



## NEWS ROUNDUP

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### [DBM urges agencies to ID climate-change programs](#)

By: Jasper Arcalas

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## BUSINESS WORLD

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By: Ashley Erika O. Jose

The Department of Energy (DoE) said it is in talks with Japanese companies interested in the government's decarbonization program and renewable energy projects.

## [PEZA conducts Taiwan, China investment briefings](#)

By: Revin Mikhael D. Ochave

The Philippine Economic Zone Authority (PEZA) has just concluded investment briefings for potential investors from Taiwan and China, pitching manufacturers on the advantages of locating in the Philippines.

## **MALAYA BUSINESS INSIGHT**

### [Cebu water district bags grant from JICA](#)

By: Jed Macapagal

The Philippines signed with the Japan International Cooperation Agency (JICA) a grant aid of approximately 2-billion Japanese yen (P807 million) to fund septage management projects of Metro Cebu Water District.

## **MANILA BULLETIN**

### [In solidarity with Masungi](#)

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It feels like a victory in a series of battles for the control of Masungi Georeserve, when the Bureau of Corrections (BuCor) postponed its plan to build a headquarters and transfer the New Bilibid Prison in that environment-protected area.

## **MANILA STANDARD**

### [UAE Environment Summit to host Magindanao's Sultan Mastura](#)

By: Nash B. Maulana

The Care for the Environment will host the Sultan of Magindanao at a Summit in United Arab Emirates in June this year, it was learned

## **PANAY NEWS**

### [Developing and promoting ecotourism and nature-based tourism](#)

By: Sonny Anga

ON MARCH 1, 2023, the Senate Tourism Subcommittee on Select Senate Bills on Ecotourism and on the Proposed Senate Resolution on Nature-Based Tourism held a hearing to discuss various measures and, ultimately, to find solutions and initiatives to advance the domestic tourism industry's recovery while instilling eco-consciousness

amid the country's upcoming summer months and in anticipation of the influx of tourists this year owing to "revenge travel".

## **SUNSTAR**

### **[Pampanga is vulnerable to Climate Change](#)**

By: Rox Peña

Last week, a disturbing news came up. According to a study, ten provinces in the Philippines are the most at risk of damage from extreme weather to their buildings and other property developments in about two decades. What is frightening is that Pampanga is second in that list.

### **[\[Opinion\] Sustaining environment friendliness](#)**

By: Benjie R. Pangan

MOST countries worldwide have been aware and are, in fact, active in maintaining a carbon emission-free environment and ecosystems.

## **THE MANILA TIMES**

### **[NEDA approves 194 high-impact projects](#)**

By: Kristina Maralit

THE National Economic and Development Authority (NEDA) Board, with President Ferdinand Marcos Jr. at the helm, has green-lighted 194 high-impact priority projects under the Infrastructure Flagship Projects (IFPs). It also approved amendments to the 2013 Joint Venture (JV) Guidelines that are seen to further strengthen the government's "Build Better More" program.

## **THE PHILIPPINE STAR**

### **[Napocor wants clean energy usage in SPUG off-grid plants](#)**

By: Richmond Mercurio

MANILA, Philippines — State-owned National Power Corp. (Napocor) is teaming up with APTI Renewable Energy Corp. for the development of sustainable renewable energy using biofuel and biomass hybrid power in the off-grid areas of the country.

## [We need regenerative agriculture to tackle climate change, to future-proof farms](#)

By: Jose T. Uy III

Global warming from human activity is increasingly driving climate change, arguably the greatest threat to our survival today. Already, we are experiencing its frightening, even life-threatening results, including more destructive weather patterns, hotter temperatures; rising sea levels endangering low-lying land; higher disease incidence; and decreasing agricultural and food output. The consequences can only worsen if we do not act now and with utmost urgency to mitigate climate change. We have no choice.

## **WORLD ECONOMIC FORUM**

### [How much faith can we have in backup plans for the climate?](#)

At 10:38 on a June morning in 1991, a volcano in the Philippines exploded. Mount Pinatubo sent an ash cloud 35 kilometers into the heavens, killing hundreds of people and impacting millions more. Before the dust had fully settled, something else happened: Earth's surface measurably cooled for a couple of years.

## **CCC IN THE NEWS:**

### **MANILA STANDARD**

#### [Marcos, other officials join quake drills](#)

President Ferdinand R. Marcos Jr. and other Cabinet officials participated in the Nationwide Simultaneous Earthquake Drill (NSED) for the first quarter of 2023.

### **PHILIPPINE NEWS AGENCY**

#### [PBBM, other officials join nationwide earthquake drill](#)

By: Azer Parrocha

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**Information and Knowledge Management Division**

## **BUSINESS MIRROR**

### **[DBM urges agencies to ID climate-change programs](#)**

By: Jasper Arcalas

The Department of Budget and Management (DBM) urged various government agencies to identify more programs aimed at mitigating the effects of the climate crisis on the country as the national government remains keen on hiking funding for climate-related programs.

DBM Secretary Amenah F. Pangandaman said the national government allocated P464.5 billion this year for climate change-related programs and projects, which was 60.1 percent higher than the P289.7 billion allocation last year.

At present, the total budget for climate change-related programs account for 8.8 percent of the national government's P5.268 trillion budget this year.

“While we are on track with our ‘Agenda for Prosperity,’ our efforts will be futile if we are unable to address climate change, as it continues to pose significant risks to our economic development,” Pangandaman told attendees of the annual Climate Change Expenditure Tracking (CCET) virtual orientation held recently.

“As stated in the World Bank Group’s Country Climate and Development Report for the Philippines published in November 2022, mainstreaming climate considerations in public financial management is crucial in climate change adaptation and mitigation,” Pangandaman added.

The DBM chief emphasized that it is important to identify environment-related programs and projects in the national budget and to track the expenditures to these programs “efficiently.”

#### Priority projects identified

PANGANDAMAN urged her colleagues in government to “keep in mind that we are doing all these to ensure that our economic progress is moving towards a truly inclusive and sustainable economy — one that will be felt by every individual, family, and entity in the country, and will benefit not only citizens in the world today but also in the generations to come.”

This year, the national government is spending P464.5 billion for various climate change mitigation and adaptation programs that include water sufficiency, sustainable energy, food security, climate smart industries, among others, the DBM said.

The programs are aligned with the country's National Climate Change Action Plan, according to the DBM.

"Water sufficiency projects are prioritized, with almost 80 percent of the total climate change budget, followed by sustainable energy, food security, ecosystem and environmental stability, climate smart industries and services, human security, and knowledge and capacity development," it said.

The DBM said some of the agencies and programs funded by P464.5 billion include the National Disaster Risk Reduction and Management Fund (P20.5 billion), Quick Response Fund (P17.15 billion), Flood Management program (P182.99 billion), National Greening Program (P2.39 billion), Manila Bay Rehabilitation (P1.56 billion) and Coastal and Marine Ecosystems Management program (P246 million).

#### Climate-related expenditures

IN an earlier statement, Pangandaman said the national government's climate-related expenditures grew at an average rate of 21.3 percent from 2015 to 2023.

The CCET seeks to contribute to the attainment of climate change-related provisions in the Philippine Development Plan 2023-2028 through efficient monitoring of programs aimed at mitigating the impact of the climate crisis. The CCET is a workshop organized by the DBM and the Climate Change Commission aimed at tracking, monitoring and monitoring programs that "help address problems posed by climate change."

Part of the workshop was explaining to government agencies the "necessity" of "intensified" climate change planning and programming, according to the DBM. The DBM added that national government planning officers, budget officers and climate change technical representatives were also briefed about the importance of CCET as a component of the national budget preparation.

## **BUSINESS WORLD**

### **[DoE seeks Japanese participation in PHL decarbonization plan](#)**

By: Ashley Erika O. Jose

The Department of Energy (DoE) said it is in talks with Japanese companies interested in the government's decarbonization program and renewable energy projects.

"Our government is always keen to work with the private sector on projects which would be mutually beneficial for both parties. With this, our gradual transition to a low-carbon economy entails the diversification of our energy sources, especially cleaner and indigenous sources, such as renewable energy, to intensify decarbonization efforts across all economic sectors as part of our broader national strategy," Energy Secretary Raphael P.M. Lotilla said in a statement on Thursday.

The Philippines is aiming to become a low-carbon economy through renewable energy and greater use of indigenous energy sources.

Last year, the government opened the renewable energy industry to full foreign ownership after amending the implementing rules and regulations of the Renewable Energy Act of 2008.

Mr. Lotilla pitched Japanese companies at the Asia Zero Emission Community Ministerial meeting in Tokyo on March 3-4.

The Philippine Energy Plan seeks to increase the share of renewables to 35% by 2030 and to 50% by 2040.

The DoE said this translates to greenhouse gas emissions reduction of about 35% or 119 million tons of carbon dioxide by 2040.

"Full foreign ownership also opens rich opportunities to new areas in energy, such as gas pipelines," Mr. Lotilla said.

## [PEZA conducts Taiwan, China investment briefings](#)

By: Revin Mikhael D. Ochave

The Philippine Economic Zone Authority (PEZA) has just concluded investment briefings for potential investors from Taiwan and China, pitching manufacturers on the advantages of locating in the Philippines.

PEZA Officer-in-Charge Tereso O. Panga said in a Facebook post late Wednesday that PEZA conducted an investment briefing for a Taiwan business delegation on March 6 and a separate investment promotion pitch on March 7 involving potential investors from Yiwu China Commodities City.

According to Mr. Panga, the Taiwan delegation consisted of eight manufacturing and two logistics companies seeking to register their export and domestic market projects with PEZA and the Board of Investments.

“The prospective Taiwanese investors manufacture consumer electronics, car brake pads, screws and other steel products, centrifugal fans, hardware materials, paper and packaging products,” Mr. Panga said.

Mr. Panga added that PEZA is currently working on firming up \$65 million worth of Taiwan investment pledges in renewable energy and artificial intelligence, which were made during a trade mission last year.

Mr. Panga said PEZA also delivered an investment promotion pitch to investors from Yiwu China Commodities City, which is located in Zhejiang province.

“The economic cooperation with Yiwu will surely increase investment and trade for the country as we attract Yiwu small commodity manufacturers to set up their production facilities ideally in the ecozones,” Mr. Panga said.

“With more than 75,000 stores and small commodity producers of 2.1 million items in 26 large-scale business categories, the Yiwu market has trade relations with more than 210 countries and regions around the world,” he added.

“Under the Corporate Recovery and Tax Incentives for Enterprises (CREATE) regime, PEZA may now register with incentives the small and medium enterprises (SMEs) and manufacturing companies that will locate in the ecozones to cater to the domestic market. These ecozone manufactured products can be readily made available to the domestic market, which are expected to be cheaper, as compared to imported products, and thus, benefiting the Filipino consumers,” Mr. Panga said.

## MALAYA BUSINESS INSIGHT

### [Cebu water district bags grant from JICA](#)

By: Jed Macapagal

The Philippines signed with the Japan International Cooperation Agency (JICA) a grant aid of approximately 2-billion Japanese yen (P807 million) to fund septage management projects of Metro Cebu Water District.

The project involves the construction of a septage treatment facility, provision of vacuum trucks for septage collection and operating system for sludge treatment of approximately 430 cubic meters of septage per day to ensure uncontaminated sewage water is discharged back to the natural environment.

JICA added the project will benefit six local government units including Cebu, Compostela, Consolacion, Liloan, Mandaue and Talisay.

The grant will help the region overcome its capacity shortage for wastewater management facilities as Metropolitan Cebu's roadmap targets to adequately treat wastewater by 50 percent in 2030 and 90 percent by 2050.

JICA also said even if septic tanks are widely spread in the region, de-sludging is not regularly practiced and collected septage are rarely appropriately treated due to limited available treatment facilities which becomes a possible health risk due to negative impacts such as deteriorating groundwater quality and surface water pollution.

"Climate change has increased extreme weather events like droughts, putting pressure on water resources. The JICA grant for a septage management system is one way of using Japan's advanced technology and systems to promote sanitation and improve water quality while protecting water environments," said Sakamoto Takema, chief representative of JICA Philippines office, in a statement.

JICA said the grant also helps the region to comply with the Clean Water Act of 2004 that requires all local government units operating without piped sewerage systems to implement septage management.

## MANILA BULLETIN

### [In solidarity with Masungi](#)

By: Johannes Chua

It feels like a victory in a series of battles for the control of Masungi Georeserve, when the Bureau of Corrections (BuCor) postponed its plan to build a headquarters and transfer the New Bilibid Prison in that environment-protected area.

Gregorio Catapang Jr., acting director general of BuCor said in a Senate committee hearing that the plan “will no longer push through... taking into consideration the impact on the environment of the construction of BuCor facilities in the area.” This was a different situation from months ago, when BuCor insisted on its right as “registered owner of the property” and sent personnel to inspect the area, which alarmed the Masungi Georeserve Foundation.

When I talked to Billie Dumaliang, advocacy officer and trustee of the Masungi Georeserve Foundation, which she co-founded with sister Ann, she was aware of the challenges — political, social, economic — of protecting the Masungi Georeserve. Protecting that area, Billie said, is not only for them but more for us. She related to me that the conservation and geotourism project was awarded with the United Nations Sustainable Development Goals Action Award in 2022, and the Global Water Changemakers Award in 2021, among others.

To stress the importance of Masungi Georeserve, more than four dozen organizations have signed a statement early this month urging the President and the DENR to stop BuCor’s plans in Masungi. Some of the organizations, collectively called the Upper Marikina Watershed Coalition, include the Philippine Native Plants Conservation Society, Philippine Biodiversity Conservation Foundation, Greenpeace Southeast Asia – Philippines, Wild Bird Club of the Philippines, Living Laudato Si’ – Philippines, Youth Strike 4 Climate Philippines, Philippine Center for Environmental Protection and Sustainable Development, Sustainability PH, among others.

The statement said, “We fully support the Masungi Georeserve in its efforts to protect and preserve the conservation area from any form of development that may harm its natural resources and biodiversity. We strongly oppose the plans of the Bureau of Corrections to build its facilities in Masungi, as this would threaten the delicate balance of the ecosystem and compromise the integrity of the entire area.”

“We recognize the need for the BuCor to address the overcrowding in the New Bilibid Prison and provide adequate facilities for the rehabilitation and reformation of inmates. However, we express our concern over the plan to take over the Masungi Georeserve,

which is an important karst landscape crucial to the conservation of the Upper Marikina Watershed.”

“While we understand the challenges faced by BuCor in finding suitable sites for their facilities, we firmly believe that this should not come at the expense of the environment — the flora and fauna that have come back and flourished after more than 25 years of rehabilitation by Masungi. A critical part of the Upper Marikina Watershed and other protected areas, Masungi Georeserve also plays a crucial role in regulating the water flow in the region and reducing the risk of flooding and landslides. These ecosystem services are essential in maintaining the ecological balance and sustaining the well-being of the surrounding communities.”

It was good that the plan of the BuCor was postponed, but is it indefinite? Or BuCor is just buying time? It remains to be seen. But for the meantime, I wish Billie and Ann all the enlightenment, strength of spirit, and wisdom, as they were entrusted with this environmental “treasure.”

To reiterate the statement, it concluded with this paragraph: “We stand in solidarity with Masungi and all other environmental defenders who work tirelessly for the conservation and protection of critical ecological areas, recognizing their value in addressing climate change and building sustainable communities.” As an environment writer, I stand in solidarity with Masungi.

## MANILA STANDARD

### [UAE Environment Summit to host Magindanao's Sultan Mastura](#)

By: Nash B. Maulana

The Care for the Environment will host the Sultan of Magindanao at a Summit in United Arab Emirates in June this year, it was learned

Maguindanao Princess Febraida Lauban Mastura-Matalam disclosed the post-Ramadan event on March 4, as part of the Maguindanao Sultanate's tribute to women on Women's Month.

Mastura-Matalam said the Magindanao Sultanate will be headed by Sultan Salem Abdulaziz Mastura Kudarat V, the 26th Sultan of Magindanao.

She said Magindanao's Royal Mission to the UAE Summit will be largely represented by the Sultanate's Royal Princesses, including herself and Princess Jasna Mastura Karon, and Princess H. Mastura Karon. Their families count them as among Maguindanao's "women in power."

The princesses' entourage in UAE will be led by Queen Mariam Amor Torres of Royal Maharlika, the great philanthropist of the World, the Magindanao princess said.

Princess Febraida said Sultan Salem Abdul Aziz Mastura Kudarat V, being the only legitimate Sultan of Magindanao, has been slated to speak to a UN Assembly at Vienna in May 2023 on the rights of the first-nations or the Indigenous nationhood.

Earlier, the Sultanate of Magindanao has released the list of Sultans who had occupied the throne from Spanish time to the post-colonial periods on Philippine Islands.

Muda Makuta Prince Datu Mama Mastura said the Magindanao Sultanate has released the genealogical order's list, after some of their relatives had signified to occupy the sultan's throne.

Social media posts gave rise to grapevine speculations that "a Maranao has been crowned as a Sultan of Magindanao" which is traditionally and politically unlikely.

Princess Mastura-Matalam Sultan Mastura's hold of the ancient throne remains fortified with legitimacy of traditional consensus as well as genealogical and historical bases.

In the genealogical list released by the Magindanao Sultanate which is now based here, Sultan Salem Mastura is the 26th Sultan of Magindanao from Rajah Laut Buisan, the father of Philippine Muslim hero Sultan Muhammad Dipatuan Kudarat (1581 – 1671).

Sultan Salem Mastura and Prince Datu Mama are both grandsons of Sultan Hijaban Mastura who held the throne in 1926 until he died in late 1930s.

The prince said thousands of signatures back the nationwide royal network of the Magindanao Sultanate to get Datu Benito's proclamation as Sultan of Maguindanao in Calanogas.

Most of those Sultans in the list are traceable on Google via Wikipedia which cites as one of its sources the history book authored by the late Dr. Casar Adib Majul titled, "The Muslims in the Philippines" (1973). Majul was an eminent Muslim scholar and the first dean of the University of the Philippines Institute of Islamic Studies.

Curiously, however, neither in the Wikipedia list nor of the Magindanao prince's list, are Sultan Muhammad Tato Esmael who succeeded Sultan Hijaban Mastura Kudarat III when he died in the 1930's, and three others, including Datu Pangadapun Benito.

Ostensibly, "at the instance" of some Mastura elders, Benito was recognized Sultan of Maguindanao in the 1981 Malacanang Ceremonies when then President Marcos Sr. honored Muslim traditional leaders in 1981.

But Annabelle Valencia Sultan Esmael, a Muslim law counsel, said her family's patriarch "was never replaced until he died in 1991." A Malacanang employee recalled that President Marcos (Sr.) then "was looking for 'the old Sultan of Maguindanao' whom he apparently knew personally, during the 1981 meeting."

Also during the 1981 Malacanang ceremonies, members of Sulu's Kiram clan were split by hereditary claims over the Sultanate of Sulu and of the Sabah Claim Issue. One of the parties had purportedly settled for the crowning of Sultan Amil Bangsa for the Palace ceremonies. However, the rest of the Kirams have hardly recognized Amil Bangsa's ascension to the throne.

## PANAY NEWS

### Developing and promoting ecotourism and nature-based tourism

By: Sonny Anga

ON MARCH 1, 2023, the Senate Tourism Subcommittee on Select Senate Bills on Ecotourism and on the Proposed Senate Resolution on Nature-Based Tourism held a hearing to discuss various measures and, ultimately, to find solutions and initiatives to advance the domestic tourism industry's recovery while instilling eco-consciousness amid the country's upcoming summer months and in anticipation of the influx of tourists this year owing to "revenge travel".

The following measures were tackled: Senate Bill 238, establishing the Northern Antique Protected Seascape and Landscape Act of 2022 filed by Senate President Pro Tempore Loren Legarda; several bills which I filed, namely, Senate Bill 1166, declaring the Pag-Asa Island as an ecotourism cluster and protected area; and Proposed Senate Resolution 472, for the creation of policy reforms and budgetary expenditures to develop the Philippines' potential to be the leading country in the world for sustainable Nature-Based Tourism (NBT).

Discussions on Senate Bill 238 centered on Northern Antique's crucial role in the region's development and its surrounding environment. Department of Tourism (DOT) Region VI Regional Director Crisma Rodriguez emphasized how Northern Antique positively contributed to tourism growth in Antique, with five of its municipalities registering 14,311 tourist arrivals, or equivalent to almost half of all tourist arrivals in the province and with receipts amounting to P103 million owing to the area's wide range of recreation activities like white river rafting, river tubing, diving, among others. Moreover, local chief executives reiterated that Northern Antique is both a tourism destination and a habitat to dugongs, which are classified as vulnerable species by the World Wildlife Fund (WWF). All the concerned stakeholders concurred that the proposed measure will ensure the protection of the flora and fauna of the Northern Antique seascape and landscape for the benefit of the local communities and future Antiqueños.

For Senate Bill 1166, Rep. Johnny Pimentel (Surigao del Sur 2D), being the counterpart measure's author in the House of Representatives, started the discussion by explaining the bill's noble purpose, which is to assert our sovereign rights through economic initiative or soft diplomacy and to pave the way for the Pag-Asa Island's development. Rep. Edgardo Egay Salvame (Palawan 1D) also manifested his support on the measure and said that the declaration of the Pag-Asa Island Cluster as a protected area would help ensure its coastal and marine resources are protected from overfishing, poaching, large-scale ocean filling or reclamation. While Department of Environment and Natural

Resources (DENR) Undersecretary Augusto dela Peña manifested the agency's support to the bill, he flagged the need for supporting infrastructures and resources to guarantee peace and order so that the safety and security of civilians and civilian activities would be unhampered. Pag-Asa Island is the only Philippine-occupied island in the Spratlys that is inhabited by civilians. We are talking about pristine waters that is rich in biodiversity that makes it an ideal destination for tourists.

Proposed Senate Resolution 472 is a result of our meeting with academics from the University of the Philippines (U.P.) who observed that we are not maximizing the promotion of NBT in spite of the competitive advantage our country has because of its wealth of resources. Masungi Georeserve trustee Billie Dumaliang agreed that nature-based tourism in the country is still underdeveloped and undermarketed. In fact the United Nations Development Program found that the gap on financing for biodiversity in the Philippines is at 80 percent. Biodiversity Conservation Society of the Philippines pressed the need for consultations to identify protected areas and other nature reserves in the country that have the potential to become flagship destinations for NBT.

As Philippine tourism was heavily hit by the recent COVID-19 pandemic, there is a need to diversify the sector's products and services while being conscious of sustainability. We fervently hope these discussions would form part of the country's rallying cry to further advance and develop our competitive advantages to propel growth and recovery in the tourism sector.

## SUNSTAR

### Pampanga is vulnerable to Climate Change

By: Rox Peña

Last week, a disturbing news came up. According to a study, ten provinces in the Philippines are the most at risk of damage from extreme weather to their buildings and other property developments in about two decades. What is frightening is that Pampanga is second in that list.

According to the 2023 Gross Domestic Climate Risk ranking by the Sydney-based climate-change research firm The Cross Dependency Initiative (XDI), Pangasinan, Pampanga, Nueva Ecija, Cagayan and Tarlac are the five most at-risk provinces based on their aggregated damage ratio (ADR)—or the total amount of damage to their built environment because of climate-induced disasters such as flooding and rising sea levels.

Out of the 2,639 jurisdictions (states, provinces and territories) worldwide covered by the report, Pangasinan's ADR ranked 238th, followed by Pampanga at 268th, Nueva Ecija at 359th, Cagayan at 417th and Tarlac at 430th place. The other five provinces are Metro Manila, Bulacan, Isabela, Davao Del sur and Leyte.

I did not check the methodology of the study, but I do know that the coastal towns of Pampanga frequently suffers from flooding during the rainy season. This flooding will get worse with rising sea levels due to melting ice brought about by global warming. There is a possibility that water from Manila Bay where Pampanga River discharges, will flow back and inundate areas along the riverbanks. In 2011, I've seen a presentation in a forum that discussed this scenario.

In that forum on Climate Change organized by the environment committee of the Philippine Chamber of Commerce and Industry, the speaker was Dr. Neric Acosta, a three-term Congressman of Bukidnon who authored the major environmental legislations on air, water and solid waste. He presented a simulation of a 6-meter rise in sea level which showed that the flood will reach even the City of San Fernando. He said that that the flooding brought by typhoons Ondoy and Pepeng somehow confirmed their model.

The sea level rise might come sooner than expected. In the Philippines, sea level is rising three times faster than the global average, according Rosalina De Guzman, a climate scientist of the Philippine Atmospheric, Geophysical and Astronomical Services Administration (Pagasa). She did not explain why this is so. Another Pagasa scientist,

Dr. Marcelino Villafuerte, said that the sea level in the Philippine Sea had risen by about 12 centimeters over the past two decades.

Complicating the flooding problem in Pampanga is another phenomenon – sinking land. This is called land subsidence, the sinking of the ground because of underground material movement most often caused by the removal of water, oil, natural gas, or mineral resources out of the ground by pumping, fracking, or mining activities. In the case of Pampanga, it's the excessive pumping of ground water from deep wells for domestic, agricultural and industrial purposes that is causing it. There's a report in 2019 which said that the provinces of Bulacan and Pampanga have sunk between 4 to 6 centimeters since 2003.

Land sinking and sea level rising is a deadly combination for disaster.

## [Opinion] Sustaining environment friendliness

By: Benjie R. Pangan

MOST countries worldwide have been aware and are, in fact, active in maintaining a carbon emission-free environment and ecosystems.

It takes a coordinated effort to generate support and enthusiasm from the public as well as private enterprises, for the further protection of the environment and really take doable steps to achieve all goals of sustaining preservation of the environment.

One such private establishment, the giant conglomerate SM Supermalls and its attached entities and foundations which take active part toward environment protection.

Indeed, at SM City Clark is found a free e-vehicle charging site where motorists are welcome to the connections. SM's Green Movement encourages environment upkeep and sustainability which is replicated nationwide.

It surely hopes that other large conglomerates like SMC, Aboitiz Ventures and Ayala Corporation are taking giant steps toward environment upkeep and protection. Ayala, for its part, has been in deep concentration on renewable energy.

It takes active participation and cooperation of these huge facilities to support the government's goal to achieve environment-friendly projects, programs and activities.

Worldwide, the United States and its allies notably France and the United Kingdom are in the forefront of the drive to combat the ill effects of climate change and the recurring carbon emissions they too target and aim for a zero carbon network.

The very destructive 7.8 magnitude earthquake which hit Turkey and Syria some weeks ago should be another wake up call for Philippine authorities.

The death toll reportedly is rising over 41,000 and more as the recovery efforts are undertaken by various nationalities.

## THE MANILA TIMES

### [NEDA approves 194 high-impact projects](#)

By: Kristina Maralit

THE National Economic and Development Authority (NEDA) Board, with President Ferdinand Marcos Jr. at the helm, has green-lighted 194 high-impact priority projects under the Infrastructure Flagship Projects (IFPs). It also approved amendments to the 2013 Joint Venture (JV) Guidelines that are seen to further strengthen the government's "Build Better More" program.

NEDA Director-General Arsenio Balisacan said the new IFP list and the amendments to the JV guidelines will improve the country's competitiveness and make it a prime investment destination in the region.

The new IFP list mentions 194 projects totaling around P9 trillion, the bulk of which are in irrigation, water supply and flood management.

It also includes projects in digital connectivity, health, power and energy, agriculture and other infrastructure.

"We will connect and integrate markets to enable access to more opportunities for local industries, enhance the productivity of our young and vibrant labor force, and create safer infrastructure for future generations," Balisacan said at a press briefing in Malacañang on Thursday.

"Ultimately, we wish to improve the overall quality of life of all Filipinos and empower every citizen to live a stable, prosperous, and tranquil life," he added.

Some of the new projects included in the list are the Panay Railway Project, Mindanao Railway Project 3, North Long Haul Railway, San Mateo Railway, UP-PGH Diliman Project, the NAIA or Ninoy Aquino International Airport Rehabilitation Project, Ilocos Sur Transbasin Project and the Metro Cebu Expressway. These initiatives are aligned with the present administration's 8-Point Socioeconomic Agenda as outlined in the Philippine Development Plan for 2023-2028.

"These high-impact and urgently-needed infrastructure projects aim to showcase the government's Build Better More program," stated the official.

The new IFPs are seen to address the constraints to business investment and expansion and will create more high-quality and resilient jobs that will allow the

Philippines to meet its poverty-reduction goals for the medium term. These will also be among the priorities under the government's annual budget preparation.

The aforementioned projects will adopt an optimal mix of financing from various development partners or Official Development Assistance, the national government or the General Appropriations and the private sector or the public-private partnerships (PPPs).

Forty-five of the 194 new IFPs will be financed through partnerships with the private sector.

To hasten their rollout, Balisacan said the Marcos administration is strongly promoting the utilization of PPPs, which he said is "one of the cross-cutting strategies likewise identified in the Philippine Development Plan 2023-2028."

"The government shall harness the financial and technical resources of the private sector, which allows the public sector to allocate its funds for greater investments in human capital development, especially to address the scarring in health and education due to the pandemic and provide targeted assistance that protects vulnerable sectors from economic shocks," he said.

The Marcos administration's efforts to go full throttle in infrastructure is borne of its vision to "transform" the country's economic landscape "in the next six years."

"Recognizing that our country has much work to do to catch up with our dynamic neighbors in the region, we will pursue high-impact initiatives that aim to encourage greater local and foreign investment and private sector participation in infrastructure development," Balisacan said.

## THE PHILIPPINE STAR

### [Napocor wants clean energy usage in SPUG off-grid plants](#)

By: Richmond Mercurio

MANILA, Philippines — State-owned National Power Corp. (Napocor) is teaming up with APTI Renewable Energy Corp. for the development of sustainable renewable energy using biofuel and biomass hybrid power in the off-grid areas of the country.

Napocor has signed a memorandum of understanding (MOU) with APTI REC in line with its ongoing efforts to explore innovative ways to accelerate its renewable energy and sustainability programs following recent funding challenges resulting from surging prices of fuel in the world market.

Napocor president and CEO Fernando Martin Roxas said the partnership is part of the corporation's move to gradually minimize the dependence of its operations on fossil fuels.

"The MOU will allow us to access APTI REC's technology on the use of biofuel or palm oil as an alternative fuel," Roxas said.

"Together, we shall also collaborate to build a prototype bioenergy renewable energy power plant that uses palm oil and develop an integrated logistical and technical system for the production of biofuel and biomass," he said.

At present, the country's off-grid islands are powered mostly by diesel plants through the Napocor Small Power Utilities Group (SPUG).

Napocor operates a total of 281 SPUG power plants nationwide.

Roxas said there is a potential for the application of APTI's technology in SPUG areas since most of these can be converted into palm oil plantations.

"Apart from high fuel prices, off-grid areas also suffer from inclement weather situations that sometimes hinder the delivery of fuel which in turn affects their power supplies," Roxas said.

"If we can develop a model of this technology on various SPUG areas, we can save costs on fuel and hauling," he said.

Roxas said the success of the partnership and the programs that would stem from it would eventually help Napocor achieve more affordable and cleaner energy, while providing additional livelihood opportunities in the off-grid areas.

APTI REC is a subsidiary of Asian Pyrochem Technologies Inc., an authorized export and import channel of the governments of Indonesia and the Philippines under a government-to-government energy program through PT PP Persero TBK and Philippine National Oil Co.

“We are happy to share our knowledge and experiences and to have found an ally in championing renewable energy in Napocor. This partnership will not only pursue energy development but will also help alleviate poverty in the countryside particularly in Small Power Utilities Group areas,” APTI REC president and CEO Harley Luis Leaño said.

Napocor is working on its long-term sustainability plan to mitigate the impact of high fuel prices on its operations.

Part of the plan is the accelerated hybridization of SPUG power plants with renewable energy resources.

To expedite the deployment of renewable energy in its service areas, Napocor is looking to work with the private sector through public-private partnership arrangements.

Napocor, as mandated by the Electric Power Industry Reform Act of 2001, is tasked to perform missionary electrification in the farthest communities and islands not connected to the main grid.

It is in this capacity that the corporation operates 281 SPUG plants in 189 municipalities across 35 provinces in the country.

## [We need regenerative agriculture to tackle climate change, to future-proof farms](#)

By: Jose T. Uy III

Global warming from human activity is increasingly driving climate change, arguably the greatest threat to our survival today. Already, we are experiencing its frightening, even life-threatening results, including more destructive weather patterns, hotter temperatures; rising sea levels endangering low-lying land; higher disease incidence; and decreasing agricultural and food output. The consequences can only worsen if we do not act now and with utmost urgency to mitigate climate change. We have no choice.

As the world's largest food and beverage (F&B) maker, Nestlé's chips are all on the table, as it were, with a commitment to tackle climate change across our entire business. Guided by an environmental roadmap, Nestlé is implementing critical measures to achieve net zero greenhouse gas (GHG) emissions by 2050, in support of a Paris Agreement target to limit global temperature rise to 1.5 degrees Celsius in 2023.

At Nestlé Philippines, we focus on a range of climate change initiatives in our operations with which we can deliver maximum impact. Two examples:

- A comprehensive approach to plastic, a major source of GHGs that itself has caused a separate environmental crisis. Our upstream - downstream strategy involves developing packaging alternatives and reducing, avoiding plastic use; collecting plastic waste equal to or exceeding the amounts in our packaging; educating some 11 million schoolchildren, their parents, and teachers on solid waste management; and enlisting consumers to deal with plastic waste;
- We have shifted to renewable electricity at our Makati administrative office, our four factories in Luzon, the Nestlé Business Services facility in Bulacan, and are working for a similar transition at our factory in Mindanao. For years, all our factories have consistently reduced the use of energy and other resources, cutting GHG emissions and costs.

Agriculture, the World Bank says, is a major part of the climate problem, generating 19 to 29 percent of GHGs globally. Conversely, agriculture is highly vulnerable to climate change, as seen in declining crop yields. Substantial investments in adapting to climate change, the World Bank notes, will be required so that agricultural output and food quality can meet demand adequately.

The source of our raw materials, agriculture, is intertwined with Nestlé value chains. And so, we have a responsibility to do all that is feasible to help maintain, enhance, and safeguard agricultural performance.

We are propagating regenerative agriculture as the best course towards mitigating climate change in the agricultural sector. Simultaneously, it improves the climate resilience of farming, also restoring, even enhancing nature's ability to yield bountiful, good food. Regenerative agriculture is a way of farming to reverse the effects of climate change by improving soil fertility and restoring degraded soil biodiversity. Building systemic crop health, it also reduces carbon emissions and improves water systems, creating an ecosystem with more plant and animal varieties able to thrive. Most importantly, it mitigates the adverse effects on the planet of food production, and helps boost livelihoods and increase food security, allowing farmers to grow nutritious food in coming years.

As the country's biggest buyer of Robusta coffee beans, Nestlé Philippines through the NESCAFÉ Plan works closely with coffee farmers and their communities to sustainably increase their yields, incomes, and quality of life beyond subsistence levels. We collaborate with the national government, LGUs, development agencies, and other partners to promote a regenerative agriculture model that protects key resources: soil, water, and biodiversity.

Fostering economic viability in coffee farming, the NESCAFÉ Plan seeks to support farmers in transitioning from sustainability to regeneration. We share coffee Good Agricultural Practices, with regenerative farming principles that will help make coffee-growing more viable. This is a crucial step in strengthening coffee farming against climate change. With our global direction to take an active role in building large-scale regenerative food systems, we have introduced regenerative agriculture to Filipino coffee farmers. We are disseminating four doable practices: (1) planting cover crops; (2) using compost; (3) practicing agroforestry; and (4) engaging in intercropping. These methods work in synergy to preserve and reinvigorate farming resources.

For Nestlé Philippines, regenerative agriculture is indispensable and will make the difference in coffee farming. In fact, it can considerably benefit the country's whole agriculture sector, as it grapples with climate change and various aspects of food security, such as domestic, long-term crop shortfalls. Hopefully, more businesses involved in local agriculture and food production will take up the cause of regenerative agriculture to tackle climate change, and to future-proof farm productivity. It is hard to do, requiring commitment and resources, but it can and must be done.

## WORLD ECONOMIC FORUM

### [How much faith can we have in backup plans for the climate?](#)

At 10:38 on a June morning in 1991, a volcano in the Philippines exploded. Mount Pinatubo sent an ash cloud 35 kilometers into the heavens, killing hundreds of people and impacting millions more. Before the dust had fully settled, something else happened: Earth's surface measurably cooled for a couple of years.

Last September, researchers in the UK lofted a balloon filled with sulfur dioxide, a common ingredient in volcanic eruptions, nearly 25 kilometers into the air before it burst. The no-frills experiment was described as a possible scientific first in the field of "solar geoengineering" – the scattering of particles into the atmosphere to deflect the sun's rays, and create a cooling effect similar to Mount Pinatubo's aftermath.

It likely won't be the last test of the potential for solar geoengineering to help mitigate the climate crisis, even as it's being likened to a scientific act of desperation.

A group of experts published an open letter last month pressing for more rigorous and responsible study of solar geoengineering, "as rapidly as possible." That followed a 2021 report issued by the National Academy of Sciences in the US, calling for an international registry of related research that asks "not just can we, but should we?"

There's inevitable tension involved in tinkering with the weather in one part of the world in ways that may negatively impact another, potentially drawing a response. Or in a pursuit that could just end up making a bad climate situation worse. That means even as models suggest solar geoengineering could help prop up food production in a warming world, skepticism abounds.

Mexico recently announced plans to ban solar geoengineering experiments. A global initiative was formed last year solely to halt its development.

Momentum behind the concept grows, however, the more challenging it seems to limit warming to a point where it can prevent increasingly catastrophic impacts.

Experts have warned that exceeding 1.5°C in warming above pre-industrial levels would increase risks related to health, food security and water supply. Warming reached an estimated 1.21°C as of January; it's been projected to hit 1.5°C by 2035.

Yet, giving up on the 1.5°C goal and focusing instead on ways to soften the climate blow, like solar geoengineering, could be a grave mistake.

That hasn't stopped people from conjuring up other varieties of backup plan.

One proposal would use thin-film space bubbles floating above the planet to deflect sunlight. Another is based on the idea that dumping iron into the ocean will help spawn carbon dioxide-devouring phytoplankton. Last month, astrophysicists suggested firing plumes of dust from the moon's surface to create a "solar shield" for Earth.

'Termination shock' and anticipating climate impacts

It may be controversial, but solar geoengineering is also an inevitable part of discussions about what should come next after years of climate inaction.

One solar geoengineering research effort at Harvard University aims to launch a balloon from a platform in Sweden 20 kilometers into the sky, to release mineral dust and measure the resulting atmospheric chemistry and light scattering. It's drawn significant pushback, and in 2021 the test was suspended pending a "more thorough societal engagement process."

The UK government said it has commissioned studies on the effects of solar geoengineering, but has no plans to deploy it. The German government has funded related research, and China has reportedly assembled one of the biggest research programs in the world. Last year, the US government moved ahead with its own effort.

Uncertainty about who should own the intellectual property underpinning a potentially world-saving science is yet another source of friction. Actively involving the developing economies most vulnerable to climate change in discussions about how solar geoengineering is (or is not) developed is also a point of concern.

There are technical matters to be sorted out, too.

Questions have been raised about how to best get the necessary particles into the air, for example, and how high they need to go in order to be harmless and effective.

And if particles really have to be released at an altitude roughly double that of typical flight paths for airliners and military jets, that could point to serious cost and safety hurdles.

Measuring the effectiveness of solar geoengineering may also be less than straightforward.

Perhaps the biggest hang-up to date: “termination shock.” If countries do manage to collectively ramp up solar geoengineering efforts, experts say, an abrupt interruption due to a war, for example, or even a shift in political will within a particular country, could trigger a calamitous spike in pent-up warming.

The science fiction author Neal Stephenson, known for portrayals of a post-apocalyptic, dystopian future, made the title of his most recent book a reference to the concept.

That means an extraordinary degree of international cooperation would be required to safely make solar geoengineering work. Among the many issues with the proposed technique, this seems to fall under the category of addressable problem.

Any discussions about its further development can and should be as global, inclusive and transparent as possible.

That would count as a win, regardless of whether solar geoengineering ever becomes a reality or not.

## CCC IN THE NEWS:

### MANILA STANDARD

#### [Marcos, other officials join quake drills](#)

President Ferdinand R. Marcos Jr. and other Cabinet officials participated in the Nationwide Simultaneous Earthquake Drill (NSED) for the first quarter of 2023.

The earthquake drill, which started at 2 p.m., was held at Malacañan Palace.

Mr. Marcos was accompanied by Senior Deputy Executive Secretary Hubert Guevara, Special Assistant to the President Antonio Ernesto Lagdameo Jr., National Security Adviser Eduardo Año, Department of the Interior and Local Government Secretary Benhur Abalos Jr.

The National Disaster Risk Reduction and Management Council (NDRRMC) earlier encouraged the public to join earthquake drills to reduce casualties as there are still no means to predict when temblors would occur.

The quarterly conduct of the nationwide earthquake drills each year is an effort of the government to promote disaster preparedness and resilience among Filipinos.

The following are steps or protocols to stay safe during an earthquake:

- When inside a building, stay calm and do the “Duck, Cover, and Hold”;
- Duck under a strong table and hold on to it. Stay alert for potential threats;
- Stay away from glass windows, shelves and heavy objects;
- After the shaking stops, exit the building and go to the designated evacuation area;
- When outside, move to an open area, stay away from buildings, trees, electric posts and landslide-prone areas;
- If you are in a moving vehicle, stop and exit the vehicle.

In December last year, Climate Change Commission (CCC) vice chairperson and executive director Robert Borje assured that the government is “doing all it can” to boost the country’s emergency preparedness and response during earthquakes.

In 2018, former President Rodrigo Duterte issued Executive Order No. 52, creating the Program Management Office for Earthquake Resiliency of the greater Metro Manila area and tasked it to ensure that all government efforts in preparing for a huge quake are well coordinated.

EO 52 defines the institutional roles and responsibilities of government agencies to strengthen the country’s resilience to earthquakes, and to ensure public safety and government continuity.

The government has been regularly holding earthquake drills in Metro Manila to prepare for the so-called “big one” or a worst-case scenario of an earthquake from the West Valley Fault.

The Philippines is situated in the Pacific Ring of Fire, a path along the Pacific Ocean characterized by active volcanoes and frequent earthquakes.

## PHILIPPINE NEWS AGENCY

### [PBBM, other officials join nationwide earthquake drill](#)

By: Azer Parrocha

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