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FL Liza joins Pasig River cleanup efforts

By ARGYLL CYRUS GEDUCOS

First Lady Liza Araneta-Marcos has volunteered to help the Inter-Agency Council for the Pasig River Urban Development in their efforts to clean up the Pasig River.

Housing Secretary Jose Acuzar said that Marcos volunteered to help the Council as efforts to clean up the

Pasig River continue to bear no fruit.

"Sinabi niya sa akin na iyong Pasig River ay matagal nang hindi... at madumi pa rin at ganoon pa rin ang itsura (She told me that the Pasig River has been like this. It's still dirty and looks the same)," he said.

"Kung maaari daw ay may magawa siyang paraan para mapaganda natin iyong Pasig River ► 4

FL Liza joins Pasig River cleanup efforts 1◀

(She asked if there was anything she could do to help rehabilitate Pasig River)," he added.

Acuzar, however, clarified that Marcos did not want to join the organization but instead offered to lend a hand in the rehabilitation efforts.

"Advocacy niya iyan. Gustung-gusto niyang maayos iyan (It's her advocacy. She really wants to fix it)," he said.

"Ayaw niya pong sumali sa organisasyon; ang gusto niya lang ay tumulong (She doesn't want to join the Council. She just wants to help)," he added.

In an interview with Tatler Asia, the First Lady listed the Pasig River rehabilitation as one of her top priorities. She hoped to make the Pasig River an attraction like the Thames in England or the Seine in France: "arteries of commerce, lifestyle, tourism and culture, and drawing visitors from home and overseas."

A Facebook post showed Marcos joining the Council's first meeting in Malacañang on Aug. 23.

The Inter-Agency Council for the Pasig River Urban Development was formed through Executive Order (EO) No. 35. It will facilitate and ensure the complete rehabilitation of the banks along the Pasig River and nearby water systems.

Pasig River families

According to Acuzar, Mrs. Marcos has shown her sincerity in not only improving the river's condition but also in helping the families living there.

"Isa sa magandang programa po ng ating mahal na Pangulo at ng ating Unang Ginang na ayusin iyong buhay ng mga tao diyan sa Pasig River (One of the programs of the President and the First Lady is to improve the lives of the people there at the Pasig River)," he said.

"Kapag naayos na, natanggal po natin iyong mga ISF (informal settler families) diyan ay gagawin po natin magandang promenade iyan (Once

we've removed the informal settler families there, we will create a beautiful promenade)," he added.

The Housing Secretary said there will be housing projects available at the North Harbor in Manila for the families affected by the Pasig River rehabilitation efforts.

"May 25 hectares po diyan na nag-uumpisa na rin po na maggawa ng pabahay (There are 25 hectares of land there and we're already starting to build houses there)," he said.

Walk the talk

Acuzar said Marcos is joining the cleanup efforts to ensure these will bear fruit. He noted that previous administrations have also attempted to clean up the Pasig River.

"Sinasabi niya, siguraduhin natin na ito naman ay may mangyari na at hindi ito kwento lang at hindi drawing (She tells me that we must ensure that we'll get results and we're not just talk)," he said.

"Sinisigurado po ng ating Pangulo at Unang Ginang na itong proyektong ito ay hindi drawing at ito ay maging katotohanan (Our President and First Lady are ensuring we'll walk the talk when it comes to this project)," he added.

According to Acuzar, the attempts of previous administrations failed because they did not look at the bigger picture.

"Dito po sa bagong programa po ng Pasig River, kumpleto po iyan - hindi lang po iyong pabahay at hindi lang din po iyong mga estero (In this new Pasig River program, it's complete - it's not just the housing or the ditches)," he said.

"Kinumpleto po namin kasi hindi pupuwedeng ang gagawin mo isa-isa lang eh (We're making sure it's complete because you cannot do it one-by-one)," he added.

Central Park

Acuzar said they would build a Central Park at the end of the Pasig River by the Laguna de Bay, where they could

put up installation art.

He, however, assured the public that the Council would preserve the Pasig River's cultural value and that everything in their plan would be approved by the National Commission for Culture and the Arts (NCCA).

"Bago po namin ginagawa, humihingi po kami sa kanila ng suggestion or approval (Before we start, we seek their suggestion or approval)," he said.

"Natutuwa naman po ang NCCA na makagawa tayo ng isang magandang park at malaking park sa buong Pilipinas (The NCCA is happy that we'll be able to build a beautiful park and big parks in the Philippines)," he added.

For now, Acuzar said they are building a 500-meter showcase at the back of the Post Office in Manila to show the public what could be the result of this administration's Pasig River cleanup efforts.

He added that they plan to finish building the showcase before Christmas this year.

"Isipin ninyo iyong pedestrian, ambience mo iyong tubig (Imagine, you are a pedestrian there and the river would provide the ambience)," Acuzar said.

"Sa ilalim po niyan ay mayroon po tayong mga kainan at mga shops na pwedeng gawin, at para private sector na rin po ang mag-maintain nitong development na ito (We could have food stalls or shops there. These developments could be maintained by the private sector)," he added.

The Housing Secretary said that the budget for the project is fluid as the rehabilitation efforts are still in the planning stage.

"Ang hirap nito, iyang funding eh, talagang aaralin mo iyong pondo (Funding is difficult because you really need to study it)," he said.

"Makikipag-usap tayo sa lahat ng pwedeng magbigay ng pondo - iyong private sector; pangalawa, iyong Kongreso (We'll talk to everyone who could provide help in the funding - the private sector and Congress)," he added.



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DENR-EMB's wasteful waste management project

HOW ironic that the Environmental Management Bureau of the Department of Environment and Natural Resources (DENR-EMB) used the urgent need to reduce the volume of garbage that we send to landfills to procure millions of pesos worth of equipment that remains non-operational two to three years after having been paid for. Shredders and composters for biodegradable waste and plastic recycling machinery, for which the national government paid nearly a billion pesos, were delivered to local government units (LGUs) across the country without proper consultation and coordination.

The result, according to the Commission of Audit's 2022 Annual Audit of the EMB, is that 50 percent or more of the paid-for equipment remains unutilized. Recipient LGUs were not provided timely training on how to operate the equipment. Important accessories were lacking. Some LGUs already had composters and shredders; others didn't have any suitable places for the equipment, or they didn't have the budget for upgrading the power supply at existing materials recovery facilities.

The suppliers — Suki Trading Corp., its partner company Boston Home (or Homes) Inc., and C&G Environmental Management Corp. — were paid in full, P936 million, on Dec. 28, 2021, even if testing and commissioning, both clearly stated project components, remained to be done. Payment was released in full "prior to the satisfactory fulfillment of the scope of work by the supplier," to quote CoA.

The purchase of 490 sets of shredders and composters (P998,000 per set) and 69 sets of plastic recycling equipment with plastic chair molds (P6.4–6.5 million per set) was done under the



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EMB's Environmental Regulations and Pollution Control Program. A special allotment was approved by the Office of the President, through then-Executive Secretary Salvador Medialdea, on June 28, 2021.

While the intention of the project is noble — the DENR-EMB extending assistance to LGUs to manage their growing volume of garbage — CoA questions why the EMB hadn't learned from problems encountered previously with the same equipment. Procurement "was still made despite history of the same being non-operational in the previous year," CoA points out. The audit team found that 94 of the 131 sets of shredders and composters that had been distributed to various LGUs in 2020–21 were unutilized. The reasons cited were similar to the ones given in connection with unutilized equipment purchased with the P936 million allotment. I don't know how the bidding was done under the P936 million project, but in 2020, a large number of shredder and composter sets were procured from Suki Trading for the EMB Central Office through the Philippine International Trading Corp.

As to the plastic recycling machine that converts plastic waste into school chairs, this is a pyrolysis plant, according to zero-waste advocates in Dumaguete City. The city government purchased a machine from Suki Trading in 2021. While the facility is operational, local environmentalists have not stopped campaigning for its closure and for the city to focus on reducing waste, especially single-



■ 'Burn Not Dumaguete' campaigners protest the plastic recycling (pyrolysis) plant in their city. Residents in Dumaguete and other parts of Negros Oriental wage 'war on waste' while promoting zero waste as the sustainable and socially responsible approach to waste management. PHOTO FROM WAR ON WASTE — BREAK FREE FROM PLASTIC NEGROS ORIENTAL

use plastic, at source.

According to CoA, 69 similar units were purchased by EMB and distributed across the country. Dumaguete City is known for its highly informed residents who don't take any threat to the environment sitting down. Putting mixed plastic waste through the pyrolysis heating process to convert it into useful products such as fuel and school chairs sounds like a wonderful idea, but what about the toxic fumes potentially created in the process? Are we sure that these fumes are not escaping and poisoning the workers and nearby surroundings? Considering that plastic is made from fossil fuels and chemicals, it is likely that some harmful fumes will be generated in the heating and melting processes. Who monitors these?

Obviously, there is a booming market for plastic recycling machinery. Take, for example, the province of Ilocos Norte. It received a unit from the EMB in 2021. This machine is part of the recently inaugurated P25.5

million plastic recycling and materials recovery facility in Marcos town. Another facility that will produce bricks made of plastic waste is under construction. Ilocos Norte is primarily agricultural, with a population of only about 600,000. Is the province going to import waste plastic from nearby provinces or encourage people to consume more single-use plastic?

Whatever way we look at it, a point apparently ignored by the EMB is that plastic pollutes from cradle to grave. Shredding, heating and molding plastic waste won't change the fact that plastic is made from climate-changing fossil fuels and toxic chemicals that poison people and the environment. We need safe and sustainable solutions to the waste crisis, not dubious hardware deals.

EMB exists to protect the environment and people's health. Instead, it is not only promoting harmful technologies; it has wasted people's money and violated the rules set by the very government of which it itself is part.



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UNDP supports QC in waste reduction targets

THE Quezon City government has received 25 biodigesters and food waste-on-wheels from the United Nations Development Program (UNDP) in the Philippines and the Japanese government to boost the city's transition to a circular economy and further strengthen its food waste recovery strategy in communities.

Mayor Joy Belmonte expressed her gratitude as the city received the equipment from First Secretary and Agriculture Attaché of the Embassy of Japan in the Philippines Jumpei Tachikawa and UNDP Resident Representative in the Philippines Selva Ramachandran. She also thanked UNDP and the Department of Environment and Natural Resources for making Quezon City part of this initiative.

"Food waste constitutes 43 percent of the total waste generated in the city so we must establish a robust and effective food waste recovery program. These biodigesters and food waste-on-wheels from UNDP and the Japanese Government will help the city attain a low-carbon future," Mayor Joy Belmonte said.

"The equipment will support Quezon City in widening its efforts towards a circular economy. It is our hope that the presence of the equipment in communities will provide Q-Citizens with better opportunities to practice circularity in their daily lives," stated Dr. Selva Ramachandran, UNDP Philippines Resident Representative.

For their part, the Japanese government noted the significance of this partnership with the country's largest city.

"I am optimistic that this collaboration with Quezon City will contribute to creating local circular economy models that can be replicated in other local government units," shared Jumpei Tachikawa, First Secretary and Agriculture Attaché of the Embassy of Japan in the Philippines.

Biodigesters break down kitchen and food waste such as vegetable peelings and spoiled or tainted food. The biogas can be utilized for cooking, while the liquid by-product can be used as soil conditioner for gardening.

The 25 biodigesters will be deployed in barangays, including Bagong Pag-asa, Sto. Cristo, San Antonio, Talayan, Batasan Hills, Payatas, E. Rodriguez, Mangga, Escopa III, Marilag, St. Ignatius, Libjis, East Kamias, Loyola Heights, Milagrosa, Kamuning, Pinagkaisahan, Roxas, Central, Bagbag, North Fairview, Kaligayahan, Talipapa, and Culiati. A biodigester will also be located at the Joy of Urban Farming Demo-farm to process food waste and showcase the technology.

On the other hand, the Community to Farm Mobile Organic Waste Recovery System will be roving around beneficiary barangays, specifically in areas where there are food strips or high concentration of food establishments to collect food waste to be fed to the biodigesters.

The biodigesters and food waste-on-wheels are in addition to the city's six biodigesters already deployed in urban farms and public markets.

"Communities are the most affected by the consequences of climate change. Through these biodigesters and food waste-on-wheels, we can effectively engage the community to participate in the city's climate action, thus ensuring that the solutions are tailor-fit to their needs and challenges," Mayor Belmonte added.

The handover is part of UNDP's Accelerating Nationally Determined Contribution through Circular Economy in Cities or "ACE Project" that aims to enable and accelerate the country's transition from a linear to a circular economy, while contributing to the reduction or avoidance of greenhouse gas (GHG) emissions in key sectors.



■ The United Nations Development Program in the Philippines and the Japanese government turn over 25 biodigesters and food waste-on-wheels units to the Quezon City government.



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Metro floods blamed on clogged waterways

BY ARLIE O. CALALO

CLOGGED waterways and drainage systems are to blame for flooding in the National Capital Region, not the reclamation projects in Manila Bay, an environmental professional said over the weekend.

"Reclamation has nothing to do with the flooding in Metro Manila. [The flooding] problem in the metropolis has been there long before the start of reclamation projects," said environmental impact assessment expert Ed Alabastro.

"The root cause of this problem is our clogged drainage [systems] and waterways. Water cannot flow

freely through these channels because they are obstructed by garbage and other plastic materials," he added.

He debunked the misconception that reclamation projects cause land subsidence, tsunamis and rise in sea level.

"Land subsidence is not due to reclamation at sea but to over-

extraction of deep well water," he said, referring to a gradual settling or sudden sinking of the land surface due to the removal or displacement of subsurface earth materials.

Alabastro has worked with various groups as the executive director of a nongovernment organization, the Federation of Philippine Industries (vice chairman of the environmental committee), the air and waste management association (chairman of the Philippine Section), Integrated Recycling Industries Philippines Inc. (director), and the College of Fellows (chemical engineer).

He attributed his claim that land subsidence is caused by deep well water extraction to Ramon Alikpala, former executive director of the

National Water Resources Board.

Alabastro said tsunamis, on the one hand, are caused by volcanic eruptions, while the rise in sea level is due to climate change and not in any way related to reclamation.

He said reclamation projects protect the coastline against storm surges and tsunamis through the construction of structural defense systems such as seawalls and wave deflectors that help absorb and dissipate the energy of tsunami waves.

In a recent interview, Philippine Reclamation Authority Assistant General Manager Joseph Literal emphasized that the Manila Bay reclamation projects are properly elevated to survive storm surges and tsunamis, hence complying with climate change projections.



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Ex-EMB chief: ECCs for Manila Bay reclamation projects legal

By JONATHAN L. MAYUGA

[@jonlmayuga](#)

THE Environmental Compliance Certificates (ECCs) for land reclamation projects granted by the Department of Environment and Natural Resources (DENR) are above board and proponents of the projects have complied with the provisions of the environmental impact system (EIS) law, a former Director of the Environmental Management Bureau (EMB) said.

William P. Cuñado, who resigned in March, told the BusinessMirror that land reclamation projects went through a tedious process. As the former Director of the EMB, it is within his authority to grant the ECCs sought by project proponents.

"If I will not approve these ECCs, then who will?" Cuñado told the BusinessMirror.

Cuñado took his oath before then-DENR Secretary Roy A. Cimatu on January 26, 2021. He joined the EMB Central Office in 2019.

During his stint as EMB Director, eight ECCs for land reclamation projects were issued, including four in the Cavite area and four in the NCR. However, the projects are not yet being implemented at the time of Marcos's suspension order early this month.

None of the three ongoing projects were issued during his term as they were issued

before his term as EMB director.

"They [ECC applicants] complied with the requirements. That's why the ECCs were granted," Cuñado said.

Under investigation

DURING the budget hearing for the proposed 2024 budget of the DENR, Secretary Maria Antonia Yulo-Loyzaga said the agency will look into irregularities in the issuance of ECCs for reclamation projects in Manila Bay.

Yulo-Loyzaga said the investigation will examine how ECCs for land reclamation projects in Manila Bay were processed and to know "if there were misdeeds or any kind of infraction in terms of the rules."

She added that the investigation will also look into possible sanctions. Nonetheless, the DENR chief later admitted that an ECC is not a permit, but merely a planning tool. That may be changed at any point when a correction is made and issues need to be addressed, Yulo-Loyzaga explained during the hearing conducted by the House Committee on Appropriations early this month.

Suspension order

PRESIDENT Ferdinand R. Marcos Jr. has ordered the suspension of all land reclamation projects in Manila Bay due to

alleged environmental violations.

The projects will remain suspended pending a cumulative impact assessment to be conducted by the DENR to address various environmental issues raised on land reclamation.

The DENR is still pooling experts from various fields to conduct the cumulative assessment of the impact of land reclamation.

SC mandamus

ONE of 13 government agencies mandated by the Supreme Court (SC) in 2008 to bring back the waters of Manila Bay to its pristine state, the DENR has recently reported that water quality in Manila Bay has improved significantly since the agency launched an ambitious rehabilitation program in 2019.

The DENR launched a massive crackdown against erring business establishments that dump untreated wastewater to Manila Bay and constructed sewage treatment plants (STPs) along Roxas Boulevard.

The DENR also implemented its own beach nourishment project and created the Boracay-like white sand beach now popularly known as "Dolomite Beach."

The SC continuing mandamus specifically orders the rehabilitation to make the waters fit for swimming and other recreational activities in compliance with water quality standards.

Water quality

EARLY this year, the DENR reported that water quality in Manila Bay, particularly in the National Capital Region (NCR) continues to improve.

As of October 2022, the fecal coliform level in the NCR area went down to 51,300 most probable number per 100 milliliters (MPN/100mL) from a high of 126,000 MPN/100mL in 2019.

The Manila Bay Coordinating Office (MBCO), which monitors the water quality in Manila Bay, also reported that other parts of Manila Bay also experienced notable drops in coliform levels.

The levels in Region IV-A's bathing beaches has dropped to 643 MPN/100mL from 3,040 MPN/100mL. In Region III, the coliform level fell to 1,243 MPN/100mL from 5,099 MPN/100mL.

The coliform level in the Manila Baywalk area has significantly decreased to 658,000 MPN/100mL from a high of 5.75 million MPN/100mL, the report also stated.



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New global environment fund aims to safeguard biodiversity

A NEW global environmental fund marks a major step towards securing the wellbeing of biodiversity in developing countries and will help to ensure sustainable utilization of their natural resources, the UN Food and Agriculture Organization (FAO) said.

The Global Biodiversity Framework Fund, launched at the Global Environmental Facility Assembly in Vancouver, Canada, will support the implementation of the landmark Kunming-Montreal Global Biodiversity Framework, which aims to halt and reverse biodiversity loss by 2030 and guide nature towards recovery by 2050.

Maria Helena Semedo, FAO Deputy Director-General, recently stressed the importance of the Kunming-Montreal Framework and the role of agriculture and food systems in addressing global challenges.

"The Framework places agrifood systems at the forefront of an enormous challenge that will require important financial resources, coordination, and commitment to implement win-win solutions for people and the planet."

She added that the new fund is a critical part of climate action, and a vital step in making these solutions a reality.

The significance of biodiversity in agrifood systems cannot be understated.

Biodiversity is the variety of life at genetic, species and ecosystem levels, and it is an indispensable component of food



FAO deputy director-general
Maria Helena Semedo

security, sustainable development and agricultural stability.

It encompasses domesticated plants and animals that are part of crop, livestock, forest or aquaculture systems, harvested forest and aquatic species, the wild relatives of domesticated species, and other wild species harvested for food and other products.

More than half of the targets in the Kunming-Montreal Biodiversity Framework directly pertain to agrifood sectors, and FAO is entrusted with overseeing four key indicators: ecosystem restoration, fish stocks, sustainable agriculture areas, and responsible forest management.

According to FAO, transforming agrifood systems to make them more sustainable can yield multiple benefits, including the preservation of biodiversity.

Such actions involve diversifying production by integrating multiple species, breeds, or varieties, and promoting habitat diversity within local landscapes and seascapes. These initiatives support climate action, enhance resilience, uplift livelihoods and improve food security and nutrition. **UN News**



Bamboo forests pushed to fight massive Metro floodings

THE Department of Agriculture (DA) is pushing for collaborations with infrastructure and public works agencies for a program that uses bamboo to fight massive flooding nationwide even as climate experts have been acknowledging the plant's climate-smart superiority.

DA Undersecretary Deogracias Victor B. Savellano is standing his ground in asserting how bamboo is now globally positioned as a flood-control device. This has been proven effective, and Philippines should similarly adopt best practices and technologies.

"Bamboo's number one characteristic is it is fast-growing. Second is it fights soil erosion. When it comes to cost-effectiveness, bamboo will be our excellent ally, second to none," said Savellano.

He stresses Philippines' thrust toward bamboo propagation is an urgent imperative with the perennial floods, as President

Bamboo matters

• Bamboo produces 35 percent more oxygen than other stand of trees. The 1997 Kyoto Protocol recognized that carbon sequestration is one of the most practical ways to fight climate change. Bamboo sequesters up to 15 times carbon dioxide compared to other trees.

"A recently documented case in Allahabad, India, tells of the rebuilding of rural livelihoods where 80,000 hectares of degraded land were brought back into productivity using bamboo as a pioneer species. In 2018, INBAR released a report about the benefits of bamboo for land restoration in eight countries: China, Colombia, Ghana, India, Nepal, South Africa, Tanzania and Thailand," IFAD reported. INBAR stands for International Bamboo and Rattan Organization

• Bamboo forests are a habitat for fauna and flora. Bamboo is an important part of a biodiverse ecosystem. Many animals and human rely on bamboo for food and shelter.

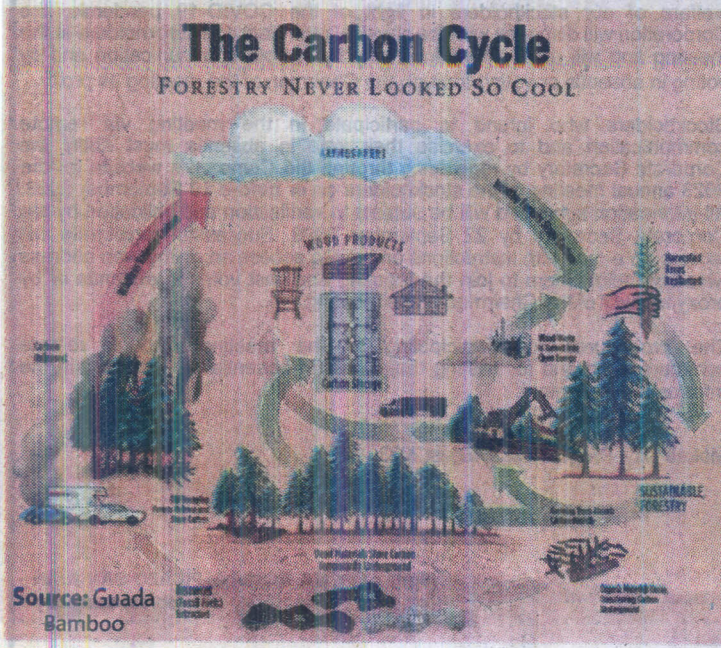
• With its biomass for renewable energy, bamboo is a sustainable source to replace fossil fuel. Its pellets has high calorific or heating value like coal, without polluting emissions. Calorific heating value of bamboo pellets equals that of coal with 4,500 Kcal/kilo to 5,000 Kcal/kilo.

• Bamboo can replace hardwood for any application.

• There are 10,000 documented uses of bamboo products from paper and pulp products, flooring, musical instruments, furniture, construction materials

• Bamboo reduces poverty and provides livelihoods for local farmers.

"Bamboo's rapid establishment and growth allow for frequent harvesting. This allows farmers to flexibly adapt their management and harvesting practices to new growing conditions as they emerge under climate change. Bamboo provides a year-round source of income, and can be converted into an increasingly wide variety of value-added products for sale," reported IFAD.



Ferdinand Marcos Jr. himself committed to abiding by the United Nations Sustainable Development Goals.

Even with its own effort, the Kilusang 5K (Kawayan: Kalikasan, Kabuhayan, Kaunlaran, Kinabukasan) Foundation Inc., Savellano's own founded firm, is participating in as much as 26,000 hectares of bamboo planting in the Marikina Watershed. It is a private-public partnership.

Kilusang 5K piloted since 2021 with 30 hectares of bamboo planting in Karugo and Puray, Montalban. It is a part of the Marikina watershed to whose denudation is blamed in Metro Manila's destructive flooding. Bamboo plays these important roles in solving flooding—rehabilitation of degraded land, reforestation, carbon sequestration and poverty alleviation.

With some bamboo species growing by more than one meter per day, bamboo must be the fastest growing plant on earth.

Guada Bamboo in Latin America, exporter of giant tropical bamboo, reported that "one hectare of Guada Bamboo forest can store more than 30,000 liters of water in its culms during rainy season, which it gradually deposits back in the soil during dry season."



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PCCI wants realistic review of mining law

By BERNIE CAHILES-MAGKILAT

The Philippine Chamber of Commerce and Industry (PCCI), the country's largest business organization, has strongly urged the Marcos administration to look into the current mining law "realistically" to be able to attract more investments in the mining sector.

PCCI President George T. Barcelon during the launch of its Media Kapihan last week emphasized the need for government to weigh the benefits and treatment to investments that the current law provides.

"We would like government to look at it realistically," said Barcelon, who prefers the review will focus on what is beneficial and not, and to find a proper balance between environment protection and business.

For instance, he said, if the investor has poured in huge capital, he should be given more time to gain on his investment.

Investments in the mining sector are eligible for tax incentives provided in the Omnibus Investment Code of 1987 and in the Mining Act of 1995. These incentives include tax holidays, customs duty and VAT exemptions on imports, and a loss carryover over a certain period.

Contractors shall pay royalties to the concerned indigenous cultural communities based on the agreed payment, which may not be less than one percent of the gross output.

Mining operations within mineral

reservations are subject to a royalty paid to the Philippine Mines and Geosciences Bureau of not less than five percent of the market value of the gross output of the minerals or mineral products extracted or produced, exclusive of all other taxes.

"But if laws are so strict, the legitimate miners tend to be a bit careful because their projects require huge capital," said Barcelon.

In fact, he said, the big mining companies are the ones that adhere to the government requirements and they have environmental compliance certificates and all requirements of responsible mining.

"On the flip side, it's the small miners that do not follow the rules and are the ones creating lots of issue on pollution," he said.

According to Barcelon, who is serving a second term as PCCI president, he also had a talk with Environment and Natural Resources Secretary Maria Antonia "Toni" Yulo-Loyzaga to discuss the new technology in the monitoring of mining operations.

"You can now monitor mines 24 hours, even at night time," he said.

In addition, host communities also benefit from big mining operations because they contribute to the local economy like jobs generation, build-

ing schools, hospitals, and promote trade and commerce.

"If done properly, mining will be beneficial to our country," he said.

Meantime, Architect Felino A. Palafox Jr., PCCI 49th Philippine Business Conference chairman, cited best practices in mining in other countries such as Canada, Australia and UK where mining areas have been restored and developed as tourist sites.

In April this year, Trade and Industry Secretary Alfredo E.

Pascual raised his proposal to US Trade Representative (USTR) Ambassador Katherine Tai during her visit to the country for the US to consider partnering with the Philippines on the processing of critical minerals, similar to a deal the American government signed with Japan.

The Critical Minerals Agreement (CMA) between the US and Japan will facilitate trade, promote fair competition and market-oriented conditions for trade in critical minerals. The agreement also advances robust labor and environmental standards, cooperate in efforts to ensure secure, transparent, sustainable, and equitable critical minerals supply chains.



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Cargo ship runs aground in Occidental Mindoro

By MARTIN SADONGDONG

A cargo vessel carrying 28,020 bags of cement ran aground off Calaviti Point in Paluan, Occidental Mindoro over the weekend.

The Philippine Coast Guard (PCG) confirmed on Sunday, September 3, that all 14 crew members of MV Joegie 5 were rescued after it hit shallow waters on Friday, September 1.

The cargo vessel was transiting the vicinity waters of Sitio Calangigan, Barangay Harrison when it encountered big waves and strong winds, causing the ship to drift towards the shallow portion of the sea at around 2 a.m.

The vessel steered by Capt. Arnie Alberto came from Bauan, Batangas and was travelling to Sablayan, Occidental Mindoro when it ran aground.

"They (crew members) managed to pull their vessel out from agrounding because of the high tide and were able to drop their anchor to check the vessel for any damage. Unfortunately, the captain noticed a continuous entry of seawater from the cargo area," the PCG said.

"To prevent the vessel from sinking, the captain decided to bring said vessel back to its agrounding position and further dropped their anchor to prevent from drifting," it added.

Several residents of Sitio Calangigan saw the distressed cargo vessel and rescued the crew members using a motor banca. They also called the Coast Guard Sub-Station (CGSS) Mamburao for further assistance.

Capt. Edison Abanilla, commander of the Coast Guard station in Occidental Mindoro, said there were no signs of oil spill although the PCG was still monitoring the vessel for possible leakage.

The cargo vessel has 15,148 liters of diesel on its fuel tank. The PCG said it is owned by Preeminent Shipping and Management Corp. based in Quezon City.

"(A) representative (from) Preeminent Shipping already arrived (in) Paluan, Occidental Mindoro to discuss their intention on the agrounded vessel. CGSS Mamburao will guarantee that an immediate suction of the diesel on the fuel tank will be conducted to prevent it from spilling in the following days," the PCG said.

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DELOITTE ON THE DOT

SHAWNTEL NIETO
AND CLARISSA BANAAG



Climate action in urban areas

A FEW weeks ago, our Climate & Sustainability (C&S) advisory team had the privilege of facilitating a training program we designed called the Pasig City "Innovation for Circular Economy (ICE)" Hub training. The three-weeklong event was part of a United Nations Development Program (UNDP) project to help local governments transition to a circular economy through a portfolio of solutions, including the phased design and operationalization of a unique ICE hub and obtaining buy-in for the hub from stakeholders and barangay within the city.

The UNDP selected Pasig as the project's pilot city because of its

good working track record with the UN agency and the city leadership's commitment to sustainability and the circular economy. The LGU has explicitly made sustainability a key priority area in the city's development. It is not alone in this focus, which points to how much climate change has come to occupy not just the minds of city leaders but of urban citizens as well.

In December 2022, Deloitte conducted a survey of 200 city leaders and 2,000 citizens globally to better understand the initiatives they were taking to become future-ready. When asked about

► **Deloitte B2**

■ **DELOITTE FROM B1**

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the biggest challenges their city would face over the next five years, 94 percent of city leaders and 54 percent of citizens cited climate change and pollution. How these respondents were addressing the global crisis — which includes initiatives similar to what Pasig has started — could serve as a template for other LGUs that are similarly concerned about the impacts of climate change on their densely populated jurisdictions.

Environmental resilience and sustainability

Among the survey respondents, there was a pronounced emphasis on building environmental resilience by focusing on specific problem areas. Top on this list was pollution, with 87 percent of respondents reporting that reducing air, noise, and water pollution is a key component of their environmental resilience plan. This is followed by flooding (74 percent) and water scarcity (73 percent), which were notably identified as massive challenges by respondents from Asia.

To address air pollution, many city leaders were focusing on public transit and other sustainable modes of transport. Eighty percent of the respondents planned to increase the usage of city buses in the next five years, while more than 70 percent were looking to incentivize the use of e-scooters and bicycles/e-bikes.

Here in the Philippines, the Department of Transportation announced earlier this year that it would spend P700 million in 2023 to construct at least 470 kilometers of dedicated bicycle lanes. While the effort is appreciated, it is not enough, as can be seen in the steady stream of incidents where cyclists' lives are put at risk because of having to share the road with automobiles. Instead of doing the bare minimum for these environmentally friendly commuters, LGUs would do well to support the growth of the cycling community by providing safe road networks and accessible amenities for charging and securely parking their rides.

A similar infrastructure concern may be hampering the adoption of electric vehicles (EVs) here in the Philippines. Seventy-two percent of the city leader respondents said they wanted to increase the usage of electric or hybrid vehicles, whose sales continue to grow globally. But according to Deloitte's

2023 Global Automotive Consumer Study, interest in purchasing a hybrid vehicle or EV in the Southeast Asian region was lowest among Filipinos because of the lack of public charging facilities.

The country's largest power distribution company appears ready to lead efforts to establish a network of EV charging stations. This initiative, coupled with the government's various incentives designed to fuel EV adoption, could tip the scale in favor of EV ownership. But what impact would this development have on Metro Manila's perennial problem of traffic congestion?

In the area of management practices, city leaders are incorporating sustainability into their various functions. Sixty-seven percent said they were incorporating sustainability metrics into the local city planning process, while 59 percent were incorporating environmental metrics into their investment decisions. Fifty-one percent were promoting circular economy practices similar to what Pasig is doing with its ICE Hub investment.

Taking these and other initiatives altogether, the major goal for city leaders is to achieve net zero and carbon neutrality, but the roadmap to that endgame may not be aggressive enough. Deloitte, for example, is working as a global network to achieve net zero emissions by 2030. In our survey, 71 percent of city leaders said they expected to hit their net-zero targets only around 2050.

Will this effort be enough to push back against the impacts of climate change? City dwellers will find out soon enough. In the meantime, it is important for everyone to get involved in the climate action initiatives that their cities are pushing. Pasig's leaders, for example, aren't just building the city's capacity to transition to a circular economy; they are planting the seeds for significant behavioral change at the citizen level so that everyone is more mindful of the effects of their consumption and, therefore, more invested in mitigating its negative impact.

It's going to take more than a village to address the climate crisis we are all experiencing, and, as the city of Pasig demonstrates, we need to continuously invest in and implement proactive, systemic, systematic, and multi-stakeholder approaches and initiatives to ensure our urban areas remain livable spaces.

Shawntel Nieto is an assistant manager, and Clarisse Banaag is an associate, both with the C&S advisory team of Deloitte Philippines, a member of the Deloitte Asia Pacific Network. For comments or questions, email snieto@deloitte.com or cbanaag@deloitte.com.



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Climate engineering: a quick fix or a risky distraction?

Aime Williams in Washington and Alice Hancock in Brussels

ON a Tuesday in August, Luke Iseman drove two hours east of Oakland in drought-stricken California to a remote spot where he launched a handful of balloons filled with sulphur dioxide and helium high into the sky.

From there, he used GPS to try to track the balloons as they rose into the stratosphere, the layer of Earth's atmosphere that begins about 12km high and contains the ozone layer that protects the planet from solar radiation. Once there, they would burst and release the gas.

Iseman's start-up, Make Sunsets, is piloting small-scale stratospheric aerosol injections: the sulphur dioxide released by the balloons oxidises to form an aerosol, or fine mist, of sulphate particles that deflect some of the sun's radiation. So far it has launched 28, each the size of a small weather balloon. "The company's mission is to cool the Earth as quickly as we safely can," he says.

It is a rudimentary version of a niche climate solution broadly known as solar radiation management — the idea that the Earth can be cooled by reflecting some of the sun's rays back into space. Other SRM techniques range from painting the world's roofs white to putting giant mirrors into orbit.

"Pretty much every country that has a climate scientist is interested [in SRM]," says Daniele Visioni, assistant professor in the department of Earth and atmospheric sciences at Cornell University, although the majority of research is concentrated in the US and Europe.

Proponents argue that humanity's lack of progress in curbing carbon emissions means society will increasingly need to look at more drastic ways to limit the worst effects of warming, as well as trying to prevent further rises in global temperatures.

July was declared the hottest month ever recorded, according to Copernicus, the European Union's Earth observation agency. The Intergovernmental Panel



People walk past an overhead water misting system on a hot day in the Ginza district of Tokyo on July 10, 2023. Japan's summer this year was the country's hottest since records began in 1896, the weather agency said on September 1, 2023. Photo by Philip IORIG / AFP

on Climate Change warned earlier this year that the average global temperature would reach 11.5C above pre-industrial levels "in the near term". The 2015 Paris Agreement pledged to "pursue efforts to limit" the increase to that amount.

In its most recent report on SRM, the UN Environment Programme described the technology as the "only" way to cool the planet in the short term.

Pascal Lamy, a former director-general of the WTO who now chairs the Climate Overshoot Commission, a civil society group working on ways to mitigate the effects of exceeding the Paris Agreement target, says governments should "open the box" and research solar radiation management.

"The risk of overshooting [1.5C] is higher and higher every day," he adds. "We have to exhaust all the avenues that we know are the ones that are working and this is the known part of the solutions. And then there are other solutions [like geo-engineering] that are more in the unknown part of the solutions."

Joshua Goldstein, professor emeritus of international relations at the American University, says that whatever efforts society makes to mitigate climate change "would be really helped [by] geoengineering because it would shave off some of the peaks of the temperature."

"Everything else we do is really only pecking away," he adds. "I don't think [SRM] is going to be

the big solution but it could be an important piece of a bigger solution."

But for others, SRM is a wasteful, ineffective and even dangerous proposition. Little is known about the side effects of attempting such cooling on a planetary scale; some scientists argue that large-scale deployment of sulphur into the stratosphere might change the colour of the sky to a milky white.

Others suggest that such a project might have unpredictable effects on weather patterns across the globe and could potentially worsen extreme weather events such as droughts and monsoons in some regions. There are concerns that fossil fuel companies could promote it to a way to allow

them to continue operating.

Diplomats and governance experts argue that the world lacks a meaningful way to discuss how to equitably unleash such technology, and that decisions with global consequences could end up being made by a few powerful governments.

Aarti Gupta, professor of global environmental governance at Wageningen University in the Netherlands, is part of a group of over 300 academics calling for a "non-use agreement" around solar radiation management.

"Our concern is that there has been very little discussion, and this risky idea is getting normalised — even though it's only a small group of people, primarily in the global north, and some

tech investors pushing this idea," she says.

Raymond Pierrehumbert, professor of physics at the University of Oxford, acknowledges that while people are "legitimately in a panic about the climate crisis", the unknowable side effects and governance issues mean that SRM is not an easy option.

"The discussion is a big distraction from the things we know we need to do, which is to get the carbon dioxide [emissions] down to [net] zero," he says.

The sulphurous mirror

When Mount Pinatubo erupted in the Philippines in 1991 it produced the largest eruption cloud

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ever measured, according to the US Geological Survey, blasting around 17mn tonnes of sulphur dioxide into the atmosphere. Climatologists estimated that global temperatures dropped by about half a degree Celsius over the following year.

This is the basis of stratospheric aerosol injection, the most studied area of solar radiation management. It has been researched for decades but only recently has the idea gained some mainstream traction. Those working in the field largely agree that if done on a large enough scale, the Earth's average temperature would drop just as it does following volcanic eruptions.

In 2021, the independent National Academies of Sciences, Engineering and Medicine recommended that the US should offer some funding to the research. Earlier this summer, both the European Commission and the White House released reports calling for more research into SRM.

The White House Office of Science and Technology Policy said that a research programme into the "scientific and societal implications" would "enable better-informed decisions about the potential risks and benefits of SRM as a component of climate policy, alongside the foundational elements of greenhouse gas emissions mitigation and adaptation".

The authors of the UN report warned that the costs of aerosol injection could run into "tens of billions of dollars per year per 1C cooling" and that these made medium to large-scale deployment "unwise".

The European Commission said it would support international efforts to assess "the risks and uncertainties of climate interventions, including solar radiation modification" and for research into how to regulate it globally.

Solar radiation management "remains a niche area of climate research with far, far less funding than other areas of climate modelling", according to Andy Parker, the chief executive officer of Degrees, a fund that gives small grants to scientists from the global south to explore the possible effects of solar geoengineering on their climate.

"But it is clear to see that it is rising in prominence quite quickly, just as people start to [ask] — 'what do we do if we can't cut emissions fast enough?'" adds Parker, who led a 2009 report on geoengineering by the UK's Royal Society. "It is not one's first choice for dealing with global warming. It is recognition of how deep a hole we are in."

Governments are not the only interested parties — wealthy individuals and philanthropic bodies have also been backing research into SRM. Harvard University has set up a solar geoengineering research programme, with financial backing from Bill Gates and a host of philanthropic trusts and funds.

"For the last 20 years or so, there's been kind of a taboo against talking about this," said professor David Keith, who was formerly of Harvard but now leads the climate systems engineering initiative at the University of Chicago.

Theory and practice

Although Keith is one of the leading researchers in the field, he acknowledges that there could be drawbacks and unforeseen

side effects.

"If we deliver sulphuric acid to the stratosphere in a jet aircraft, which we know we can build, and you did it enough to reflect half a per cent of sunlight, then the Earth would cool," he says. "That's not to say that it's a good idea."

There are uncertainties, Keith adds, over how much the sulphur dioxide might damage the ozone layer or human health, and whether it would influence extreme weather events. Scientists have, for example, looked at models that suggest aerosols released in the northern hemisphere could cause severe droughts in sub-Saharan Africa.

Gupta argues that there are "things we cannot know through small scale experiments...we're looking for a planetary scale effect, so we need planetary scale experiments".

"In essence this is an untestable technology, because to test it would be to deploy it," she concludes.

Researchers backed by Degrees funding are looking at how stratospheric aerosol injections might affect issues ranging from the spread of malaria to rainfall patterns and loss of mammal species in different regions.

Scientists are also wary of so-called termination shock — the idea that once the reflective aerosols in the stratosphere dissipate, the warming they prevented then takes place relatively suddenly, over a decade or so.

Pierrehumbert describes termination shock as the biggest drawback of solar radiation management. "You're setting the world up for a real catastrophe," he says. "There's no precedent in all of our history for such a rapid warming on such magnitude — we'd be taking the Earth, way, way out of its known ways of operating."

There is a mismatch, argues Pierrehumbert, between the year or so that aerosols reflecting sunlight will stay in the stratosphere, and the thousands of years that carbon dioxide lingers for.

"You're trying to cancel out an essentially permanent climate effect with something that has to be renewed every year," said Pierrehumbert. "We would be moving under the sword of Damocles, globally. That termination shock risk is always hanging over you."

Managing the ongoing project of injecting aerosols into the stratosphere would be crucial. The White House report agreed that while SRM "offers the possibility of cooling the planet significantly on a timescale of a few years", there should be international co-operation over its implementation.

Who's in charge?

But as yet, no framework exists for such co-operation. Frank Biermann, professor of global sustainability governance at Utrecht University, says proponents of the technology are "extremely optimistic that we will have 1,000 aeroplanes flying around for 100 years, organised and managed by some international agency, and somehow everybody is happy."

He is concerned about the consequences of countries deciding to act unilaterally. "What would happen if Vladimir Putin launched a unilateral geoengineering programme to compensate for continuing Russian fossil fuel use?" says Biermann. "Or what if the Americans wanted to do this, but the Chinese or the Europeans do not agree? Who would decide?"

There are also concerns that this planetary-scale technology may end up being controlled and run by wealthy countries, leaving

governments from the global south excluded from decision-making.

In February, Ajay K Sood, the principal scientific adviser to the Indian government, warned that geoengineering could end up "concentrating power in rich countries", despite the risks that the technology could worsen droughts or intensify hurricanes in countries not party to their decision-making.

Parker, at Degrees, believes countries on the front line of extreme weather events could be more tempted to jump to use geoengineering techniques without proper research.

"Desperate people do desperate things and the possibility remains that a country might decide that it is suffering disproportionately and it might want to take the option," he says.

Pornampai Narenpitak, one of the researchers that Degrees supports at the National Science and Technology Development Agency in Thailand, agrees that the effects of using these methods to cool the Earth were not widely enough understood in her region.

"Countries that are impacted by climate change the most are those that are the more tropical countries or have lower incomes and so have less resources for whatever [research] they need," she says.

She adds that it is important to have the voices of scientists from the global south "represented in discussions about geoengineering techniques." But the first step is to "make sure the scientists or representatives from these countries understand what solar radiation management is and what we are talking about in terms of the risk-risk scenario, referring to the process of comparing the risks of doing something with the risks of doing nothing."





We must address climate change – envoy

THE Ambassador of Qatar to the Philippines Ahmed bin Saad Al Hamidi stressed the importance of addressing the global challenges arising from climate change.

The ambassador was recently invited by the Climate Change Commission to grace the launch of its project in Laguna related to reducing carbon emissions.

Al Hamidi, in his speech, expressed Qatar's "keenness and continuous support in its efforts to combat the effects of climate change, locally and internationally."

Qatar's support for programs addressing climate change was "aimed at enhancing climate sustainability by improving air quality, increasing green areas, and reducing gas emissions."

The ambassador praised the "diversity and richness" of Philippine heritage, the Embassy of Qatar said in a statement.

The United Arab Emirates

(UAE) Ambassador to Manila Mohamed Obaid Alqattam Alzaabi was also invited, but he could not make it. He sent a video message instead. UAE Embassy First Secretary Obaid Al Shahid gave brief remarks.

CCC Executive Director Robert Borje said that the project is "consistent with its mission of creating an enabling environment and promoting broader participation of multiple stakeholders in the field of climate action."

The Qatari Embassy said Borje "wished to learn and benefit from the plans and experience of Qatar as it has extensive experience and plans."

The CCC vice chairman hopes that his meeting with the ambassador will result in "mechanisms for permanent cooperation."

Borje also hopes that he will be part of the delegation of President Ferdinand Marcos Jr. to the climate summit in Dubai, UAE, in November.

BERNADETTE E. TAMAYO



Seawater enters vessel beached off Mindoro

A cargo vessel that has run aground in the waters off Occidental Mindoro is reportedly unable to leave its position as it may sink once it sails into a deeper portion of the sea, the Philippine Coast Guard (PCG) reported yesterday.

Arnie Alberto, skipper of motor vessel *Joegie 5*, said that seawater had seeped into the vessel, which may cause it to capsize once it resumes sailing.

The *Joegie 5* is loaded with 28,020 bags of cement and had 15,148 liters of diesel in its fuel tank when it drifted in the shallow waters off Calavati Point in Paluan town at around 2 a.m. on Friday.

Alberto told the PCG that during the early hours of Sept. 1, he and his 13 crewmembers were sailing toward Sablayan, Occidental Mindoro from Bauan, Batangas when big waves and strong winds battered the vessel.

When high tide occurred at around 4 a.m., Alberto said they were able to maneuver the vessel away from its position, but they saw that seawater had entered the ship.

He said he decided to return the vessel to the shallow area to allow it to sit on the rocks.

Alberto said they dropped anchor in the area to prevent the *Joegie 5* from drifting toward deeper waters.

The PCG said there were no signs of an oil spill when the crewmembers left the *Joegie 5*. It said monitoring would continue.

Personnel of the PCG-Mamburao substation deferred the inspection of the *Joegie 5* due to rough sea condition in the area.

- Evelyn Macairan



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'Hanna' leaving PH but monsoon to persist

**By Abby Boiser
and Frances Mangosing**
@Team_Inquirer

The seasonal southwest monsoon, called "habagat," will continue to affect western portions of the country as Typhoon "Hanna" (international name: Haikui) made landfall in southern Taiwan on its way out of the Philippine area of responsibility (PAR).

The Philippine Atmospheric, Geophysical and Astronomical Services Administration (Pagasa) said Hanna hit land at Taitung County around 2 p.m. on Sunday, only days after Su-

pertyphoon "Goring" (international name: Saola).

Goring, on the other hand, appeared to weaken as it made landfall in the southern Chinese province of Guangdong and battered Hong Kong, Macau and Shenzhen with some of the heaviest rain seen in years, according to Chinese meteorologists.

In its 5 p.m. update, Pagasa said Hanna was expected to exit PAR by Sunday night or Monday morning and may make another landfall in China's Guangdong or Fujian provinces on Tuesday.

Although the two cyclones are expected to dissipate soon, the

weather bureau said monsoon rains will continue to affect the country over the next three days.

Gale warning

Occasional heavy to intense rains are expected in Ilocos Norte, Ilocos Sur, La Union, Pangasinan, Abra, Benguet, Zambales, Bataan and Occidental Mindoro, while moderate to heavy rains may prevail over Metro Manila, Apayao, Tarlac, Pampanga, Bulacan, Rizal, Cavite and Batangas.

As for Western Visayas and the rest of Luzon, Pagasa said that residents may experience

moderate to, at times, heavy rains and thunderstorms.

"Under these conditions, flooding and rain-induced landslides are possible, especially in areas that are highly or very highly susceptible to these hazards," Pagasa said in the bulletin.

Pagasa said a gale warning was still in effect over the northern and western seaboard of Luzon, the eastern seaboard of Central and southern Luzon, the northern Quezon seaboard, the southern seaboard of Southern Luzon, and the western seaboard of Visayas. INQ



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More rain expected in next 3 days - Pagasa

By BELLA CARIASO

Rainfall in Luzon will persist until tomorrow amid the continued effects of Typhoon Hanna and the enhanced southwest monsoon, according to the Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA).

Hanna (international name Haikui) was expected to exit the Philippine area of responsibility (PAR) last night or this morning.

"Outside the PAR region, Typhoon Hanna will become slow-moving as it moves westward or west-northwestward over the Taiwan Strait,"

PAGASA assistant weather services chief Chris Perez said in a press briefing. "It is forecast to make its final landfall along the coast of Guangdong or Fujian in China on Tuesday as a severe tropical storm."

Perez said the dark clouds brought by Hanna were affecting a portion of the northern tip of Luzon. Hanna also enhanced the southwest monsoon, causing dark clouds in the rest of Northern Luzon and certain parts of Central and Southern Luzon as well as Western Visayas.

Heavy rain over Ilocos region and in the provinces of Abra, Bataan, Benguet, Occidental Mindoro and Zambales will persist until Wednesday, according to Perez.

Metro Manila will experience rainfall today and tomorrow, he said.

Meanwhile, the water level in Angat Dam in Bulacan has reached 201.43 meters due to continuous rain.

"As the rains are expected to continue, we expect the water level in Angat to further improve," PAGASA hydrologist Sonia Serrano said.

Angat Dam supplies more than 90 percent of Metro Manila's potable water needs. It irrigates 25,000 hectares of farmlands in Bulacan and Pampanga.

The Ipo and Bustos dams, also located in Bulacan, continued to release water as of yesterday morning.

- With Ramon Efren Lazaro