communities in Yokyok, Baykuran and Makidata slammed the Metropolitan Manila Waterworks and Sewerage System (MWSS) and the National Commission on Indigenous Peoples (NCIP) for signing a memorandum of agreement (MOA) on the dam project in January with only a select group of tribal leaders.

The MWSS denied that it had railroaded the consultation

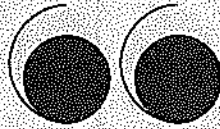


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There is no consent from the indigenous peoples in the area and therefore, (the environmental compliance certificate) cannot be acted on

Ma. Antonia Yulo-Loyzaga
Environment Secretary

process, which is required before the IPs give their FPIC.

Feared water crisis

The MWSS has long been pushing for the construction of dams to prevent a projected water crisis in Metro Manila. The Kaliwa Dam is intended to reduce dependence on the Angat and Ipo dams.

The project, however, will submerge parts of the Sierra Madre in Tanay town, Rizal province, and General Nakar and Infanta towns in Quezon province.

The dam construction is expected to flood a watershed area of 9,700 ha and affect 1,465 families, according to studies by Save Sierra Madre Network Alliance.

It will cover Sitio Cablao of Barangay Pagsangahan in General Nakar and Sitio Queborosa of Barangay Magsaysay in Infanta.

It will also include the Upper Marikina Watershed and the Kaliwa Watershed Forest Reserve, a conservation site in the Sierra Madre Biodiversity Corridor, which is a protected area under Presidential Proclamation No. 1636.

The construction of the dam was awarded to the Chinese company, China Energy, under an official development assistance agreement between Manila and Beijing.

Tulfo objection

Sen. Raffy Tulfo, who expressed his opposition to the dam project during the hearing, maintained that stopping the dam project will protect the Sierra Madre and uphold the rights of the indigenous communities.

"His opposition is very welcome in our cause to protect the rights of the indigenous people to their ancestral land as well as our advocacy to protect the Philippine environment," Bonifacio said.

Groups opposing the project fear that it will endanger more than 100,000 lives once the dam is built as it will be constructed within a zone of two active tectonic belts—the Philippine Fault Zone and the Valley Fault System.

In 2018, at least 51 Catholic bishops led by Bishop Bernardino Cortez of Infanta signed a pastoral letter opposing the dam construction.

The letter called on the government to look for alternative water sources to address the water supply problem affecting the national capital. —WITH A REPORT FROM INQUIRER RESEARCH INQ



Complaints filed vs energy projects

CALAPAN CITY, Oriental Mindoro: Environmental groups had filed a complaint before the Environmental Management Bureau (EMB) of the Department of Environment and Natural Resources (DENR-EMB) Central Office in Quezon City on Friday, asking for the suspension and cancellation of the Environmental Compliance Certificate (ECC) granted to power energy developers of a project in Batangas City.

The Protect the Verde Island Passage (Protect VIP) and the Center for Energy, Ecology and Development (CEED) filed the complaint against the issuance of an ECC for the project of the AG&P-Linseed to build a liquefied natural gas (LNG) import terminal facility in Batangas City and the San Miguel Corp.-Excellent Energy Resources Inc. (SMC-EERI) that is constructing a 1.75 gigawatts (GW) LNG power plant in the same vicinity.

In a statement sent to *The Manila Times*, the groups said that the project is within the Verde Island Passage, an internationally recognized marine biodiversity center. The groups also said that the projects pose a threat to the biodiversity of the area and the livelihood of the people who depend on it.

Fr. Edwin Gariguez, convenor of Protect VIP, in another statement, said that they are highly concerned about how SMC-EERI and AG&P-Linseed treat rules, regulations and laws concerning environmental protection.

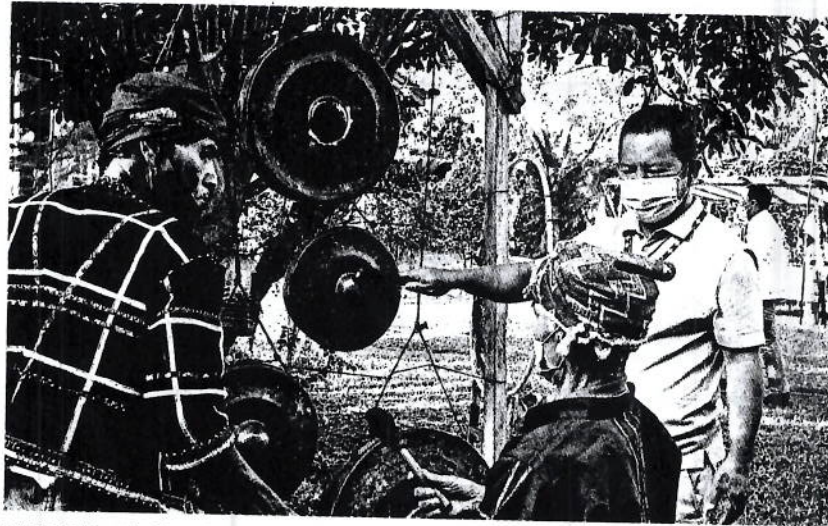
He added that they fear that "such an attitude will be carried over to the detriment of the Verde Island Passage if ever the facilities start operating."

The complaint cited three violations of the project. First is the companies' continued construction despite failure to secure coconut tree-cutting permits from the Philippine Coconut Authority (PCA); second is the failure to secure tree-cutting permits from DENR; and third, the failure to secure a land conversion order from the Department of Agrarian Reform (DAR), which would warrant the cancellation of the environmental compliance certificate for the projects. Gariguez said DAR issued a cease-and-desist order against SMC-EERI and AG&P-Linseed on Aug. 8, 2022 for the companies' violation.

"We don't need gas for electricity. It will only drive up the cost of bills for Filipinos, poison the environment, and threaten the beauty of the VIP and the food and livelihood of many who depend on it. There is no reason that will justify the means or ends of these two companies. We ask that DENR promptly act on our complaint and cancel the ECCs to avoid further damage to the area," Gerry Arances, executive director of CEED and co-convenor of Protect VIP, also said in a statement.

Batangas is at the forefront of the expansion of LNG in the country, with 15 LNG projects underway or being proposed.

IRE JOE V.C. LAURENTE



BISHOP Valentin Dimoc (right) of the CBCP Episcopal Commission on Indigenous Peoples play the gongs with Bagobo-Klata men during the national celebration of Indigenous Peoples' Sunday at the Upper Sirib in the southern city of Davao's Calinan district on October 9.

NIKKO BALBEDINA

Bishop to govt: Act more on IPs' ancestral land claims

A Catholic bishop has called on the government to pay more attention to legitimate ancestral land claims by Indigenous peoples (IPs) living in different parts of the country.

Bishop Valentine Dimoc, chairman of the Catholic Bishops' Conference of the Philippines' Episcopal Commission on Indigenous Peoples (CBCP-ECIP), said ancestral domain issues remain among major challenges that IP communities face until today.

"Many indigenous groups still do not have their CADT [certificate of ancestral domain title] and are still struggling," Dimoc said.

"And sometimes, there is no NCIP [National Commission on Indigenous Peoples] to help them," he lamented.

The bishop was speaking during the national celebration of the 45th Indigenous Peoples' Sunday at the Upper Sirib in the southern Philippine city of Davao's Calinan

district on October 9.

Speaking to the Bagobo-Klata tribe, he told them that they are "blessed" to have an NCIP that cares for them.

"I'm sure that your NCIP here, along with your government, your church and other organizations are biddable, merciful and loving that they worked for and helped you to have your CADT. Sana all [I hope that is true for all]," Dimoc added, using a modern-day Filipino catchphrase.

This year's IP Sunday national celebration was hosted by the Archdiocese of Davao in partnership with the ECIP.

Various activities were held during the day including dialogues, tree-planting and Mass officiated by Archbishop Romulo Valles of Davao and former CBCP president.

The event was also held a day after the "Panagtagbo 2022," a local celebration of the IPs "culture, faith and of life." *Nikko Balbedina/CBCP News*



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Increased collaboration, awareness crucial to tackling biodiversity, climate concerns

By JONATHAN L. MAYUGA

THE Philippines is one of the most biologically diverse countries in the world. However, it has also been identified as one of the world's biodiversity hotspots due to biodiversity loss.

Aggravating the challenges posed on the country's biological ecosystem are population growth, rapid urbanization, global warming and the global pandemic caused by Covid-19.

Biodiversity experts believe that maintaining a healthy ecology or strong biodiversity, is essential to human survival. Eventually, they believe it will lead to the path of sustainable growth and development

Ecosystem services

ECOSYSTEM services are the direct and indirect benefits humans obtain from nature, Executive Director Theresa Mundita S. Lim of the Asean Centre for Biodiversity (ACB) told the BUSINESSMIRROR in an e-mail interview on October 1.

Citing various studies, Lim, an international biodiversity expert, said different ecosystems provide different types of services.

More importantly, she cited the provisioning services that include the supply of food, water, fiber, wood and fuels.

"Different ecosystems provide different types of services. Forests and trees aid in healing damaged ecosystems and in providing livable conditions," Lim said.

Importance of forests

IN addition to producing tangible goods, Lim, a former director of the Biodiversity Management Bureau of the Department of Environment and Natural Resources, said forests reduce the effects of noise, floods and droughts.

"They purify water, bind harmful substances; they maintain soil fertility and water quality; they aid in controlling erosion; they protect drinking water resources; and they can help with wastewater processing," she said.

Besides reducing climate change,

forests help in controlling infectious diseases.

At the same time, Lim said oceans and seas provide a different set of ecosystem services.

There is also an increasing body of research in the indirect impact of biodiversity on human health, proving that exposure to nature, including urban green space, parks and woods, have measurable good effects on mental and physiological health, she pointed out.

Threats to ecological services

THE ecological services provided by forests, however, are threatened by deforestation, pollution and biodiversity loss.

Food production, Lim noted, impacts all ecosystems. Agriculture, the main economic driver, along with habitat loss, are recurring threats to biodiversity and remain the primary concern.

Population growth also places added pressure on natural resources.

"Some countries are experiencing a rapid increase in population, while some experience close to negative growth," she said.

Many parts of the world are experiencing increased pressure in the consumption of food and resources due to the increasing population.

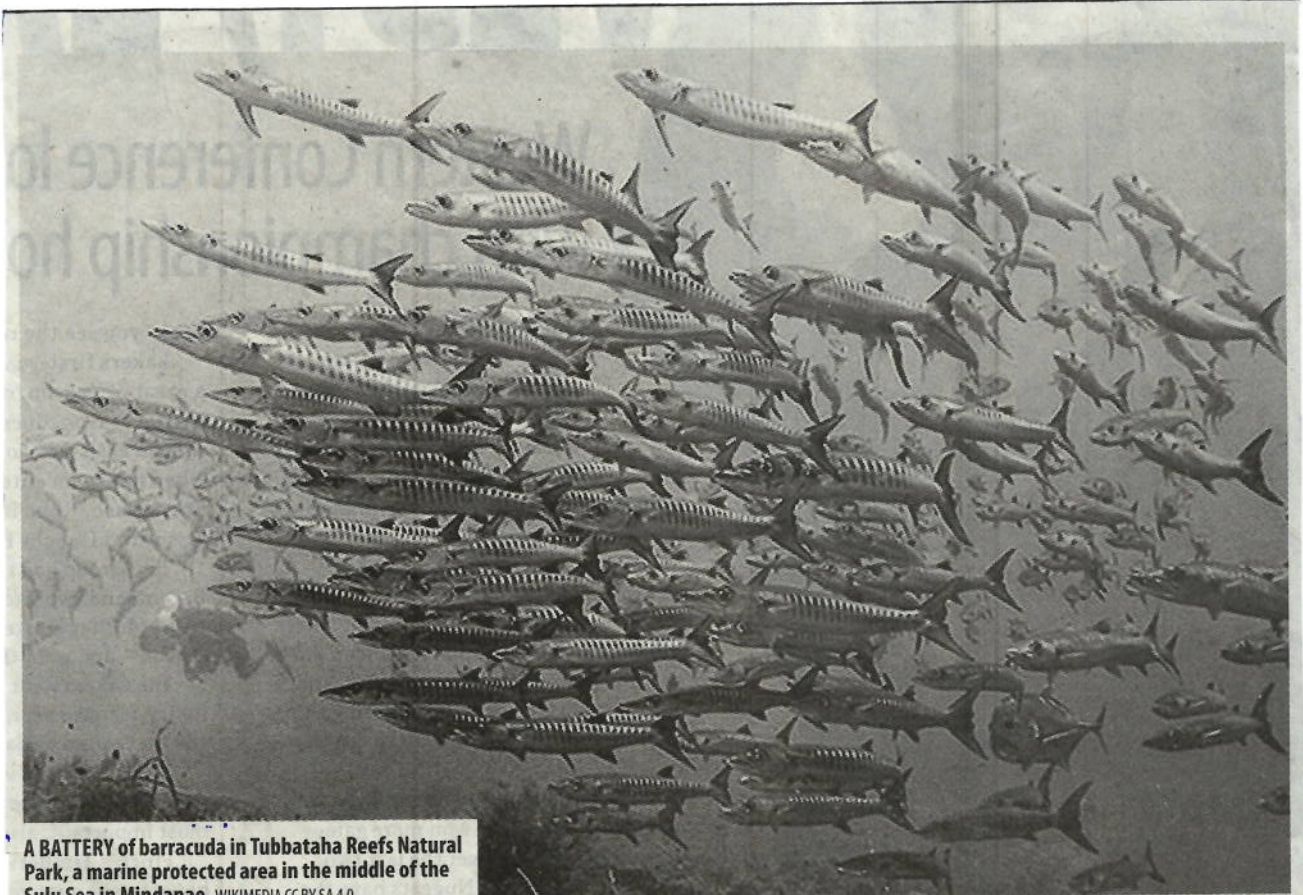
Climate change and biodiversity loss

SCIENTISTS and experts have time and again identified climate change as a major driver of biodiversity loss.

According to the Convention on Biological Diversity (CBD), climate change has already adversely affected biodiversity at the species and ecosystem levels.

"Some species and ecosystems are demonstrating the capacity to adapt naturally. However, others show negative impacts under current levels of climate change," Lim noted.

Meanwhile, the United Nations Environment Programme said biodiversity-rich forests are likely to be less vulnerable to climate risks and impacts than degraded and/or fragmented forests and plantations dominated by a single or a few species.



A BATTERY of barracuda in Tubbataha Reefs Natural Park, a marine protected area in the middle of the Sulu Sea in Mindanao. WIKIMEDIA CC BY SA 4.0

However, the current regulating service of forests as carbon sinks may be lost entirely and turn land ecosystems into a net source of carbon dioxide.

Meanwhile, in marine and coastal ecosystems, warmer temperatures lead to increased rates of coral bleaching or a decline in coral health. Lim noted, citing a 2010 Asian Development Bank study.

Climate change's impact on agriculture

A STUDY by the Southeast Asian Regional Center for Graduate Study and Research in Agriculture (Searca) states that changes in climatic patterns consequently alter the spatial distribution of agro-ecological zones, habitats, distribution patterns of plant diseases and pests, fish populations, and ocean circulation patterns that can significantly affect agriculture and food production.

The manifestation of identified climate change-induced hazards and risks to agriculture will vary due to differences in geographical and

socioeconomic conditions across the region, according to the Searca study in 2013.

Lim noted that agrobiodiversity remains the main raw material for agroecosystems to cope with climate change as it contains the reservoir of traits for plant and animal breeders and farmers to select resilient, climate-ready germplasm, and produce new breeds, citing a study by Marambe and Silva.

Protected areas' limited defense

CLIMATE change is likely to result in biodiversity loss, forest degradation, and reduction, migration and extinction of species.

Citing a World Wide Fund for Nature (WWF) report, Lim said protected areas indeed have a limited defense against climate change and they should be improved to withstand climate impacts.

"Climate change also adds to pressures of already vulnerable biodiversity hotspots. If there is a significant rise in sea level, all wetland and

marine and coastal Asean Heritage Parks (AHPs) will be affected," she explained.

According to WWF, Lim noted, species existing in about 60 percent of AHPs are vulnerable to climate change due to decreasing niche space, considering these AHPs are 1,000 meters above sea level.

AHPs in Cambodia, the Philippines and Vietnam have been previously affected by past cyclones.

Lim pointed out that endangered plants and animals are the most common components in almost all AHPs that are sensitive to climate change.

Zoonotic disease

BIODIVERSITY loss and climate change aggravate the threat of zoonotic diseases, Lim said.

"The exposure to vectors is increased or altered by activities connected to deforestation, such as mining, hydroelectric projects, road construction, mineral exploitation and agriculture. [They] have a profound impact, not only on the biology of vectors or potential vector populations,



but also on the exposure of both native populations in the area and migrant populations," she explained.

Lim pointed out that land-use changes are also associated with the creation of road networks, further enhancing pressures on wildlife populations.

"A series of emerging infectious diseases, for example, severe acute respiratory syndrome, Ebola and Middle East respiratory syndrome, have been linked to wildlife use, trade and consumption," she said.

Mainstreaming biodiversity

HOW can mainstreaming biodiversity conservation help mitigate the impact of climate change and reduce, if not totally avoid yet another global pandemic?

Lim said that in many cases, different national government agencies work on climate change and biodiversity separately.

She pointed out that "convergence" among relevant stakeholders on both issues is necessary to comply with commitments to both the United Nations Framework Convention on Climate Change and the CBD.

"Regionally, there is a recognition of the vulnerability of Asean to the impacts of climate change. But an understanding of biodiversity conservation as an effective mitigating measure against climate change impacts needs to be emphasized," Lim said.

"Increased collaboration, sharing of expertise and public awareness on the interrelationship between climate change and biodiversity are crucial to addressing these twin issues," she added.

According to Lim, there is already an increasing recognition that protected areas may buffer against the emergence of novel infectious diseases by avoiding drastic changes in host/reservoir abundance and distribution and reducing contact rates between humans, livestock and wildlife.

The current Covid-19 pandemic further emphasizes the fact that protected areas are at the forefront of preventing future disease outbreaks by maintaining ecosystem integrity, she said.



Marcos Jr. pushes for more incentives for Balik Scientists

BY SAMUEL P. MEDENILLA

PRESIDENT Ferdinand R. Marcos Jr. is pushing for more incentives to bring home more Filipino scientists so they could help address the impact of climate change and in the country's development.

Marcos gave the instruction to the Department of Science and Technology (DOST) during the Eighth Annual Balik Scientist Program (BSP) Convention held at the Philippine International Convention Center (PICC), in Pasay City last Friday.

With the theme, "Balik Scientist: Kasangga sa Paglinang ng Agham at Teknolohiya para sa Maunlad at Matatag na Kinabukasan," the convention aims to present some of the notable achievement of the current Balik Scientists, and to entice more Filipino experts abroad to join the program and give back to the country. It has the slogan: "Balik puso, balik Pilipinas, balik scientists."

"You must continue to strengthen the implementation of the Balik Scientist Program and find ways to provide more incentives to encourage more Filipino scientists to come back to the country and share their expertise," Marcos said in his speech in the event.

The additional incentives, he said, will be on top of what is already being provided by the Republic Act 11035, or the Balik Scientist Act of 2018, which include allowances, education assistance for their minor children, participation in grants-in-aid projects.

Crucial role

MARCOS noted how the returning scientists played a role in the country's Covid-19 response, including vaccine protocols.

Since the onset of the pandemic in 2020, DOST Assistant Secretary Leah J. Buendia disclosed at the event that the country has 67 Balik Scientists.

Of which, seven worked in the Virology and Vaccine Institute of the Philippines.

Marcos said scientists will also be playing a crucial role to ensure the country could cope with the effects of climate change, which he said has become an international "primordial problem."

"We look to science to provide us with the answers for the mitigation and the adaptation that we have to undergo if we are going to flourish and do better in the future," Marcos said.

Lauds DOST

THE President lauded DOST for its continuous implementation of its BSP, which helped in local research and development initiatives and resulted in patents.

"I was impressed by the number of patents that have emerged. This is generally the guide that we use, this is generally the measure that we use when we are talking, especially of primary research," Marcos said.

Since the launch of the BSP in 1975, Buendia said it was able to attract 603 scientists, who conducted research for 130 host institutions nationwide.

Marcos said he hopes DOST will use the BSP as a way to attract the youth to take up courses related to science, technology, engineering and math (STEM).

"Let us also encourage our young people by showing them what a career in science, research and development, in what the work that is being done by Balik Scientists and to motivate them and to inspire them, and to explain to them, that you can do this too," Marcos said.



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Marcos Jr. pushes...

Frustrated scientist

AS a self-professed "frustrated scientist," Marcos said he knows the importance of giving role models to the youth and their parents to develop appreciation for STEM-related courses.

"All my scholastic career was spent in science and it was only toward the end that it was explained to me by my father that science was hard and I will not grow rich from it," Marcos said.

Marcos amusingly said he would have loved to prove his father, former president Ferdinand E. Marcos, wrong by showing him the business tycoons, who became rich from STEM-related endeavors.

"Boy, if he were alive now, I would like to introduce him to Elon Musk, I'd like to introduce him to Bezos, I'd like to introduce [him] to Microsoft, to Apple," Marcos said.

The president vowed to continue extending support to DOST so it could continue with its BSP implementation.

"You may always be assured that I and my administration will extend all support in making science and innovation an instrument of progress and prosperity for the Filipino," Marcos said.

BSP established under Marcos Sr.

ESTABLISHED by Marcos Jr.'s father, then-President Ferdinand E. Marcos through Presidential Decree 819 in 1975, the program sought to provide more opportunities for local scientists and boost the science, technology and innovation (STI) capacity of the country. It also aims to present more opportunities to Filipino scientists who were being recruited by foreign institutions.

The enactment of Republic Act 11035, or the Balik Scientist Act, in June 2018 was for DOST to provide Balik Scientists with competitive benefits, such as daily subsistence allowance, health insurance, roundtrip airfare, and among others.

The BSP specifically aims to reverse the effect of the brain drain; strengthen S&T capabilities; accelerate the flow of technologies; and promote knowledge sharing.

The Balik Scientists

THE current 12 Balik Scientists presented their innovations with their host institutions, the three sectoral councils of the DOST, namely the Philippine Council for Health Research and Development (PCHRD); Philippine Council for Agriculture, Aquatic and Natural Resources Research and Development (PCAARRD); and Philippine Council for Industry, Energy and Emerging Technology Research and Development (PCIEERD).

1. Dr. Myra O. Villareal

VILLAREAL is a lecturer at University of Tsukuba in Japan.

Her project is, "Establishing Functional Food Research in SUCs [state universities and colleges] for a Future-ready and Healthy Philippines."

She has been a Balik Scientist for host institutions Bicol University, University of the Philippines (UP) Manila, and University of the Philippines Los Banos (UPLB).

She has the vision of establishing a mammalian cell culture laboratory that will play a central role in creating a functional food

program at the Bicol University.

Her engagement has the potential to increase the research capacity of the host institutions and inspire young researchers to pursue research in science that will contribute to national development and economic growth in the future.

2. Dr. Julius Adam Lopez

LOPEZ is a DOST-PCHRD Medium-Term Balik Scientist and is affiliated with the Center for Natural Drug Discovery and Development, University of San Agustin (USA), Iloilo City.

His project is on "Empowering the countryside with nuclear magnetic resonance for better health and well-being of Filipinos."

His engagement as a Balik Scientist will address the regional disparity by providing his expertise in nuclear magnetic resonance spectroscopy through assisting the laboratory operations of the USA DOST-PCHRD Tuklas Lunas NMR Laboratory Visayas in the USA, and co-authoring the Training Module on Fundamental NMR Spectroscopy and Standard Operating Procedure for Bruker NMR Spectrometers.

He will also equip potential NMR spectroscopists in the countryside through a training program on NMR principles, data interpretation, and use of the first and only 600 MHz cryoprobe NMR spectrometer in the country.

3. Dr. Thaddeus Carvajal

HE is an Associate Professor and Balik Scientist affiliated with the De La Salle University-Manila.

His project is "The Importance of Studying Vector Biology and Ecology of Mosquito-borne diseases for Designing Appropriate Vector Control Strategies."

Carvajal's presentation highlighted the Philippine-based studies focusing on the biological and ecological aspects of dengue disease transmission. It also discussed the different biological control approaches and their effectiveness in reducing disease transmission through a systematic review.



PRESIDENT Ferdinand R. Marcos Jr. (seated, center) takes a photo with DOST officials and some Balik Scientists after he delivered the keynote address at the Balik Scientist Program Convention on Friday. In the photo with him are (from left, seated) Pasay City Mayor Imelda Calixto-Rubiano, Science Secretary Renato U. Solidum Jr., Undersecretary Sanchez A. Maborang for Regional Operations and OIC Undersecretary Leah Buendia for R&D. Standing at the back are nine of the 12 featured Balik Scientists. BSP PHOTO

4. Prof. Jocelyn Serrano

SHE is affiliated with the University of Tsukuba. Her project is "Establishing Functional Food Research in SUCS for a Future-ready and Healthy Philippines."

Serrano's expertise in cell biology and functional food science will help in the establishment

of an income-generating mammalian cell culture assay laboratory through the DOST PCHRD NICER Health Program.

Her engagement is co-hosted by the UPLB and UP Manila to establish a collaboration that will further improve Bicol University's capacity for instruction and research and extension engagements.

5. Engr. Syrus Gomari

GOMARI is a Medium-term Balik Scientist 2022. He is the CEO of Mobility Vision+, Munich, Germany and Manila, Philippines

His project is on "Urban Mobility Planning of Tomorrow."

Through his engagement in BSP, Gomari, with his expertise on the intersection of sustainable urban mobility planning, stakeholder engagement, data science and software development, automated vehicles, and video artificial intelligence, will identify data-driven approaches and tailor solutions to fit the needs of decision-makers and planners in local government units.

Two cities in Metropolitan Manila are identified as his host institutions. The Balik Scientist will collect data and use decision-support software that will be used during the pilot-phase and beyond.

6. DJ Donn Matienzo, PhD

A POSTDOCTORAL research fellow/entrepreneurial lead, Matienzo is affiliated with UP Diliman and Technological Institute of the Philippines.

His project's title is "Batteries and hydrogen technology: pathways for a sustainable energy future."

His engagement will contribute to ongoing R&D projects on battery and hydrogen technologies.

It involves two essential technologies to decarbonize all sectors of the Philippine economy, such as the batteries and hydrogen-producing electrolyzers.

7. Dr. Chosel P. Lawagon

LAWAGON is the director of the Center of Green Nanotechnology Innovations for Environmental Solutions (CGNIES). She is with the University of Mindanao (UM).

With her project, "Panaw: A Balik Scientist's journey in creating impact through science," Lawagon's contributions brought about significant change in the scientific landscape of the UM.



8. Dr. Jonel P. Saludes

SALUDES is the associate vice president, Research and Global Relations at the University of San Agustin (USA).

His presentation is on "Visible and tangible impact of Balik Scientists for the Filipinos: The Western Visayas experience."

Through the BSP engagements at the USA-Iloilo, the university became known for its flagship degree programs in health. USA has since then hosted eight Balik Scientists, and five chose to repatriate and join its faculty.

Four research centers focusing on aquaculture, chemical biology, bio- and health informatics, diagnostics, drug discovery, marine microbial biotechnology, and nanomaterial engineering and nanotechnology were established.

To date, USA through the leadership of Balik Scientists established four laboratories led by our Balik Scientists namely: Center for Advanced New Materials, Engineering, and Emerging Technologies Laboratory by Dr. Noel Peter Tan; Center for Natural Drug Discovery and Development by Dr. Jonel Saludes; Center for Chemical Biology and Biotechnology by Dr. Doralyn Dalisay; and Nuclear Magnetic Resonance (NMR) Spectroscopy Laboratory by Dr. Julius Lopez

9. Dr. Leilani S. Dacones

AN ASSISTANT professor, Dacones is affiliated with the Institute of Biology of UP Diliman.

Her project is "Fungus-tic engagement in the academe."

The focus of the research was to gain a better understanding of the population biology of fungal plant pathogens causing disease epidemics of economically important crops in the Philippines by developing molecular markers and the subsequent establishment of recommendations for the implementation of cost-effective control.

The research has extended opportunities for providing access to crop growers in initially identifying potential cause of losses in their production fields and consequently the measures to help mitigate these problems.

10. Dr. Homer Pantua

PANTUA is the co-founder and CEO of BioAssets Corp.

His presentation is on "Balik Scientist Public and Private Engagements Toward Building a

Biotechnology Atmosphere in the Philippines."

The Balik Scientist and researchers at the DOST-Industrial Technology Development Institute (ITDI) advanced its African Swine Fever virus point-of-need diagnostics kit development.

Through the engagement, ITDI and BioAssets Corp., collaborated to generate a whole genome sequence of the ASF virus. Such genomic information are important to further diagnostic development and vaccine research.

11. Dr. Jennifer Luangsa-ard

A SENIOR researcher, Luangsa-ard is with the National Center for Genetic Engineering and Biotechnology, Thailand and Polytechnic University of the Philippines.

Her project is on "Diversity studies of invertebrate-pathogenic fungi in Quezon Province, search for novel species and new sources of biocontrol agents."

This is the first study that explored the diversity of Invertebrate-pathogenic fungi (IPF) in the province of Quezon province. IPF, considered the least explored fungal groups in the Philippines in terms of biodiversity and its potential in biological control, are important natural enemies of insects and other invertebrates and their interactions have been shown to drive the dynamics of insect host populations.

12. Dr. Divina Amalin

AMALIN is affiliated with De La Salle University.

Her presentation is on "Balik Scientist Program Brain Gain from the Perspective of the Host Institution."

The De La Salle University (DLSU) as an active host institution partner of DOST for the BSP has an existing Visiting Scholar Program (VSP) with the inclusion of hosting a BSP under the Filipino Professors and Researchers category.

The VSP assures the visiting scholars with work space, research support such as existing laboratory equipment, research consumables and office supplies.

DLSU has hosted a total of 11 BSPs, two of which has been retained by DLSU as regular employees. DLSU as a host institution benefits significantly in terms of research and education from the BSPs engagement, a manifestation of the brain gain from BSP.

With Lyn Resurreccion



Farmer held for selling P30-M 'taklobo' in Cebu

By CALVIN
CORDOVA

CEBU CITY - Authorities arrested a 46-year-old farmer for selling endangered giant clams locally known as "taklobo" worth P30 million in Barangay Bongoyan, Borbon, Cebu last Wednesday.

The suspect was identified as Anecito Pogado of Barangay Bongoyan.



A LIVE giant clam or 'taklobo'

(Turn to Page 2)

Farmer ...

(From Page 1)

Pogado was nabbed in a buy-bust operation in Barangay Bongoyan by the Criminal Investigation and Detection Group-Lapu-Lapu City Field Unit (CIDG-LCFU), 300th Air Intelligence Security Wing of the Philippine Air Force, Naval Forces

Central, and personnel of the Bureau of Fisheries and Aquatic Resources.

Seized from Pogado were at least 120 giant clams weighing around two tons with an estimated value of P30 million.

According to the CIDG-LCFU, headed by Capt. Nigel Sanoy, the giant clams were being sold abroad for at least P15,000 each.

Sanoy said harvesting, possessing, and selling of giants clams is punishable under

Republic Act (RA) 8550 or the Philippine Fisheries Code of 1998 as amended by RA 10654.

Giant clams are considered endangered species.

Sanoy said Pogado was placed under surveillance by the CIDG intelligence group due to reports that he was selling giant clams in Barangay Bongoyan.

Pogado was confirmed to be selling giant clams and a case build-up was conducted until the suspect was arrested.



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P30M taklobo nasilat sa Cebu

Dinampot ng mga tauhan ng Criminal Investigation and Detection Group (CIDG) Lapu-Lapu City Field Unit ang isang magsasaka matapos makuhanan ng giant clam shell o taklobo na nagkakahalagang P30 milyon sa ikinasang follow up operation sa Borbon, Cebu City.

Nakilala ang magsasaka na nagbebenta ng giant clam shell na si Anecito Baliguat Pogado, 40, na nakumpiskahan ng otoridad ng aabot sa 120 mga higanteng taklobo na may bigat na dalawang tonelada.

Ang nasabing operasyon ay isinagawa ng 300th Air Intelligence Security Wing sa Philippine Air Force, Naval Forces Central at Bureau of Fisheries and Aquatic Resources sa Sitio Tukdaw, Barangay Bongoyan, bayan ng Borbon.

Naibebenta ng P15K kada kilo ang mga giant clams sa ibang bansa na kadalasan ding ginagamit bilang decorations, alahas, at iba pa. **(Vick Aquino)**



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Only 2% of PH coral reefs remain healthy – watchdog

AN environmental group said that only 2 percent of the country's coral reef remains healthy.

In a webinar titled "Today is the seas the moment: A deeper connection with the ocean," Haribon Foundation Chief Operating Officer Anna Varona added that there are 5 trillion plastics in the world's surface water.

"There are more plastics than there are people on the planet Earth. Imagine what plastics do for us, what plastics do for ecosystems — nothing. [They] suffocate the marine environment, [they] suffocate the forest, and the land and the mountains. The land where [they] dumped, dies," Varona said, referring to the estimated 7.7

billion world population.

Varona also cited a study released by the Department of Science and Technology (DoST) on the dwindling coral reefs.

"This is the sad part. In 2017, the DoST said initial findings of coral reefs nationwide showed 90 percent of the 166 reefs that were sampled were classified as either poor or fair. The latest [study] was that we only have 2 percent healthy coral reefs in the Philippines, and that is a shame. We are an archipelago surrounded by the oceans, and we are made up of islands. We are the center of biodiversity on the planet. If coral reefs

► **CoralA2**

■ CORAL FROM A1

Only 2% of PH country's coral reef

are not healthy, the animals, the turtles, the octopus and fish are also affected," Varona said.

Varona added that it is vital for the ecosystem to run in an efficient manner.

"Because there are so many plastic particles in the marine environment, they have already entered our food chain. When you are a lover of seafood, most likely you have 70,000 particles of microplastics ... in your system, every year on an average," she added.

Varona noted that of the 90 species of whales, it is estimated that 18 percent are considered endangered species.

"Five of them have an alarming rate of death. Many die because of climate change and other reasons," Varona said.

Varona said the dugong also has a very high mortality rate.

"The situation of dugong right now is bleak. It's because of chemical pollution, plastic pollution, climate change and invasion of

habitats," she said.

Varona said dynamite fishing persists despite its harmful effects to the marine environment.

"Dynamite fishing is still being done. There is still dynamite fishing despite the fact there is much knowledge in dynamite fishing, and its effect in the marine environment because people need money, they get hungry," she noted.

At the same time, Varona lauded the passage of Republic Act 11898 or "Extended Producer Responsibility (EPR) Act of 2022" making firms responsible for plastic packaging.

"The people who create or manufacture plastic products should be accountable to the wastes that come out from the products that they bring out," she said.

Environment Secretary Maria Antonia Yulo-Loyzaga said that the country generates at least 2.7 million metric tons of plastic wastes, adding that 20 percent of plastic wastes end up in the oceans.

BELLA CARIASO



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DOLE includes forest rangers in TUPAD program

By JUN MARCOS TADIOS

The Department of Labor and Employment (DOLE) has integrated the forest guardians in its emergency employment program in a bid to boost the enforcement of environmental laws, particularly the government's campaign against illegal logging.

Labor Secretary Bienvenido Laguesma said they signed a memorandum of agreement with the Department of Environment and Natural Resources (DENR) in a bid to include workers in the Tulong Panghanapbuhay sa Ating Disadvantaged/Displaced Workers (TUPAD) as forest rangers.

Laguesma said the main responsibility of the forest guards is to patrol the forest, seedling production, establish plantations, and assist in forest protection activities in support of the DENR's Improved National Forest Protection Program.

The MOA signing between Laguesma and environment Sec. Maria Antonia Yulo-Loyzaga was witnessed by President Marcos.

The MOA will be implemented by the Bureau of Workers with Special Concerns (BWSC) and the Regional / Field Offices assigned to hire workers to be deployed in areas identified by the DENR Forest Management Bureau.

DOLE also allocated funds to cover

the prevailing daily minimum wage in the region as well as the administrative cost for personal protective equipment and group personal accident insurance of workers who will be hired.

The department will assign a sequencer coordinator for the reforestation program to monitor and ensure the smooth implementation of the program.

"Those who will be hired will augment the current number of Forest Rangers who will conduct patrolling, seedling production, plantation establishment, and protection activities," Laguesma said.

DOLE also tapped the Technical

Education and Skills Development Authority (TESDA) and its accredited training institutions to conduct appropriate skills training, and assist in the advocacy of environment-related laws, rules, and regulations for the TUPAD workers assigned as forest rangers.

"The agreement is in line with the directive of the President to prioritize mitigation of the worst impacts of climate change in the country through the establishment of livable and sustainable communities, including the adoption of a green economy roadmap which is one of the key strategies of green jobs creation," said Laguesma.



Benepisaryo ng TUPAD tutulong sa mga forest ranger

BILANG suporta sa kampanya ng pamahalaan laban sa pagbabago ng klima, gagamitin ng Department of Labor and Employment ang mga benepisaryo ng programang Tulong Panghanapbuhay sa Ating Disadvantaged / Displaced Workers (TUPAD) bilang mga forest ranger para tumulong sa pagpapalakas at pagpapalawak ng national greening program ng Department of Environment and Natural Resources (DENR).

Lumagda sa isang memorandum of agreement (MOA) sina Labor Secretary Bienvenido Laguesma at Environment and Natural Resources Secretary Maria Antonia Yulo Loyzaga, na nagtatakda para sa pagpapakilos ng mga benepisaryo ng TUPAD sa pagpapatrolya sa kagubatan, produksyon ng mga punla, pagtatatag ng mga plantasyon, at pagtulong sa mga gawain sa pangangalaga ng kagubatan, bilang suporta sa Improved National Forest Protection

Program ng DENR.

Sinaksihan ni Pangulong Bongbong Marcos Jr. ang paglagda sa nasabing kasunduan noong nakaraang linggo.

Ang MOA ay ipatutupad ng DOLE sa pamamagitan ng Bureau of Workers with Special Concerns (BWSC) at ng mga Regional/Field Offices ang mamamahala sa pagkuha ng mga manggagawang ipapakalat sa mga lugar na tinukoy ng Forest Management Bureau ng DENR.

Maglalaan ang DOLE ng pondo para sa umiiral na minimum na sahod sa rehiyon gayundin ang gastusin para sa mga kailanganing personal protective equipment at group personal accident insurance ng mga manggagawa; pagpili ng mga kwalipikadong benepisaryo ng TUPAD; at pagtalaga ng isang program coordinator na susubaybay at titiyak na maayos na naipatutupad ang programa.

Ang mga manggagawang matatanggap, na magiging karagdagan

sa kasalukuyang bilang ng Forest Rangers, ay magsasagawa ng pagpapatrolya, produksyon ng punla, pagtatatag ng plantasyon, at mga aktibidad hinggil sa pagprotekta ng kagubatan.

Bukod dito, ang labor department ay inatasan din na gamitin ang Technical Education and Skills Development Authority (TESDA) o ang mga accredited training institution para sa pagbibigay ng angkop na pagsasanay; at tumulong sa pagtataguyod ng mga batas, tuntunin, at regulasyon na may kaugnayan sa kapaligiran.

Ang kasunduan ay alinsunod sa direktiba ng Pangulo na bigyang-prioridad ang mga pamamaraan at gawain upang mabawasan ang masamang epekto ng pagbabago ng klima sa bansa sa pamamagitan ng pagtatatag ng maayos na komunidad, kabilang ang pagpapatibay ng green economy roadmap na isa sa mga pangunahing istratehiya sa paglikha ng green jobs.



World Food Day 2022: Leave no one behind

Today is World Food Day. More than 150 countries around the world are celebrating World Food Day (WFD) in more than 50 languages and through hundreds of activities and programs, making it the most celebrated United Nations (UN) day of the year.

Food is a basic need. It gathers government and private sector to discuss – and implement – policies and processes that will ensure food security. It gathers families, friends and strangers to talk and build relationships that strengthen communities. It also creates heroes who work hard to produce, plant, harvest or transport food to sustain our world.

The significance of World Food Day, established by the Food and Agriculture Organization (FAO), is highlighted by the involvement of key people in launching this year's celebration.

In Rome, headquarters of the FAO, Director-General QU Dongyu, officially launched this year's celebrations on Oct. 14. Attending the meeting were the mayor of Rome, the heads of the other UN Rome-based agencies, and the executive director of the World Food Programme (WFP). Giving special messages were Pope Francis, the president of the Italian Republic Sergio Mattarella, and UN Secretary-General António Guterres.

In the Philippines, President Ferdinand R. Marcos, Jr., who is also the Agriculture Secretary, will lead the celebration and the start of week-long activities tomorrow. Giving special messages will be Senator Cynthia Villar, chairman of the Senate committee on agriculture, food and agrarian reform, and country officials of the FAO and WFP.

Around the world hundreds of private sector groups and non-government organizations are also celebrating the day with various activities like feeding programs.

The activities support World Food Day 2002's theme – "Leave no one behind, through better production, better nutrition, a better environment,

and a better life."

For as we are aware, food also defines what separates people – the bountiful presence of food on the table states privilege; its absence describes the poor.

As FAO defines the challenge: Our globalized world is one where our economies, cultures, and populations are becoming increasingly interconnected. Some of us are vulnerable because of who we are or where we live, but the reality is that we are all fragile. When someone is left behind a chain is broken. That impacts not only the life of that person, but also ours."

It focuses on the reality that millions of people live with hunger and malnutrition. Around the world, as many as 828 million people suffer from hunger and 3.1 billion people – almost 40 percent of the world's population – cannot afford a healthy diet, a FAO statement said.

In the Philippines, the proportion of poor Filipinos in 2021 was recorded by the Philippine Statistics Authority at 18.1 percent, or 19.99 million Filipinos who live below the poverty threshold.

The call to "Leave no one behind" is a big challenge. Food scarcity has been pushed by many factors—conflicts, climate change, rising prices, and recently, the Covid pandemic.

Today, a "global solidarity" is needed to transform agrifood systems to foster inclusive economic growth, and achieve sustainable development," a FAO statement said.

World Food Day helps raise awareness of the crucial need for successful agriculture policies to ensure that there is ample food for everyone.

Meanwhile, what can one person reading this editorial do to celebrate World Food Day? Donate cash or food to an organization that works to fight hunger in the Philippines. Volunteer to teach livelihood skills to people in poor communities. Get involved in agriculture.

"A sustainable world is one where everyone counts."



Point of view

An environmentally-resilient Philippines

By FEDERICO R. LOPEZ

I've been asked to share my thoughts on what an environmentally-resilient Philippines could look like. To understand what this involves, let me take a step back and place it in the context of what the world needs to get to and why. It's often said that the COVID-19 pandemic was just a dress rehearsal for how we will face an even more perilous world from the impacts of climate change.



The overriding goal is to "solve climate change" – which means mitigating it as well as adapting to its impacts that are already here, with more yet to come. Because if we don't get it right, the exponential deterioration of global climate systems and the environment will make it impossible to solve other problems like poverty, inequality, disease, food production, freshwater scarcity, mass migration, social displacement, mass extinction of species and biodiversity loss, among others. All of this we will feel during our lifetimes.

Paris Conference of Parties (COP) 21 applauded the agreements that signaled we could limit global warming to 2.0 degrees Celsius if all commitments were met. Since then, the IPCC issued in October 2018 a Special Report on the impacts of Global Warming of 1.5 degrees Celsius, followed last year and this year by its Sixth Assessment Reports from Working Groups I, II and III, all with dire warnings and consequences for a 2-degree Celsius warmer world. Taken together, they underscored the scientific consensus that our targets must not exceed 1.5 degrees by end century. The 1.5 degrees therefore must be our base case.

Consequently, "Solving Climate Change" means:

Phase 1: We *reduce* greenhouse gas (GHG) emissions (of carbon dioxide, methane, nitrous oxides and fluorinated gases) from the current 50 gigatons (Gt) of GHGs per year. (Emissions peak by 2025). We cannot stop here.

Phase 2: Aim further to *eliminate* all emission of GHGs (get to Net Zero emissions by 2050.) By 2050, to begin the arduous task of reducing the concentration of GHGs in the atmosphere.

Phase 3: Get to what's called *net negative*

emissions. This is best described in the words of NASA climate scientist James Hansen: "If humanity wishes to preserve a planet similar to that on which civilization developed and to which life on Earth is adapted...CO2 will need to be reduced...to at most 350 ppm."

For reference, pre-industrialization levels were at 280 parts per million (ppm) and we sailed past 350 ppm in 1986. We continued to blow through

400 ppm in 2013, the same year Super Typhoon Yolanda, the most powerful typhoon on earth to ever make landfall, announced to the world, through the suffering of millions of Filipinos, that climate change is here and that we better get our acts together now.

We now need to realize Phases 1, 2 and 3 above within the rapidly diminishing timeframe of the next 28 years. Failing to do this over the timeframe will trigger irreversible tipping points, the effects of which we are already seeing in news reports from all over the world every day. The clock ticks as we speak.

Progress through Phases 1 to 3 in the battle to "solve climate change" has many facets beyond just energy; it spans agricultural practices, food production, waste management practices, industrial processes, deforestation, f-gases used in refrigeration and many others. For now, let me just focus on what the foundations to the global energy transition will look like as it's important that we appreciate what the transition to net zero demands.

Cornerstone 1: Reduce carbon intensity of electricity. Clean up the electricity grid's generation sources with the intent of progressively lowering carbon intensity per kwh. We must keep in mind that as we do this, we need to keep the lights on and keep power prices affordable.

Cornerstone 2: Scale up energy efficiency efforts. Scale up energy efficiency as the "first fuel" and encourage and incentivize its use everywhere.

(To be continued)

* * *

Remarks delivered by Federico Lopez, chairman of First Philippine Holdings, at the DENR Multi-Stakeholder Forum on Oct. 5, 2022 at the Manila Diamond Hotel.



Villar urges everyone to save 'suffering' planet

With the earth in the middle of a climate emergency, Sen. Cynthia Villar urged stakeholders – the government, manufacturers and citizens – to collaborate and save the “suffering” planet.

“We occupy the same ‘suffering’ planet due to a climate emergency; we should learn to live in partnership to solve our biggest problems together. The globe is in the middle of a climate emergency,” Villar said in her speech during the Coca-Cola “World Without Waste” event in Taguig with the theme, “The Role of Partnerships in Driving a Circular Economy.”

“Because of this, every individual is bound not only to reduce his or her own footprint but also find strategic interventions to drastically redeem what would have been valuable materials from the waste stream,” said Villar.

Villar also commended the Coca-Cola company for not only looking at collection compliance, but also developing ways to incorporate recycled materials in their packaging.

“Cradle-to-grave management of products is no longer sufficient. Responsibility must begin at product conceptualization before it even sees production,” said Villar, chair of the Senate committee on environment and natural resources.

She was referring to the management model where the generating company is responsible for all legal and financial liabilities if an error occurs at any stage of the waste disposal process.

While thriving corpora-

tions have already adopted the Extended Producer Responsibility (EPR) framework as their ethical responsibility, the senator emphasized it is about time to turn this ethical responsibility into a legal one.

“The law introduces a better policy than simply expecting all our citizens to segregate and manage their wastes and let the local governments in our scattered settlements and islands deal with the massive problems brought about by the lack of legal responsibility among the top producers of plastic wastes,” said Villar.

She said EPR requires manufacturers to reach collection targets. The EPR Law places responsibility for products squarely on the shoulders of the manufacturer from cradle to grave.

“Hopefully, what is collected will no longer find its way back to the environment as unmanaged waste,” the senator added.

She noted that large enterprises should be able to recover and recycle a minimum of 20 percent of all packaging waste distributed for the year before the end of 2023, adding that the target rises to 40 percent in the second year, 50 percent in the third year and so on until 80 percent by 2028.

“It is actually my hope that your considerable resources will allow your industries to fast-track research and development, reach and breach these targets and go beyond mere compliance,” she added. “When these very realistic targets are met or exceeded, EPR expenses will be deducted from taxable annual income.”

– Cecille Suerte Felipe



Pinoy-developed app on coastal hazards global finalist in NASA tilt

By **JANVIC MATEO**

A web application that monitors coastal hazards was selected as one of the global finalists of the National Aeronautics and Space Administration (NASA)'s Space Apps challenge.

A team composed of marine biology and computer engineering students from Mindanao State University-Iligan Institute of Technology (MSU-IIT) won the hackathon hosted by the United States embassy and FAB LABs Philippines at the American Corner at Xavier University-Ateneo de Cagayan earlier this month.

A total of 54 students representing 10 teams joined the hackathon, where participants used NASA's open-source data to develop applications addressing the impacts of climate change and other environmental challenges.

The winning group, Team Bay-

bayin, developed a web application that provides visual representations of coastal degradation to monitor coastal hazards and raise public awareness on mitigation methods.

"With the Philippines having the third longest coastline in the world, we will continue to develop this project and explore data-driven solutions for the benefit of coastal communities," Team Baybayin co-founder Preus Patrix Manulat said.

Team Baybayin will compete in the final stage of the competition, where NASA experts will assess all submitted projects.

The global winners are expected to be announced in December.

Founded in 2012, the NASA Space Apps Challenge aims to encourage coders, scientists, designers and other stakeholders to use NASA's free and open data to address real-

world problems.

Last year, some 28,000 participants from 162 countries joined the competition.

In preparation for the hackathon, participating students were guided by experts from MSU-IIT, Xavier University and iDEYA, the US Department of State's Global Innovation through the Science and Technology Innovation Hub.

EducationUSA also hosted an information session for students interested in completing their studies in the US.

"Skills-building is an important pillar of our American Spaces programs. This hackathon, including mentoring participants provided by NASA, increases the ability of Filipinos to address global challenges through science and technology," US embassy assistant cultural affairs officer Pauline Anderson said.



Vietnam: Military might won't solve sea dispute

VIETNAM maintains that the South China Sea (SCS) disputes must be resolved through diplomatic and peaceful means, as a military option will benefit no one.

This was stressed Saturday by Tran Duc Loi, the vice chairman of the Communist Party of Vietnam Central Committee's Commission for External Relations, at the Pandesal Forum, the 83-year-old Kamuning Bakery Cafe in Kamuning, Quezon City, where he was a special foreign guest.

Vietnam and the Philippines have territorial disputes over the Spratly Islands, along with Brunei, China, Malaysia and Taiwan.

Loi said that just like the Philippines, Vietnam disapproves of China's nine-dash line map which China uses as justification for its claim in the South China Sea.

He said Vietnam is also committed to a multilateral diplomatic approach to the resolution of disputes in the South China Sea with the United Nations Convention on the Law of the Sea (Unclos).

In 2016, after a legal battle in The Hague, the International Court of Justice of the United Nations ruled in favor of all arguments of the Philippines against China's claims in the South China Sea, effectively nullifying the communist state's position in the international legal arena.

However, China waived the court's ruling despite being a signatory with respect to international laws and Unclos and sent more military vessels to the South China Sea and occupied some land formations claimed by the Philippines.

On the China-Taiwan conflict, the Vietnamese official said that outsiders should not interfere in the internal affairs

►DisputeA2

■ DISPUTE FROM A1

Vietnam

of China, stressing that Taiwan is a part of China.

He said the international community must respect the "One China Policy."

Loi pointed out that the Chinese people should be given the chance to reunite themselves instead of pitting them against one another.

On the Vietnam economy, Loi emphasized that despite the negative consequences of the pandemic, Vietnam remains one of the few countries in the world to have experienced positive economic growth during Covid-19.

He said that with the multi-faceted challenges that the Asean is facing, socialism is an option to consider by countries who wish to be economically stable. **JAVIER JOE ISMAEL**



Filipinos fishing on frontline of China's battle for disputed sea

Filipino fisherman Mariel Villamonte had spent years plying the turquoise waters of Scarborough Shoal, locally known as Panatag Shoal or Bajo de Masinloc, in the South China Sea for snapper and grouper – until a Chinese coast guard vessel water cannoned his boat.

That was in 2012, around the time China snatched control of the small ring of reefs from the Philippines, and he has not dared go back.

"Their ships are made of steel, ours are made of wood," said Villamonte, now 31, recalling how two Chinese vessels chased his outrigger before blasting it with high-pressure water.

The fishing ground, tapped by generations of Filipinos, is one of many potential flashpoints for military conflict over the South China Sea.

China and Taiwan both claim sovereignty over almost the entire sea, while the Philippines, Vietnam, Malaysia and Brunei have competing claims to parts of it.

Trillions of dollars worth of ship-borne trade passes through the waterway annually and naval vessels from the United States and Western allies sail through it regularly.

Of all the claimants, China has in recent years forced its stance most aggressively. Hundreds of Chinese coast guard and maritime militia vessels prowl the waters, swarming reefs, harassing and attacking fishing and other boats and interfering in oil and gas exploration, and scientific

research.

Analysts say Beijing's aim is regional supremacy and control over all activity in the waters and it is using its might to bully smaller rivals into submission.

"They really envision themselves to be the center of this region, economically, politically and militarily," said Jay Batongbacal, director of the University of the Philippines' Institute for Maritime Affairs and Law of the Sea. "What they want is that eventually the weaker nations simply give up and leave them there just to avoid a problem."

'Chinese Dream'

China often invokes the so-called nine-dash line, a vague delineation based on maps from the 1940s, to justify its claims over the South China Sea.

The Philippines brought a case before an international court disputing China's stance. The tribunal ruled in 2016 that Beijing's claims have no legal basis.

China has since ignored the ruling, and tensions with the Philippines eased after former president Rodrigo Duterte set aside his country's legal victory and courted Chinese businesses instead.

Ferdinand Marcos Jr., who took over from Duterte in June this year, has pledged to uphold the court decision and insisted he would not let China trample on Manila's maritime rights.

But in the decade under President Xi Jinping, who is expected to secure a record third consecutive term in of-

fice this month, China has dramatically expanded its presence in the sea.

Xi's desire for control of the waters is not about fish or fossil fuels, said Greg Poling, director of the US-based Asia Maritime Transparency Initiative (AMTI).

His main objectives are realizing the "Chinese Dream" of national rejuvenation – Xi's vision of restoring the country to perceived past glory – and securing his political legitimacy.

Poling said generations of Chinese leaders had made increasingly "absurd" claims to the sea, leaving Xi with no choice but to "assert claims to everything."

Satellite images published by AMTI show China's land-reclamation efforts in the waters have vastly outstripped those of all other claimants combined.

Since 2013, it has ripped up roughly 6,000 hectares of reef to create about 1,300 hectares of new land for artificial islands in the Spratly archipelago, said Poling.

The militarized islands – complete with runways, ports and radar systems – enable Chinese vessels to patrol as far south as Indonesia and Malaysia.

Apart from destroying fish breeding grounds and smothering marine life with sediment, experts say Beijing's actions contravene international law.

Under the 1982 United Nations Convention on the Law of the Sea, which China helped negotiate, countries



have exclusive rights to natural resources within about 200 nautical miles of their shore.

China's claims extend as far as a thousand nautical miles, which Poling said was "wildly inconsistent" with the law.

"The rules that protected China as a developing coastal state now seem like an unfair constraint on a China that believes that it should be able to impose its will on its neighbors," he said.

'Thief in own backyard'

China's seizure of Scarborough Shoal has robbed Villamonte and other fishermen in Barangay Cato in Infanta, Pangasinan of a key source of income.

Their families began fishing there in the 1980s when bigger boats enabled them to make the 500-kilometer round trip. It was full of fish and offered life-saving shelter during storms.

Now, the fishermen say they mainly rely on *payaw*, referring to the floating device that attract yellowfin tuna, anchored away from the shoal and left alone by Chinese boats.

After decades of overfishing by countries surrounding the waters, the men have to spend longer at sea and resort to catching smaller fish. Even then, they sometimes struggle to break even.

Despite the risks, Filipino fishermen still try to enter the shoal to top up their catch.

Christopher de Vera, 53, said members of his crew have

gone inside under the cover of darkness, leaving them feeling like "a thief in your own backyard."

But he said the shallow waters no longer teem with fish after the coral was "decimated" by Chinese giant clam harvesters.

'Worst nightmare'

China's growing assertiveness has not been seriously challenged by Southeast Asian countries due to deep divisions over how to respond and fear of retaliation if they do, according to analysts.

The 10-member Association of Southeast Asian Nations (ASEAN) is split between those with close ties to China, such as Myanmar, Cambodia and Laos, and others that are warier of Beijing.

Their differences have hampered negotiations between China and ASEAN for a "code of conduct" that would govern behavior in the sea.

Talks have dragged on for 20 years as Beijing, which prefers to deal directly with its smaller neighbors, went on an island-building spree.

The US is widely seen as the only nation powerful enough to push back, but there are concerns about its reliability.

US President Joe Biden hosted ASEAN leaders in May to signal Washington's long-term commitment to the region in the face of China's growing clout.

But decades of inconsistent policies and perceived neglect of the region have damaged Washington's image.

"Southeast Asian coun-

tries are simply not willing to place their bets on the United States," said Shahrman Lockman of the Institute of Strategic and International Studies in Malaysia.

China has previously used deadly force to back its claims and its recent war games around Taiwan, which it considers part of its own territory, rang alarm bells across the region.

Chinese and Vietnamese forces engaged in clashes in 1974 and 1988 in which dozens of troops died.

For now, Beijing appears keen to avoid war while pursuing its expansionist drive.

"They are masterful at avoiding crossing that threshold by being shrill about their protestations, this wolf warrior diplomacy, that is designed to intimidate and get you to give in without fighting," said John Blaxland, an international security and intelligence expert at the Australian National University.

And its tactics are working.

Poling said the sea could become a "Chinese lake" as the growing risk and cost of operating there forces out Southeast Asian fishermen, oil and gas companies and coast guard.

Villamonte used to regularly make P6,000 per trip when he could fish at Scarborough Shoal. Now it can be as little as P2,000, or nothing at all.

Fishing is all he knows - his father and grandfather were fishermen - and his "worst nightmare" is losing access to the rest of Philippine waters.

"My family will go hungry," he said.

-AFP



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Mining company brings green jobs to community

Hinatuan Mining Corp. (HMC), a subsidiary of Nickel Asia Corp. (NAC), has engaged local weavers in its mining community as part of the company's environmental, social and governance (ESG) initiatives in contributing to the government's goal of getting rid of plastic waste.

HMC has contracted weavers in Sitio Campandan, Hinatuan Island in Surigao del Norte, to produce 5,000 seedling pots made of 'pandan dagat' (*pandanus tectorius*) which they call "jobo pots" in a contract arrangement worth P25,000.

The company said it is adhering to the global clamor of employing ESG criteria in evaluating, measuring and reporting about the company's impact to the ESG aspects.

Francis Arañes, HMC resident mine manager, said at present, 40 percent of

their seedling pots are "jobo pots" and the company is aiming at least 80 percent before the end of next year.

Jomer Tiamson, HMC environment manager, said while a 'jobo pot' which they buy from the weavers costs P5 each, compared to a plastic seedling bag which costs only 25 centavos a piece, in the long run, the use of jobo as seedling pots is economically practical as the pots are biodegradable and seedlings on jobo pots have a higher chance of survival.

Tiamson added that HMC is also looking at the matter of having enough materials for the hundreds of jobo pots they will need in the future and part of future plans is to augment the growing of pandan dagat, which is also another opportunity for "green jobs" for the people in Hinatuan Island.