



# Business Insight



A8-12-22

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PAGE

### EPR law, tax proposal to reduce plastic waste

#### BY JED MACAPAGAL

THE Environmental Management Bareau (EMB) believes the enactment of the Extended Producer Responsibility (EPR) Act of 2022 mandating companies to establish EPR programs for their plastic packaging would significantly reduce the amount of plastic wastes dumped on creeks, rivers and

The EPR act which lapsed into law on July 30 also amended the Ecological Solid Waste Management Act.

William Cuñado, director of the EMB, said the law is a "practical approach to efficient waste transgement, focusing on waste reduction, recovery and recycling and the development of environment-friendly products that advocate the internationally accepted principles on sustainable consumption and

production, circular economy and producers' full responsibility throughout the life cycle of products."

Through EPR, obliged enterprises or through their Producer Responsibility Organizations, will have to recover or offset their generated plastic product footprint by 20 percent in 2023 and to 80 percent by 2028.

Among the plastic packaging covered by the EPR Law include single or multi-layered plastics such as sachets, rigid plastic packaging products like food and drink containers, single use plastic bags and polystyrene.

Penalties for the non-complistice of EPR duties range from P5 million to P20 million, or "twice the cost of recovery and diversion of the footprint or its shortfall,

See EPR ➤ Page A2



Plastic trash is shown in a garbage-filled shore on Freedom Island, Paranaque City on Sept. 3, 2019. (Reuters photo)

#### EPR

whichever is higher."

The law also reconstituted the composition of the National Solid Waste Management Commission and enhanced the functions and duties of the National Ecology Center, apart from expanding and simplifying fiscal incentive schemes to encourage stakeholder involvement both for solid waste management and EPR activities.

Earlier, the EMB also expressed support for a proposal to tax the consumption of single-use plastics as a preactive measure to curb plastic pollution in the country, as suggested by Finance Secretary Benjamin Diokno.

"Imposing tax on single-use

plastics is a positive development for the environment in several ways. It can promote use of reusable packaging, reduce single-use plastic wastes, and extend the life of sanitary landfills," Cuñado said.

He said the DENR has been pushing for a similar tax measure to combat plastic pollution since the previous administration as it is also expected to prompt behavioral change among stakeholders towards proper waste management.

However, Cuñado acknowledged "imposing an additional expense on stakeholders need to be reasonable and beneficial."

"As long as there is an abundant

supply of disposable plastics produced, consumers will always use these out of convenience. But, if these will be taxed, it may serve as motivation for the public to opt for reusable or recyclable products, which can result in a waste-free behavior for the betterment of the environment," Cuñado said.

Since the National Solid Waste Management Commission approved in February 2021 the inclusion of plastic soft drink straw and plastic coffee surrer in the list of non-environmentally acceptable products, the EMB has been holding public consultations on the phaseout schedule of these single-use plastics.















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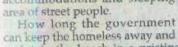
### maintenance

#### SKETCHES

ANA MARIE PAMINTUAN

### **High maintenance**

ontroversy hounded the dolomite beach in Manila from the get-go. The nar-rocky shore that the beach replaced had served as informal accommodations and sleeping



maintain the beach in a pristine state as a "white beach" is interesting to watch. At this point, it seems the beach is proving to be high maintenance in a land with many other urgent priorities, and critics say it's becoming more trouble than it's worth.

Those in charge can try turning it, even for a week or two, into a real public beach, open to all 24/7, with trash bins placed in strategic sputs and sanitation workers on duty. Night patrols can be conducted to prevent swimming and the use of the beach as lodging (or worse, a public toilet).

There's a free public bay area premented on the

There's a free public bay area promenade on the grounds of the Mall of Asia, and so far it hasn't turned into a pigsty or nighttime lodging for the homeless. But it's maintained by the well-funded SM Group, and it doesn't have a man-made white beach that is

challenging to keep pristine.

The artificial white beach in Manila was meant to be a public beach. But with the carrying capacity that had to be imposed because of its tiny area, it's not the public beach as I understand the concept

In fact, the Manila Bay Dolomite Beach (its official name) - fenced off and with an administrative office building, a public toilet and spare World War II cannon barrels taken from Corregidor raising the hackles of historians - now obstructs the ground-level view of Manila Bay, including the iconic sunset.

That two-kilometer stretch of Roxas Boulevard from the US embassy to the Manila Yacht Club—christened Manila's Baywalk when the city government installed those garish "Sputnik lights" some years ago — used to be one of the handful of good spots where anyone could easily enjoy a view of the bay, at all hours of the day and night. For tourists, it's just a short walk from Rizal Park and close to Intramuros. Today you have to wait in line to enter the beach and see the have and the vicities etrictle limited.

see the bay, and the visit is strictly limited, to accommodate others while complying with the carrying capacity.

The beach is closed by early evening.

Meanwhile, outside the fence, what used to be a jog-

ging and biking area is chockful of ambulant vendors

The scenic public beach in Lingayen, Pangasinan is also fenced off and closed at 9 p.m., but this could be partly because of the unusually strong undertow in the gulf that has claimed lives

As I wrote when they were starting work on Manila's dolomite beach, it would be one of the few pretty spots amid the urban blight in the city where I was born and bred, and it would be a huge hit among those who wouldn't give a whit about environmental concerns or the cost of the cosmetic makeover of Manila Bay.

Upon its opening, the problem quickly became crowd control, amid worries that the beach might become dirty white and, worse, collapse.

Dolomite is truly used for creating artificial beaches or extending narrow ones. There are special engineering interventions designed to keep a reclaimed area from being swallowed up by the sea. Otherwise, the Manila Bay reclamation area that now houses mixed-use property developments would have long collapsed. I understand these engineering interventions were applied in Manila's artificial beach

Other engineering works, however, need to be fast-tracked. As we have seen in the continuous thunderstorms since last week, keeping the dolomite beach "white" is causing the 'ublic grief.



High



maintenance





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Last Friday, it took someone I know nearly five hours to reach her home in Parafiaque from Manila's Port Area. About two hours of the drive were spent just trying to get out of the Intramuros district.

The reason: vehicles were either stalled or had stopped in the middle of the road because the drivers didn't want to risk damage to their vehicles, and preferred to wait for the floods up to about two feet deep in some areas to subside

But the flood took forever to subside. Weather forecasters insisted they provided proper alerts about the monsoon-induced rains, and said the amount of rainfall, which began Thursday night, was not unusually heavy to warrant color-coded rainfall / flood alerts.

People missed the digital alert blasts under Project NOAH, or Nationwide Operational Assessment of Hazards, which was launched in 2012 and shut down by the Duterte administration in March 2017, just because.

Post-NOAH, the national disaster alert system is best remembered for announcing the presidential candidacy of Bongbong Marcos. It issues advisories on possible volcanic eruptions and news on strong earthquakes.

The role of the dolomite beach in the unusual flooding was initially denied. But it turned out that a requirement to divert polluted floodwaters away from the beach has prolonged the completion of three flood pumping stations and a pipeline by the Department of Public Works and Highways.

DPWH officials explained that the completion has been delayed by a requirement of the Department of Environment and Natural Resources, which operates

the artificial beach, to extend the pipeline by another 300 meters and expand pumping capacity to ensure that floodwaters do not drain into the precious dolomite.

So when the heavens opened up last week, instead of the water being mechanically pumped to Manila Bay, only force of gravity drained the floodwaters from Manila's streets to the Pasig River, away from the dolomite. Nature took ages to finish its work.

The DPWH drainage project is expected to be com-

The DPWH drainage project is expected to be com-pleted by end-September. That's still typhoon season, so there will be ample opportunity to test if it works.

As for the dolomite on the man-made beach, it's a no-return, no-exchange deal. We're stuck with it, and those in charge should make its maintenance as painless to the public as possible.















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# processing firm deploys reef balls

A vast marine protected area off the island of Aroroy in Masbate recently witnessed the "return to life" of coral recfs, following the steady deployment of close to 3,000 reef balls in a determined bid to rehabilitate the area.

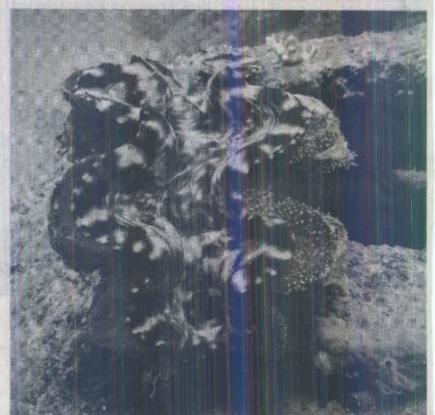
The Phil Gold Processing & Refining Corporation (PGPRC), a gold processing company in Aroroy, Masbate said it has made substantial progress in marine life renewal in the adjoining communities' marine resources, since it began the environmental restoration project in 2013.

One of eight species of giant clams found in the Philippines, Tridacna squamosa, was sighted at the Colorada Marine Protected Area (MPA) where PGPRC deployed the reef balls. Two other species of giant clams: Tridacna maxima and Tridacna gigas were also seen within the MPA and were found to be "natural recruits," indicating that the reef is coming back to life.

The MPA located in Aroroy, Masbate was heavily damaged by illegal and dynamite fishing in the past, which prompted PGPRC to start efforts in rehabilitating it back in 2017.

According to latest consolidated reports, 2,743 reef balls have been deployed by PGPRC, propagated and planted approximately 40,482 coral fragments. To complement the rehabilitation of the MPA, PGPRC is also conducting a mangrove reforestation program and has planted over half a million mangrove seedlings — 510,000 to be exact — covering an area of approximately 115 hectares.

A reef ball is an artificial reef with holes that create whirlpools around it. It was developed by the Reefball Foundation, a publicly supported non-profit and international environmental NGO whose mission is to rehabilitate the world's ocean reef ecosystems and to



Tridacna squamosa, one of the eight species of giant clams in the Philippines, with the reefbalis planted by PGPRC in the background.

protect the natural reef systems using artificial reef technologies, to restore alling or destroyed coral reefs and create new fishing and scuba diving sites.

Reef balls are made of a special marine-friendly concrete and used around the world to create habitats for fish and other marine and freshwater species. Reef balls are made in many sizes to best match the natural reef type. They function better when they mimic nature.

The reef restoration project is part of the initiatives for the Port Barera Rehabilitation Project, which was launched in 2013, in partnership with the local government in Aroroy. The construction and deployment of the reef balls started in 2017 in tandem with the US-based ReefBall Foundation, a non-profit environmental organization with a mission to rehabilitate the world's ocean reef ecosystems and to protect the natural reef systems using Reef Ball artificial reef technologies.

Local fisherfolk helped in the production of the reef balls and have become the wardens of the MPA.





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MINING TINGNAN BILANG **NATURAL RESOURCES** 

NAPAKAHAL AGA ng mining.
Hisuli kang sa mining companies, sa mga nakikinabang dito ring na ang pagmimina ay sana minero at trabahador subalit maging sa pamahalaan sapagkat ang pagmimina ang paraan kung paano maka-tutukkas ng natural resources

at natural treasure.

Makivi ang maitutulong ng pagmimina sa Pilipinas dahil dito posibleng makahukay o makatuklas ng likas na yaman na mula sa lupa at makatagpo ng mineral na magiging ma-laid ang pakinabang

Maraming mineral na nahuhukay sa lupa ang pinakk-nabangan ng mamamayan tu-lad ng uling, ginto, pilak, pla-tnum, tanso, bakal at marami

pangiba.
Malaking tulong ang nagagawa ng mga ito sa ating parnumuhay.

Kaya naman maituturing na ang pagmimina ay ugat ng natural resources at natural treasure. Hindi kailangang lulot basta tiyakin lang na sa paggamit nito, kailangang ma-

ging environmentally neutral. Aminin men o hindi nating mga Filipino, malaki ang naiaambag ng pagmimina sa ekonomiya ng bansa at ma-ging sa takbo ng pamumuhay

ng mga tao. Isang halimbawa na malaki ang tiong ng pagmimina ay ang produktong langis na nakukuha sa pagmimina. Saka ling walang naghuhukay para sa produksyon ng langis, paano na kaya tatakbo ang mga sasakyan at makinarya na gamit sa mga pabrika na nagbibigay ng trabaho at produktong gamit ng mamamayan

Sa pulong balitaan, sinabi ni Pangulong Ferdinand Mar-cos, Jr. na balid niya noon pa.



man ang mga kallangang ma

man ang mga kasa gang hal laman sa pagpapatucad ng mining sa aing bansa. Kayar naman ipinahayag niya na kayang-kaya i-montor ang pagmimina bukod pa sa macai lang naman maingu-lata ang manan maingulate ang mining industry sa bansa.

Sa usapin ng taxation, si-nabi ni Presidente Bongbong na sisikapin ng kanyang ad-ministrasyon na malayos ang kita ng pamahalaan sa usapin ng tax sa miring at hindi para

lgasan pa ang singil dito. Iginit pa ri Prangulong Mar-cos na hihikayatin ang mga may-aring mining company na penabithin sa Plipinas ang nilaw na produktong mineral na

nakuha sa pagmimina upan sa gayun ay mapatawan liki ng karapatang value adde tax.

Makabubuti sa ating bansa, ani PBBM, na sa halio na iexport o dalhin sa ibang bansa ang hilaw na produktong mineral at metal at maiwan ito sa Pilipinas o kaya naman ay bago dalhin sa ibang bansa bilang export product ay partially processed na ito nang se gayun ay macatawan sa rin ng VAT na magiging bal ag ng kitang bansa.

Anomeng puna o rotamo i-text sa 09189274784, 09266719269 o i- email so juandesabog@yahoo.como juandesabog@yahoo.como



### Malaya **Business Insight**





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### The West Philippine Sea

APS from any source, even from Philippine schools, universities and government offices, still describe the seas west of the Philippine archipelago as the "South China Sea." Sen. Francis Tolentino will have no more of that, so he has filed Senate Bill No. 405 which seeks to institutionalize the West Philippine Sea by formalizing the designation of the said nomenclature as part of the laws of the land.

Under Tolentino's proposed measure, the maritime area - including the air space, scabed, and sub-soil - on the western side of the Philippine archipelago will be named the "West Philippine Sea" or "Kanlurang Dagat ng Pilipinas" as part of the Philippines' "inherent right to designate the names of its maritime areas," and consistent with the 2016 Award of the Arbitral Tribunal of the Permanent

Court of Arbitration (PCA).

In 2016, The Hague tribunal invalidated Beijing's "nine-dash line" doctrine over the entire South China Sea (SCS) region following an arbitration case filed by the Philippine government on Jan. 22, 2013. China's nine-dash line unilaterality encroached territories of other Southeast Asian countries, including the West Philippine Sea, the bill claimed.

The government has always talked in international forums about our correct and just claim in the West Philippine Sea, without realizing that there is indeed a need for legislation to bolster our position...

Explaining the rationale for the bill, Tolentino said his proposal is in response to the archipelagic doctrine embodied under the United Nations. Convention on the Law of the Sea (UNCLOS), in which the Philippines is granted a territorial sea of up to 12 nautical miles, a contiguous zone of up to 24 nautical miles, and an exclusive economic zone (EEZ) of up to 200 nautical miles where the West

Philippine Sea is located.

The senator also called on patriotic crizens to "assert our sovereign rights over our EEZ for the purpose of exploring and exploiting, conserving and managing the natural resources, whether living or non-living, of the waters superjacent to the seabed and of the scabed and subsoil of our EEZ with the concomitant duty to protect and preserve the marine environment therein." The proposed law also affirms that the territories under the West Philippine Sea includes the Luzon Sca and the waters around, within, and adjacent to the Kalayaan Island Group in Palawan and Bajo de Masinloc, also known as Scarborough Shoal in Zambales, among others.

Finally, to address the felt need for "politically correct" maps of the Philippines, the Tolentino bill mandates the National Mapping and Resource Information Authority (NAMRIA) to produce and to publish charts and maps of the Philippines reflecting the nomenclature "West Philippine Sea" or the "Kanhirang Dagat ng Pilipinas."

Once a law, the measure commands government, through the Department of Foreign Affairs, to deposit a copy of the future Act and other relevant documents with the Secretary General of the United Nations and notify accordingly all relevant International and intergovernmental organizations, such as the United Nations Statistical Commission, the Intergovernmental Oceanographic Commission of the United Nations Educational, Scientific and Cultural Organization, the United Nations Group of Experts on Geographical Names (UNGEGN), and the International Hydrographic Organization (IHO). The government has always talked in international forums about our correct and just claim in the West Philippine Sea, without realizing that there is indeed. a need for legislation to holster our position, which the Tolentino bill seeks to provide.















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## Phl, US discuss biological

### threat reduction

#### By PIA LEE-BRAGO

The Philippines and the United States held a series of meetings to discuss current and future biological threat reduction and chemical security capacity-building initiatives in the Philippines.

The US government, through the

Defense Threat Reduction Agency (DTRA) Cooperative Threat Reduction (CTR) Program, met with the Philippine government to support the Philippine in addressing biological and chemical security threats.

DTRA representatives met officials of the Department of Health, Department of Agriculture, Department of Science and Technology, and Department of the Interior and Local Government for an exchange on a five-year biological threat reduction and chemical security capacitybuilding program, development of a sub-national level laboratory network, and potential future training opportunities on chemical security

and bio-risk management

"We are proud to be a partner in the multi-year effort to jointly address biological and chemical security threats," Program manager Michelle Nalabandian said.

Bureau of Animal Industry (BAI) officer-in-charge Dr. Reildrin Morales underscored the importance of upgrading the capacity of the Philippines' veterinary services and noted that the CTR Program "will enhance the BAI-Animal Disease Diagnosis and Reference Laboratory to prevent and control the entry and spread of transboundary animal diseases that may pose a threat to the country's agriculture economy."



### **BusinessMirror**

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# Forest Foundation PH, AYEJ launch Kwentong Kalikasan docu series: There's more to forests than just trees



10 put a human face on the issues affecting our forests, the Association of Young Environmental Journalists (AYEJ), in collaboration with Forest Foundation Philippines, launched Kwentong Kalikasan Documentary Episodes that aim to protect and conserve forests. Episode 1 focuses on how to protect and conserve lorests and take care of our environment. Episode 2 promotes responsible travel and care for our forests with Viajero Outdoor Centre's wide array of products, services, and pieces of training. Finally, Episode 3 tackles the forests home to indigenous communities and all sorts of livelihood mean.

The advocacy features stories and works of individuals and emerging advocates of forest conservation through a video series in the hopes of creating awareness and creatively documenting the positive impact of forest conservation work. It also aims to highlight the heroes and the champions behind forest conservation in Eukidnon and Misamis Oriental.

For Episode 1, Thieza Verdejo, Deputy Director of Xavier Science Foundation chose the road less traveled. As a woman, it has never been easy. She was pressured with expectations to work in a corporate world but she eventually chose to concentrate on a career around the mountain ranges of Buddulnon.

Xavier Science Foundation is a 53-yearold foundation that works to support development programs and projects. The foundation is the initiator of unovative programs and forums for dialogue. It acts as a conduit of funds – its prime mission. It envisions Mindanao to be hunger-free and competitive

According to Verdejo, the foundation

finds it relevant to promote the ecosystem because many forests have been deluded. The country is faced with a lot of logging and deforestation that really destroyed our mountains because there are no more trees that hold on to the water that causes flooding.

Protecting the environment or conserving our environment is a shared responsibility. It's not just for the IPs alone, not just for the community downstream alone but for co-existence as human beings with nature/ environment.

"Nature shall continue doing its own thing, But for humanity who has that capacity to think and do things, it's us who should take responsibility. We should consider nature as our abode, as our home and we have to take care of it," Verdejo stressed.

Episode 2 features Maria Reina Olavidez Bontuyan, a passionate mountaineer running a business advocating for sustainability. Bontuyan promotes responsible travel and cares for our forests with Viajero Outdoor Centers wide array of products, services, and pieces of training

"While taking up Development Communication, I discovered mountaineering in my last year of college. I decided to shift into fulltime being a mountaineer. Since then, I never stopped climbing. For a month we would climb three to five times a month in the Bukidnon area. Eventually, that experience we will share with the next generation," Bontuyan shared.

She equates her mountaineering experience to a spiritual journey.

"I was enveloped in the very rich foliage of forest with the sound of birds. It's like a solo reunion or solo retreat with my Lord. It was more spiritual for me," she confessed.

After a couple of years of exploring mountains and going outdoor, Bontuyan felt the need for safe outdoor gear and equipment. She would go to Cebu or Manila and even outside of the country to purchase outdoor equipment. Then she thought of buying a couple of items and selling them in Cagayan ce Oro. That's how she decided to build a business.

Today, the Mindanao-based retail store specializing in outdoor re-restional or sports equipment, also conducts outdoor education training. While promoting, safe responsible travel, Bontuyan is also giving her full attention to forest conservation.

There are many lessons in our 27 years journey but if I'm going us pick one, the valuable lesson is the need for a community, we can work ingerher. We want to continue our advectory and passion to share and be able to reach out to everybody. It's a calling that we can say never say no," she said in her video interview.

In Bpisode 3, Archie I ulm who works as a research Management Officer of the Land Timber Forest Product the hange Program Philippines, admits to developing his sense of environmentalism already in his college years. New, as a development worker, striving to address the climate crisis, Anchie proves that it is never too late to make an impact.

"Typhoon Yolanda really opened my eyes that climate change is here knocking on our doors. From then on, I made a pledge to myself to contribute to addressing the climate crisis. That's how I started my journey in development work." Archie recalled.

"What keeps me moving and motivated for the past 6 years is the thought that even as a young person like me can do little things for the community that in the long run can make up positive impact for them, especially for the environment," Tulin shared

This episode taddes the ways people can help conserve the forests with the support and assistance of the Non-Timber Porest Products - Exchange Programme Philippines (NTFF-EP). After all, forests are home to incigenous communities and all sorts of livelihood mean, making them more than just trees. Watch the three docus here: https://bwatch/eElJGal.Pfq/, https://bwatch/eElJGal.Pfq/, https://fbwatch/eElJGal.Pfq/, https://fbwatch/ellJGal.Pfq/, https://fbwa



# The Manila Times











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### Editorial

# Shift to indigenous energy long time coming

IWO recent developments could provide renewed impetus to unshackle the country from its dependence on imported energy and to sharpen the focus on tapping indigenous, clean and sustainable power sources.

After meeting with US Secretary of State Antony Blinken last week, Foreign Affairs Secretary Enrique Manalo announced that the US will help the Philippines build a more robust framework for developing clean energy.

Last Tuesday, Energy Secretary Raphael Lotilla said President Ferdinand Marcos Jr. has directed him to think up ways to "accelerate and expand the development of our indigenous energy resources in order to provide accessible and affordable energy to the Filipino people as we transition to a sustainable low-carbon future."

Energy security has long been a goal of past administrations, but the focus on achieving this goal has never been as sharp as it is now.

According to Lotilla, 56.8 percent of the country's energy supply comes from abroad. In 1998, 5.77 million tons of coal was used up by the generating industry, 82 percent of it imported almost exclusively from Indonesia. Last year, coal importation was at 87.2 percent.

In more than two decades, there was no move at all to cut

our dependence on fossil fuel.

Yet, only some 65 percent of the population has gridsupplied electric power. Clearly, the government's household electrification targets were never fully met.

"So you can say that we are very energy insecure," Lotilla said.

Coal and oil make up more than 70 percent of our energy sources for generating electricity. The rest comes from hydro, natural gas, geothermal and renewable energy.

The trend needs to be reversed — less dependence on coal and oil, and an aggressive shift to the other energy sources, notably renewables.

Lotilla said President Marcos envisions a "policy environment" that would make the development of indigenous energy resources attractive to investors.

The President's vision fits in nicely with the US commitment to help the Philippines transition to clean energy.

Already, the initiatives have been set in motion. The US State Department said that Washington and Manila will "collaborate closely with one another on nuclear and clean energy."

Last March, the two countries signed a memorandum of understanding which draws up an outline for cooperation and a "mutually aligned approach to nonproliferation on civil nuclear issues."

The US also provided assistance to the Philippines through the "Foundational Infrastructure for Responsible Use of Small Modular Reactor Technology program which deepens our strategic ties, supports energy innovation, and advances our technical collaboration with the Philippines on secure, safe nuclear energy infrastructure," the State Department said.

Funding is also flowing in. The US Agency for International Development has allotted \$34 million for its Energy Secure Philippines program "to support a more competitive, secure, and resilient Philippine energy sector by working to improve the performance and efficiency of energy utilities, deploy renewable energy systems, enhance competition in the power sector, and bolster energy sector cybersecurity."

Under the program, over \$750 million in private sector investment will be raised to develop 500 megawatts more to boost clean energy generation capacity.

Other initiatives include an agreement by State Department's Bureau of Energy Resources Clean Energy Demand Initiative and the Philippine government to talk with 12 companies which are interested in investing up to \$2.1 billion in the country's clean power infrastructure, and funding from the US Trade and Development Agency (USTDA) for projects ranging from smart grids, renewable power generation, distributed energy, and energy storage systems.

The USTDA has completed 33 energy projects for the Philippines that have been credited by US companies by generating

over \$557 million in US exports.

There is an urgency in reducing the country's dependence on imported energy and developing indigenous and clean sources of power.

Our energy requirements are projected to double in 20 years, and unless the supply keeps up with the rising demand, we will be constantly scrambling to meet growth goals.

It is a situation we must do our best to avoid.















DATE

# Solar panels to power Makati public schools

Public schools in Makati will soon be powered by solar energy under the local government's push for sus-

the local government's push for sus-tainable energy, Mayor Abby Binay announced yesterday.

Binay said they would be install-ing solar panels in all public schools as well as local government offices, which will cut down energy con-sumption and costs while pushing the city's advocacy for lower greenhouse

gas emissions.

This is part of our initiatives to reduce carbon footprint and leave a greener and healthier environment for the next generation of Makati-zens," she said during the launch-ing of the "Brigada Eskwela" at the Comembo Elementary School.

Binay said that with solar energy,

the city can continue supplying elec-tricity to schools and offices even

during calamities.

The installation of solar panels will be done in batches, with the Comembo Elementary School as the pilot site.

pilot site:

Makati has 25 public elementary schools, 10 junior high schools and eight senior high schools.

Makati will also roll out electric buses next year as part of the P724-million public transportation master plan in partneship with the Korea International Cooperation Agency.

Meanwhile, Binay thanked the Integrated Bar of the Philippines, Rotary Club of Makati and the barangay councilors of Comembo for donating bicycles to the school.

Neil Jayson Servallos



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## Makati publ schools to shi to solar power

By PATRICK ELY GARCIA

s part of its campaign to combat climate change and reduce the carbon footprint of Makati, Mayor Abby Binay announced that the city government will soon install solar panels in all its public schools in line with the city's advocacy to promote a greener, cleaner, and more sustainable com-

Binay announced this during the Brigada Eskewela kick-off activity held at Comembo Elementary School on Wednesday, Aug. 10.

She said her administration aims to make Makati City the pioneer in using renewable energy to power public schools and local government offices.

"I am proud to announce that the city is procuring solar panels to provide a source of renewable energy in our schools and local government offices. This is part of our citywide initiatives to reduce our carbon footprint and leave a greener and healthier environment for the next generation

of Makatizens," Binay said. She explained that the use of solar panels will significantly cut down energy consumption and costs while pushing for the city's advocacy for sustainability and lower greenhouse gas (GHG) emissions. The solar panels will also assure continuous supply of electricity to schools and offices even during calamities.

Aside from its economic and environmental benefits, the installation of solar panels will also set a good example for young Makatizens so they could become more conscious of the environmental impact of fossil fuel use and greenhouse emissions.

According to Binay, the installation of the solar panels in public schools can be done in batches with Comembo Elementary School as one of the pilot sites.

Makati City has 25 elementary schools, 10 junior high schools, and eight senior high schools that would benefit from the use of solar panels.

On Aug. 5; Binay declared a state of climate emergency in the city as she called for a whole-of-society approach in responding to the crisis

"As temperatures and sea levels continue to rise, low-lying coastal areas in cities like Makati have become more vulnerable to strong typhoons that bring floods and landslides. This will result not only in the disruption of public services but also the displacement of families and even entire communities," Binay said during a webinar organized by Makati Disaster Risk Reduction and Management Office (MDRRMO).

Binay laid out her administration's programs and initiatives aiming to mitigate greenhouse gas emissions in the city which includes the procurement of electric vehicles (e-vehicles) to be used by the city government, installation of solar panels in public schools and government offices to minimize energy consumption, and to ensure continuity of services during calamities.

"We call upon everyone to come together and act now. We must ensure aggressive application of the wholeof-society approach in combating climate change. We heard the data. We understood the science, and we are feeling its impact. Now is a crucial time to act, and we need to act fast. We need thinkers, doers, and movers," Binay said.

The time for action is now. As the new breed of Makatizens and global citizens, it is our responsibility to take care of our city and ensure that it remains a livable place for future generations. We must promote sustainability and climate consciousness in all our actions. We must be the change we want to see in our city and the world," she added.









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Dumaraan ang bansang South Korea sa isang pambihirang pagbabaha na, ayon sa mga ulat, ay hindi nila naranasan sa sobrang tagal ng panahon. Hindi ito hiwalay na pangyayari. Maraming mga lugar sa buong mundo ang dumaranas rin ng kakaibang klima. Maging ang Pilipinas ay saksi sa mga naglalakasang bagyo at matitinding pagbaha.

Nuong isang araw, pormal na nagdeklara si Mayor Abby Binay sa Makari ng "climate emergency". Sa wakas, may nag-umpisa na sa pagkilala nito. Tatlong taon na rin noong aking isulat sa kolum na ito ang matagal nang sinasabi ng mga siyentipiko na may emergency sa klima ang ating bansa at ang buong mundo. Nabanggit ko nuon na dalawampung porsyento ng mundo ay magkakaroon ng hindi tiyak na klima bandang taong 2050. Nangunguna dito ang Pilipinas. Ito ay ayon sa maraming siyentipiko na matagal ng tinatawag ang pansin ng buong mundo hinggil sa "global warming"

### Emergency sa klima

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at "climate change" na tumutukoy sa pagtaas ng temperatura sa buong mundo na nagdudulot naman ng pag-iiba ng klima na lumalabas bilang mga matinding tagtuyot at tag-ulan.

Tila hindi masyadong nabahala ang mga namumuno noon. May mga ilan-ilan na nagpahayag na kailangan ang agarang kumilos dahil tayo ay gipit na sa oras. Ang mungkahi nila ay magdeldara na ang ating pamahalaan ng isang "climate emergency" kagaya ng ginawa na ng United Kingdom, France, Canada, Australia at United States.

Bukod sa pagbibigay ng malakas na mensahe sa ating mga kababayan ukol sa ating katayuang pangklima, ang ganitong deklarasyon ng pamahalaan ay dapat ding sundan ng mga patakaran at programa kung saan mabibigyan ng karampatang suporta ang mga bagay na turulong maibsan ang problema sa kalikasan at sa klima.

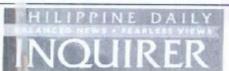
Ang isang tinuturong dahilan nito ay ang mga kagawiang mapanira sa ating kalikasan, kagaya ng patuloy na paggamit ng karbon bilang pinagkukunan ng enerhiya. Binanggit ni dating Pangulong Rodrigo Duterte sa kanyang SONA noong 2019 na

dapat bawasang umasa sa tradisyonal na mapagkukunan ng enerhiya tulad ng karbon at sa halip pabilisin ang pagbuo ng mga "renewable energy" kagaya ng solar, wind, hy-dro, geothermal at biomass—mga mapagkukunan ng enerhiya na hindi nauubos. Naumpisahan ba ang mga ito at ano ang estado nila ngayon?

Sa termino ng bagong administrasyon, dapat agaran ang pagkilos ng pamahalaan upang maisakatuparan ito. Maaring magbigay ang pamahalaan ng mga tinatawag na mga "incentive" para sa mga negosyong tutugon sa pangangailangan ng bayan. Sa kabilang banda, maari ring magbigay ng higit na mabigat na pasanin para sa mga dumadagdag sa problema.

Ang isang "emergency" ay nangangailangan ng hindi normal na mga pamamaraan ng paglutas. Bagama't magandang unang hakbang, hindi magiging sapat ang deklarasyon sa Makati lamang. Kinakailangan seryosohin ng bagong administrasyon ang "climate emergency" at ideklara ito sa buong bansa. Hindi biro ang ating kalagayan. Isantabi muna sana ang mga hindi gaanong mahalaga. Huwag na nating hintayin ang puntong wala na talaga tayong magagawa.













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Ex-CJ Puno chairs solar power firm

Former Chief Justice Reynato Puno urged Filipinos to consider shifting to solar energy to bring down the cost of electricity for homes and businesses and mitigate the impact of a brewing energy crisis. Puno, who now chairs the board of GenWatt, warned that rising electricity costs, spiraling prices of imported fossil fuels and the expected depletion of the Malampaya natural gas fields in Palawan could bring back rotating blackouts and grind many businesses and industries to a halt, resulting in billions of pesos in economic losses. "Our power supply is really lacking and this shortage is even expected to increase when the natural gas at Malampaya runs out." Puno said at the ceremonial switching of a 50-kilowatt GenWatt system at the St. Martin of Tours Credit and Development Cooperative in Bocause, Bulacan, on Aug. 6.

### The rise of solar power: Cheaper, changing and crucial

By KELLY MACNAMARA

ARIS (AFP) - Generating power from sunlight bounc ing off the ground, working at night, even helping to grow strawberries; solar panel technology is evolving fast as costs plummet for a key segment of the world's energy

The International Energy Agency says solar will have to scale up significantly this decade to meet the Paris climate target of limiting temperature rises to 1.5 degrees Celsius above preindustrial levels.

The good news is that costs have fallen dramatically.

In a report on solutions earlier this year, the Intergovernmental Panel on Climate Change said solar unit costs had dropped 85 percent between 2010 and 2019, while wind fell 55 percent.

"There's some claim that it's the cheapest way humans have ever been able to make electricity at scale," said Gregory Nemet, a professor at the University of Wisconsin-Madison and a lead author on that report.

Experts hope the high fossil fuel prices and fears over energy security caused by Russia's invasion of Ukraine will accelerate the uptake of renewables.

Momentum gathered pace on Sunday with the ambitious US climate bill, which earmarks \$370 billion in efforts to cut greenhouse gas emissions by 40

percent by 2030. An analysis by experts at Princeton University estimates the bill could see five times the rate of solar additions in 2025 as there were in 2020.

Nemet said solar alone could plausibly make up half of the world's electricity system by mid-century, although he cautioned against looking for "silver bullets."

"I think there really is big potential." he told AFP.

Rapid changes

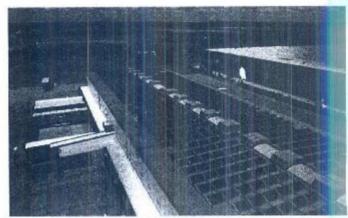
The "photovoltaic effect" - the process by which solar cells convert sunlight to electrical energy first discovered in 1839 by the French physicist Edmond Becquerel.

After decades of innovations, silicon-based solar cells started to be developed in the United States in the 1950s, with the world's first solarpowered satellite launched in 1958.

The IPCC said of all energy technologies, small-scale ones like solar and batteries have so far proved quicker to improve and be adopted than bulkier options like nuclear.

Today, almost all of the panels glimmering on rooftops and spreading across vast fields are made in China using silicon semiconductors

But the technology is changing



THIS FILE aerial view taken on Aug. 2, 2022 with a drone shows solar panels on the roof of a logistics company's freight processing hall in Aurach, southern Germany. (AFP)

In a recent report, the IEA said these new solar cells have proven to be one-fifth more efficient in converting light to energy than standard modules installed just four or five years ago.

There are also a host of new materials and hybrid cells that experts predict could supercharge efficiency.

These include cheap, efficient and lightweight "thin film" technologies, like those using perovskites that can be printed from inks.

Experts say they raise the prospect of dramatically expanding where solar energy can be harvested – if they can be made durable enough to withstand a couple of decades of use

Recent research has raised hopes

that it could be possible. In one study, published in the Journal Science in April, scientists added metal-containing materials to perovskite cells, making them more stable with efficiency near traditional

silicon models. Other research mixes materials for different purposes

One study in Nature used "tan-dem" models, with perovskite semiconductors to absorb near-infrared light on the solar spectrum, while an organic carbon-based material absorbed ultraviolet and visible parts of the light.

And what happens after sunset?

Researchers from Stanford said this year they had produced a solar cell that could harvest energy overnight, using heat leaking from Earth back into space.

"I think that there's a lot of creativity in this industry," said Ron Schoff, who heads the Electric Power Research Institute's Renewable Energy and Flect Enabling Technologies research.

Location, location

Generating more energy from each panel will become increasingly crucial as solar power is rolled out at greater scale, raising concerns about land use

and harm to ecosystems.

Schoff said one efficiency-boosting design that is becoming more popular for large-scale projects is "bifacial"

These double-sided units absorb energy not just directly from the sun's rays, but also from light reflected off

the ground beneath.

Other solutions involve using the same space for multiple purposes - like semi-transparent solar panels used as a protective roof for strawberry plants or other crops.

India pioneered the use of solar panels over canals a decade ago, reducing evaporation as they generate power.

Scientists in California have said that if the drought-prone US state shaded its canals, it could save around 63 billion gallons.

Construction on a pflot project is due to begin this year.

All shapes, sizes

Experts say solar will be among a mix of energy options, with different technologies more suitable for different places

Schoff said ultimately those energy grids with more than 25 percent solar and wind need ways to store energy with batteries or large-scale facilities using things like pumped water or compressed air.

Consumers can also play their part, said Nemet, by shifting more of their energy use to daytime periods, or even hosting their own solar networks in an Airbnb-style approach.

He said the modular nature of solar neans it can be rolled out in developing countries with sparse access to traditional grids.

You could have solar on something as small as a watch and some thing as big as the biggest power plants in the world," he said.

"I think that's what's making people excited about it."











### World's biggest ice sheet could cause massive sea rise without action

LONDRES, United Kingdom (AFP/ Xinhua) -- The world's biggest ice sheet could cause "several meters" of sea-level rise over centuries if the global temperature rises more than °C, according to a British study published Wednesday.

Researchers at Durham University concluded that if global greenhouse emissions remain high, the melting East Antarctica Ice Sheet (EAIS) could cause nearly half a meter of sea-level rise by 2100. Their analysis was pub-lished in the scientific journal Nature.

If emissions remain high beyond that, the EAIS could contribute around one to three meters to global sea levels by 2300, and two to five meters by 2500, they said.

However, if emissions were dramatically reduced, EAIS could contribute around two centimeters of sea level rise by 2100, according to the assessment

This would represent far less than the ice loss expected from Greenland and West Antarctica.

"A key conclusion from our analysis is that the fate of the East Antarctic Ice Sheet remains very much in our hands," said lead author Chris Stokes, from Durham University's Department

of Geography.
"This ice sheet is by far the largest on the planet, containing the equivalent of 52 meters of sea level and it's really important that we do not awaken

this sleeping giant.

"Restricting global temperature increases to below the 2°C limit set by the Paris Climate Agreement should mean that we avoid the worst-case scenarios, or perhaps even halt the melting of the East Antarctic Ice Sheet, and therefore limit its impact on global sea level rise," he added

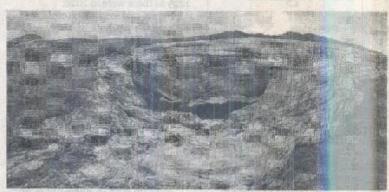


Photo provided by Italy's Alpine Rescue on July 3, 2022 shows a general view of Marmolada Glacier in northern Italy. (Italy's Alpine Rescue/Handout via Xinhua)

The study did note that the worst scenarios projected were "very un-

World leaders agreed at the 2015 UN Climate Change Conference in Paris to limit global warming to well below 2°C and pursue efforts to limit the rise to

The research team, which included scientists from the UK, Australia, France and the US, analyzed how the ice sheet responded to past warm periods when making their predictions.

> Over 200 major glaciers disappear

glaciers disappear
More than 200 major Alpine glaciers
have disappeared in Italy since recordkeeping began in 1895, Italy's environmental lobby group Legambiente said in
a report released on Wednesday.
In its third "Caravan of the Glaciers" report, Legambiente said the
latest findings verified "the dramatic
recression of glaciers due to the climate

regression of glaciers due to the climate crisis."

The group said Alpine temperatures

are rising twice as quickly as temperatures are rising at sea level, and the ground snow has decreased every year since 2012.

The report was produced as a way to inform policymakers regarding policies of sustainable development, said the Legambiente. It was produced by Legambiente in partnership with the Italian Glaciological Committee.

The phenomenon is thought to have wide-ranging consequences.
"The rapid retreat of glacial fronts not only leads to the loss of fascinating landscapes and biodiversity, but it also amounts to the disappearance of important fresh water reserves," the

report said.

The lack of fresh water coming from glacial reserves is a major contributor to the drought gripping most of Italy and threatening to reduce agricultural output, especially in northern Italy, where water from glaciers is a key part of the area's ecosystem, noted the report. Another key impact involves public

safety, said the report.