

13 July 2023 Thursday



**DENR**

# **NEWS ALERTS**

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**STRATEGIC COMMUNICATION AND INITIATIVES SERVICE**





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## DENR to adopt short-term water supply fixes

**By Rio N. Araja,  
Macon Ramos-Araneta  
and Maricel V. Cruz**

FACED with the effects of the El Niño phenomenon, the Department of Environment and Natural Resources (DENR) plans to diversify the country's water sources.

Undersecretary Carlos David, Water Resources Management Office head, urged the public to conserve water, noting that the Angat Dam in Bulacan is already below its minimum operating level at 178.8 meters or slightly below the 180 meters minimum.

He added DENR is also adopting short-term water supply augmentation programs, such as using water from Laguna Lake and reprocessing wastewater.

Rep. Elizaldy Co of Ako Bicol on Wednesday hailed the Congress, under the leadership of Speaker Ferdinand G. Martin Romualdez, for taking proactive measures to address the water supply

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### DENR...

*From A1*

challenges faced by many Filipinos, particularly exacerbated by the El Niño phenomenon.

Co said that "Romualdez's visionary leadership" has provided solar water systems to the upland areas, enabling access to essential services that were previously lacking. This groundbreaking move demonstrates Congress's commitment to leaving a lasting impact on the lives of the Filipino people.

"Even prior to the onset of the El Niño phenomenon, the Congress has allocated a significant budget of P10 billion in the 2023 GAA for the construction of solar-powered water supply systems across the country," Co, chairman of the House Committee on Appropriations, said.

He noted that Romualdez is committed to providing a solar-powered water supply system to 60 percent or 40 million Filipinos in the upland barangays to have access to potable water.

The Angat Dam supplies 98 percent of potable water in Metro Manila and its nearby provinces.

"One strategy is to diversify our sources of water, and not to rely too much on

Angat. There are a couple of efforts over the last few months to increase our sources of water besides Angat," he said.

These include the construction of the Kaliwa Dam, he said.

He also underscored the importance of water conservation.

"Every drop that we are able to save through individual efforts, through institutional strategies actually goes a long way because while the amount of water in Angat is still sufficient for Metro Manila and all concessionaires, we foresee the El Niño season to be moderate or strong," he said.

The drought conditions due to El Niño may extend until the first quarter of 2024, and its impact is likely to be more extreme than what is expected, he added.

Senator Grace Poe has renewed her assertion for the creation of the Department of Water Resources to lead the comprehensive development and management of water resources to address the water crisis as she vowed to conduct a Senate hearing on the matter.

"Of course, we have been pushing for a long time to create the Department of Water Resources... we understand that this administration wants to streamline," said Poe, who chairs the Senate public services committee. *(See full story online at manilastandard.net)*





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## Maynilad to address water supply cut

By BELLA CARIASO

Six augmentation projects are ongoing to address the impact of the National Water Resources Board (NWRB)'s allocation of 48 cubic meters per second to the two Metro Manila water concessionaires due to Angat Dam's declining water level.

Aside from the augmentation projects, daily service interruptions have been implemented to "cushion the impact of any supply constraints," Maynilad said.

"As these supply augmentation projects gradually come on stream over the course of the year, we should be able to generate more water supply for distribution to customers," Maynilad chief executive officer Ramoncito Fernandez said yesterday.

Daily service interruptions have been isolated to nighttime hours in some areas as additional water supply from the ongoing projects mitigated

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## Maynilad From Page 1

the drop in water allocation.

The ongoing supply augmentation projects include the reactivation of eight deep wells, four modular treatment plants in Cavite, a new treatment plant in Parañaque City, the Poblacion Water Treatment Plant, cross-border supply through the purchase of treated water from Manila Water and leak repairs and replacement of old pipelines.

The eight deep wells generated at least 5.6 milliliters per day (mld) as of March 2023.

The two modular treatment plants in Imus, Cavite will be operational sometime this year, while the two plants in Bacoor will be operational by late 2024.

The new water treatment plant in Parañaque City can generate five mld.

The Poblacion Water Treatment Plant, the third treatment plant sourcing raw water from Laguna Lake, would generate 50 mld by yearend and 150 mld by early 2024.

Maynilad is also hoping to recover 100 mld by yearend in leak repairs and replacing old pipelines.

"To date, at least 22 mld were generated from several tapping points as there are plans to increase volume purchased with the cooperation of Manila Water," Fernandez said.

Fernandez also gave assurance that Maynilad will shorten the duration of daily service interruptions. At least 591,000 service connections in portions of Caloocan, Malabon, Valenzuela, Navotas, Quezon City and Manila are affected by water interruptions.

Fernandez said Maynilad is working to reduce losses in its distribution system.

"Following major investments in the infrastructure, Maynilad managed to bring down (non-revenue water level in the west zone) to 43 percent by 2022. With its newly approved business plan, Maynilad commits to bring non-revenue water down to the internationally accepted level of 25 percent by 2027," he said.

### Decline

Meanwhile, Angat Dam recorded the highest daily drop in its water level after it decreased to 178.21 meters compared to its previous level of 178.80 meters.

The normal operating level of Angat Dam is 180 meters.

"So far, there is no further reduction in the allocations (for Maynilad and Manila Water). The National Irrigation Administration will likewise continue with the approved allocation," Metropolitan Waterworks and Sewerage System





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(MWSS) deputy administrator Jose Dorado Jr. told **The STAR** in a text message.

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

The water levels of other dams – Ipo Dam in Bulacan, La Mesa Dam in Quezon City, Ambuklao Dam and Binga Dam in Benguet, Pantabangan Dam in Nueva Ecija, Magat Dam in Isabela and Caliraya Dam in Laguna – also dropped.

Maynilad corporate communications head Jennifer Rufo said at least 80 mobile tankers are ready to provide water supply to Filipinos affected by daily service interruptions.

"We have 80 mobile tankers that we can deploy but as much as possible, we advise our customers to be prepared so that they will not depend on tanker delivery and at the same time, the tankers can be reserved for medical institutions," she added.

### Water resources department

Sen. Grace Poe yesterday reiterated the need to create a Department on Water Resources amid the hours-long service interruptions resulting from Angat Dam's declining water level and the El Niño phenomenon.

"There are 30 different government agencies governing our water distribution and management, and they are not complementing each other," Poe said in Filipino at the Kapihan sa Senado forum.

"We're supposed to be a tropical country and yet we have problems with water supply. The problem is not with water flow in the country – it is a management problem," she added.

Poe said the MWSS has become "inutile" in its administration of water.

"MWSS should have a contingency plan. We shouldn't be dancing and praying for rain to happen. As far as I know, MWSS should be the one supposed to be actively looking for new water sources, which they haven't been doing," she said.

Poe also urged authorities to come up with modern and long-term solutions instead of "primitive" water rationing at barangays and relying on rainfall.

More dams and water catchments should be constructed and repairs must be done to prevent water leakages, Poe said. – With Marc Jayson Cayabyab





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## Solving the water crisis

**A**s early as March this year, President Marcos had acknowledged a looming water crisis. Recent events proved him right.

First, the Philippine Atmospheric, Geophysical, and Astronomical Services Administration (Pagasa) declared the onset of El Niño, a climate pattern that increases the chances of below-normal rainfall conditions in our region. Just a few days after the declaration, reports came in that the water level in Angat Dam, Metro Manila's main source of raw water, had fallen below its minimum operating level, thus raising the possibility of decreased water supply for the metropolis. True enough, an advisory from Maynilad Water Services Inc. followed, stating that the company will enforce rotating water service interruptions in various areas of Metro Manila.

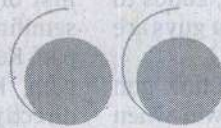
Unfortunately, matters could get worse in the coming months, since Pagasa anticipates that El Niño may persist until next year. Water scarcity could lead to several problems, chief of which is the lack of drinking water. Early this year, an officer of the National Water Resources Board said that around 11 million Filipino families still do not have access to clean water, with many obtaining water from unsafe sources. One can only imagine how much the present crisis could increase this number.

Another glaring problem is the potential decrease in food production, especially in a country like ours which relies heavily on agriculture. The lack of water could result to crops drying up that, in turn, could drive up food prices. This is alarming considering that we are still grappling with the injurious effects of a global inflation.

The government must act fast to solve the

### COMMENTARY

MARIO C. CERILLES JR.



**THE GOVERNMENT SHOULD  
ENSURE THE SAFE AND  
SPEEDY CONSTRUCTION OF  
DAMS THAT WOULD PROVIDE  
ADDITIONAL WATER SUPPLY  
TO THE POPULATION**

water crisis, or at the very least, to mitigate its effects. The creation of the Water Resources Management Office under the Department of Environment and Natural Resources, along with the plan to create an institutionalized Department of Water Resources through legislation, signal a good start. These could help harmonize efforts in tackling the present crisis. Similarly, the directive to government agencies, local government units, and other stakeholders to enforce water conservation measures is commendable. Nevertheless, the government should still implement other long-term solutions.

To begin with, there is a need to find other sources of clean water. The government

should ensure the safe and speedy construction of dams that would provide additional water supply to the population. This is not an easy task, considering that the government must also preserve the environment and protect the rights of indigenous peoples. At this stage, however, the government has no choice but to find a way to navigate these issues.

Additionally, the government could rely on technological solutions. For example, it could look into the installation of hydropanels—solar-powered panels that trap water vapor through the natural process of condensation. Just a few years ago, a nonprofit and a United States-based company collaborated and successfully installed hydropanels in Palawan, which reportedly helped provide a renewable supply of drinking water to an indigenous community. While admittedly, implementing a similar project or any other technology-focused project on a larger scale can be costly, such endeavors are worthwhile as they can also provide more lasting solutions to the water crisis.

Perhaps the government can encourage the country's biggest conglomerates, particularly those whose operations require the consumption of vast amounts of water such as real estate developers, to invest in similar technology. Inevitably, the country can only solve the current crisis if both the public and private sectors will cooperate and exert efforts toward water conservation.

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26 YEARS AFTER PRIVATIZATION

## SENATE TO REVIEW WATER FRANCHISES

By Marlon Ramos  
@MRamosINQ

Sen. Grace Poe on Wednesday said the water interruptions that affect nearly 600,000 residents in Metro Manila only showed the need to create a new department to harmonize the mandates of over 30 state agencies involved in water supply systems.

Poe, the chair of Senate committee on public services, also blasted the Metropolitan Waterworks and Sewerage System (MWSS) for its failure to build infrastructures to address the water supply problem in the metropolis.

She said establishing Department of Water Resources would centralize the government's role in the distribution and management of water, and

in regulating water utilities.

"I'm sorry to say this, but the MWSS has become inutile," Poe said at the Kapihan sa Senado press forum.

"They have failed in the administration of [water resources]. We will really have a problem in the supply of water because we don't develop the needed infrastructure," she said.

She noted that the MWSS was only good at disrupting people's water supply, but not at attending to needed investment in infrastructure.

The senator said her committee will conduct an inquiry to review the compliance of water concessionaires with their contractual obligations under their legislative franchises.

"About 11 million [Filipinos]

still do not have access to [clean] water. That's almost 10 percent of our population. There's really a failure in the implementation [of policies]," she said.

Sen. Christopher Lawrence Go also urged the MWSS to be more responsive to consumer needs after water services were privatized in 1997, or 26 years ago.

"They have to make a way," Go told reporters in Filipino in Quezon City. "People pay properly to get water and that should be met with proper service."

### Lower allocation

That was Go's reaction when asked about Maynilad Water Services announcement on Monday that they may have to cut water service to Metro Manila's West Zone starting

July 12 as a result of lower allocation from the Angat Dam.

The National Water Resources Board (NWRB) allocates water supply from Angat Dam to MWSS, which in turn decides how much to split between the metropolis' two water concessionaires, Maynilad and Manila Water Services.

NWRB executive director Sevilla David Jr. said last week that water agencies are already looking at boosting the operations of water treatment facilities and deep wells as alternative sources.

But he said water agencies are, by and large, still dependent on weather patterns to replenish Angat Dam, particularly from July to September, the usual season for the southwest monsoon, or "habagat." INQ





## EDITORIAL

# Water diversification

A day before water supply rotation started in large areas of Metro Manila, the Department of Environment and Natural Resources said the government is diversifying its water sources and reducing dependence on Angat Dam. The DENR's Water Resources Management Office said new infrastructure is under construction while wastewater recycling programs are being pursued.

Among the "new" infrastructure cited was the Kaliwa Dam, which is projected to be finished by the end of 2026. This multibillion-peso project, however, has been in the pipeline for a long time, despite repeated reminders from the two Metro Manila water concessionaires that the government committed to develop new fresh water sources for the capital region.

Completion of the dam has encountered strong resistance from indigenous groups who fear the loss of their ancestral lands and cultural heritage. The Marcos administration will have to exercise political will in balancing the needs of the National Capital Region and neighboring areas with those of indigenous communities.

Political will is also needed to stop continuing reclamation activities and reduce the number of fishpens, owned mostly by political families or the well-connected, in Laguna de Bay. Despite its heavy siltation, the lake is being

tapped as a short-term water source for Metro Manila. The reclamation and siltation have affected the natural floodplain around the lake, resulting in severe flooding in lakefront communities.

Treating wastewater has also been talked about for some time. It would be good if the government gets serious in promoting the initiative, with incentives dangled to the private sector for investing in the technology that has already been in use for many years in several countries.

There is also talk about developing rain catchment systems at the community level. Such catchments were already in place in the country before the 20th century, but lost popularity with the introduction of piped water distribution systems. With the country getting so much rainfall every year, water catchments can help mitigate, among other things, irrigation woes during the dry season. There are also existing rainwater harvesting or collection systems for residential and building rooftops, available for sale and even for do-it-yourself application.

Each time the water levels in the dams drop, there is talk about rushing the development of new water sources, rainwater harvesting and water recycling. With Metro Manila back to water rationing, it's time to get serious about all these initiatives.





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#INQNATIONAL



**STUNTED** Ricarte Nicolas checks on his corn plantation in the City of Ilagan, Isabela province, on Wednesday, as his crops start showing signs of stunting due to lack of rainfall in recent weeks. With the onset of the El Niño phenomenon, water levels in major dams in Luzon, including Magat in Isabela, have started to drop, reducing irrigation supply to farms. —VILLAMOR VISAYA JR.

PHILIPPINE DAILY INQUIRER  
**REGIONS**

Editor:  
Maria Edralyn L. Benedicto

# Water levels in Luzon dams keep dropping

**Farmers in Cagayan Valley, Central Luzon worry about their crops as Magat, Angat reduce irrigation supply**

By Villamor Visaya Jr. and Carmela Reyes-Estrope @InqNational

**RAMON, ISABELA**—Water levels at Magat Dam in Isabela province and Angat Dam in Bulacan province continue to drop to almost their critical levels as the dry spell brought about by the El Niño phenomenon persists.

On Wednesday, Magat Dam's water level registered 162.89 meters, slightly above its 160-meter critical level and the lowest level recorded at the reservoir in this town this year. Magat's lowest water level on record was 149 meters in July 1991.

Water inflow was recorded at 24.19 cubic meters per second (cms) and outflow at 147.22 cms, said Carlo Ablan, National Irrigation Administration-Magat River Integrated Irrigation System (NIA-MARIIS) division manager, in an interview on Wednesday.

In Bulacan, water level at Angat Dam, the main source of water for Metro Manila households and businesses and for farms in Bulacan and Pampanga provinces, had dropped to 178.14 meters on Wednesday, which was almost 2 meters lower than the 180-meter minimum operating level. Its elevation on Tuesday was 178.76 meters, 179.19 meters on Monday and 179.54 on Sunday.

**Rotational release**

As a remedial measure, Magat Dam, which supplies irrigation to 88,000 hectares (ha) of palay farms, reduced its rotation



**HANGOUT SPOT** Students on a break relax by Angat Dam at Barangay San Lorenzo in Norzagaray, Bulacan, on Monday, unmindful of the receding water level at the reservoir. Angat's water level on Wednesday dropped to 178.14 meters, below the 180-meter minimum operating level. —LYN RILLON

al water release from 150 cms to 112 cms this month, according to an advisory issued by Roldan Bermudez, NIA-MARIIS engineering and operations division acting manager, on Wednesday.

Supply for upstream farms will be limited for three days while downstream farms will also be irrigated for three days each week.

If the lack of rainfall persists in the coming weeks and the Magat reservoir hit its critical level, the dam would likely be unable to irrigate its service areas in three towns in Quirino province and in Cordon town and Santiago City in Isabela. The 11,000-ha area being serviced by the Baligatan diversion dam will also be affected.

Lack of irrigation water supply from Magat increases farm expenses as farmers turn to water pumps, according to farmer Simeon Danao of Gamu, Isabela.

"This is an additional expense. Why can't the government provide solar-powered

pumps and more subsidies to farmers? We are losing money," Danao said.

**Gov't help sought**

Palay farmer Lucito Preza of Barangay Lenzon, also in Gamu, rued the lack of priority of the government on irrigation expansion.

"We are so sad to hear the news. The government prioritizes agricultural commodities for Metro Manila but not [the need] for irrigation of farmers in the provinces," Preza said.

According to Narciso Edillo, Department of Agriculture regional executive director in Cagayan Valley, the government had been monitoring the impact of the El Niño weather phenomenon in places like Isabela and other provinces in Cagayan Valley as these areas are major sources of crops like rice.

But Edillo said the government was discussing the distribution of water pumps and seed subsidies and the conduct

of cloud-seeding operations to help farmers in the region.

Carlos Dimaapi, a farmer leader in Plaridel, Bulacan, said rice farmers on their second cropping season had no choice but to rely on the reduced supply from Angat Dam, now down to 28 cms from the 36 cms regular allocation from the National Water Resources Board (NWRB).

The NWRB reduced the allocation for the irrigation needs of the farmers to prioritize the water requirement of Metro Manila households and businesses.

Dimaapi said their farms could still tap stock water in irrigation canals, which were collected from previous rains in Bulacan, except those in the Sierra Madre ranges in the uphill areas of Norzagaray town.

Francis Clara, head of the Water Control and Coordinating Unit of NIA, said water in the 26-kilometer stretch of irrigation canals from Angat Dam to Bustos Dam, which the agency released on June 16 or a day after farmers started planting, would still be enough to supply farms during the second cropping season.

More than 20,000 farmers, tilling around 27,000 ha in four towns in Pampanga and 16 towns in Bulacan, depend on Angat Dam for their irrigation needs.

Clara said the 28 cms allocation for irrigation will continue until July 30. The NWRB has yet to announce the allocation for farmers for August and September before the harvest period in October. **INQ**





## Don't waste water, don't waste rice?

**I**t was the National Irrigation Administration (NIA) that sounded the call last weekend for the public to stop wasting rice for there is a great likelihood of a shortage in the commodity. The threat of El Niño on palay production is more serious than initially thought. Sounding trivial, NIA appealed to rice eaters "that if we cannot consume the entire one cup of rice, we should only order half."

But neither climate change as an existential issue, nor water supply is trivial.

The Philippines in recent years has suffered enough the ravages of climate change. We see that in rising sea levels that have been claimed to be three times the global average. Yolanda is just too recent to be swept away to history books. Typhoons continue to assault us in greater frequency, even on Christmas Day. Climate advocates now observe the destruction of natural ecosystems and devastation of what remain of our forests.

No less than the Social Weather Stations reported in March 2023 that 93 percent of Filipinos polled in December 2022 have personally experienced the negativity of climate change. Five years earlier in 2017, some 87 percent felt the impact of climate change. That NIA call should resonate with many of us because even climate awareness has increased from 74 percent to 81 percent.

For we are no strangers to climate change in the Philippines.

Likewise, water can never be trivial as far as palay and other food production is concerned. The International Rice Research Institute documented that "the current way of growing irrigated rice in most Asian rice farms requires large amounts of water." In India and the Philippines, for instance, one kilo of rice would need around 3,000 liters of water. More water would be needed for land preparation.

True, the President announced as early as late April this year his government's efforts to mitigate the "looming dry spell" of El Niño. The approach is basically to convert the country's dependence on water supply from underground water to surface water.

To do this, the President created the Water Resources Management Office (WRMO). The Palace thinks this office should be senior to MWSS, Local Water Utilities Administration (LWUA) and the National Water Resource Board (NWRB). Its recommendations should be followed. How this is going to be executed with an office that is still a work in progress in the middle of El Niño is impossible.

The next problem with the office is that the premise of its mandate does not conform with what's on the ground. The President argued that "We have sufficient...there's enough water in the Philippines, we don't just use water, we also waste it."

If that's the case, how does one explain Senator Grace Poe's admoni-

*Water can never be trivial as far as palay and other food production is concerned. The International Rice Research Institute documented that 'the current way of growing irrigated rice in most Asian rice farms requires large amounts of water.'*

tion of MWSS to be more proactive in avoiding water crisis?

And we have one brewing. Some 600,000 Maynilad customers in the west concession zone in Metro Manila stand to suffer water service interruption up to nine hours nightly starting this week. This means that outside Metro Manila, residents of Rizal, Cavite and Bulacan will also be affected. The Department of Environment and Natural Resources (DENR) has admitted that Angat Dam's water level continues to decline below the minimum operating level of 180 meters.

Such an initial outcome should surprise no one because if indeed we have sufficient water supply, all we need to do is either to issue directives and advisories to the public to conserve water or prepare plans.

Obviously, the problem is much deeper, and more serious, one that cannot be licked by directives and advisories.

Even then, it is only now that orders have been actually issued to speed up the approval — yes, just the approval — of pipe repairs by Maynilad and Manila Water! We don't find it reassuring that WRMO should realize only now that it needed to conduct spot inspections of office building for "unwarranted use of water, leaks and faulty bathroom fixtures. The WRMO must have under its employ millions of inspectors to do this and advance water conservation.

We cannot stress enough that a concrete strategy for mitigating El Niño should be rolled out to the general public. Water is *sine quanon* to producing rice and other food commodities. And to do something about this prolonged drought is the responsibility of government. Otherwise, we paint ourselves in a corner for another season of food shortage and galloping inflation.

A presidential directive to government agencies to prepare for the possible impact of the dry spell, ensure "protocol-based and scientific" long-term solution, and information campaign is hardly game changing. It's even less than a nudge in today's context.

What we read in the papers and social media are essentially stop-gap: don't waste water, don't waste rice.

In the middle of the Asian Financial Crisis 1997-1998, we recall that we also struggled against an earlier El Niño. Its likelihood was flagged a couple of years earlier. Monthly advisories on the weather outlook were released. An Inter-Agency Committee for Crisis Wa-



**OF SUBSTANCE  
AND SPIRIT**

DIWA C. GUINIGUNDO





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An employee of the Malabon Environmental and Natural Resources Office inspects the newly installed rainwater harvesting facility in Barangay Potrero yesterday. The DENR has called on local government units to establish alternative water sources as Angat Dam's operative level continues to drop.

JESSE BUSTOS





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THE EXPONENT OF PHILIPPINE PROGRESS  
SINCE 1900  
**MANILA BULLETIN**  
THE NATION'S LEADING NEWSPAPER

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# Senate commmits to speed up passage of bamboo bill

By BERNIE CAHILES-MAGKILAT

The various bamboo development bills are being consolidated under Senate Bill 605 for public hearing on July 19, 2023 amid the Marcos administration's goal develop the biggest agriculture industries in the country.

Authored by Senate President Juan Miguel F. Zubiri, SB 605 or an "Act Institutionalizing the Philippine Bamboo Industry Development Program," will create among the biggest agriculture industries in the country.

The Bamboo Bill is seen to speed up economic development, create livelihood, and cushion vulnerable poor population from climate disasters.

This, with up to 55,000 hectares of existing bamboo stands across the islands, Zubiri said.

Six other bamboo development-related bills will be deliberated in the Senate on July 19. All these bamboo bills, generally strengthening functions of the Philippine Bamboo Industry Development Council (PBIDC), are seen to be consolidated with SB 605.

The bills are SB 615 (Senator Cynthia Villar), SB 1044 (Sen. Joel Villanueva), SB 1145; and SB 1552 (Senator Lito Lapid), SB 1118 (Senator Loren Legarda), SB 1145 (Win Gatchalian), and SB 2172 (Senator Jinggoy Estrada).

SB 605 fortifies PBIDC's policy-making role in creating community-

based enterprises that will have sufficient supply of quality materials and produce new products from research and development-inspired technologies.

Under the bill, manufacturers are mandated to use bamboo on at least 25 percent of their raw materials inputs for furniture, lumber (wood processed into uniform sizes such as beams and planks), and manufactured products that can use bamboo as an alternative to wood.

Plantations will be accepted as loan collateral in government-owned-and-controlled financial institutions. Plantation developers and bamboo processors will have priority access to credit and guarantee. Bamboo plantations will be exempted from security cutting, harvesting, and transporting permits.

Once implemented, the law will pave the way for aggressive trade promotion, and creation of stable supply of trained and skilled labor.

The bill also provides for a comprehensive program on bamboo nursery expansion;

bamboo propagation, breeding, site-specific bamboo species development; and sustainable planting, harvesting, soil and water conservation protocols.

Not only is bamboo a unique Filipino cultural symbol with the "bahay kubo" and the innovative industrial design

works of Bobby Manosa and Kenneth Cobonpue.

The Philippines also has the world's fifth biggest bamboo industry. Yet it has to keep up with far distant huge bamboo industries of China and Vietnam, said Zubiri. Global market is estimated by the Department of Environment and Natural Resources (DENR) at \$17 billion.

Under the bill, the bamboo industry will be supported by accurate and reliable data for decision-making aid of investors and entrepreneurs.

Investors will enjoy the incentives granted to stakeholders of bamboo-based products under the Board of Investments and National Internal Revenue Code.

At least 20 percent of planting materials needed for the National Greening Program of the Department of Environment and Natural Resources (DENR) will come from bamboo.

In addition, the Bamboo Industry Research and Development Center will be established under the bill. Local Bamboo Industry Development Councils (BIDC) will be put up in towns and provinces to localize planning and support for budget and policies for industry development.

Bamboo advocate former House Deputy Speaker Deogracias Victor B. Savellano, currently vice chairman of PBIDC, said he hopes SB 605 will be ratified on or before the year ends.





SWS SURVEY

## HOW PINOYS MANAGE THEIR SOLID WASTE

Six out of 10 Filipino households rely on garbage collection and hauling services for solid waste disposal, according to a Social Weather Stations (SWS) survey on garbage management practices.

The survey, which was conducted from March 26 to March 29 but whose results were released by the SWS on Tuesday, showed 64 percent of households saying that garbage trucks collect their trash while 27 percent dispose of their refuse by burning.

Nine percent of the households bury their garbage in the ground, while 8 percent dump their garbage in an open pit but do not burn it.

### Composting, segregation

Four percent said they have other methods, such as composting, feeding food scraps and kitchen waste to animals, or throwing their trash into rivers and creeks.

The survey also found that 61 percent of households frequently segregate biodegrad-

able waste from nonbiodegradables. Of the 61 percent, 44 percent say they "always" segregate waste while 17 percent said they just do it "often."

A fifth, or 20 percent of households, segregate their waste "sometimes," and another 20 percent say they never segregate at all.

The SWS survey used face-to-face interviews with 1,200 household heads and had a margin of error of plus-or-minus 2.8 percent. —NATHALIE GRACE ADALID, INQUIRER RESEARCH INQ





## '27% of Pinoys dispose of garbage by burning'

By JANVIC MATEO

One in every four Filipinos burned garbage despite a two-decade-old law prohibiting the open burning of solid waste, according to a survey conducted by Social Weather Stations.

The survey released on July 11 found that 64 percent of 1,200 respondents rely on garbage trucks that collect their garbage, 27 percent burn their garbage, and nine percent bury it in the ground.

Eight percent of respondents dump their garbage in an open pit, and four percent use other methods such as composting, feeding it to animals or throwing garbage into rivers.

In segregating biodegrad-

able from non-biodegradable garbage, 44 percent said they do it "always," 17 percent "often," 20 percent "sometimes" and 20 percent "never."

The Ecological Solid Waste Management Act of 2001 penalized the open burning of solid waste and the collection of unsorted waste.

A recent Commission on Audit report found that "waste management has continued to be an issue of concern" more than 20 years after the passage of Republic Act 9003.

"This problem worsened further due to the increased production of hazardous and infectious wastes caused by the COVID-19 pandemic," the audit report released last April stated.





## Filipino families segregate trash – survey

A RECENT survey by the Social Weather Stations (SWS) showed that 61 percent of Filipino families “frequently” segregate their garbage.

The survey, conducted from March 26 to 29, 2023 revealed that of the 61 percent of households polled, 44 percent said they always segregate and 17 percent often segregate biodegradable waste from non-biodegradable.

It also said 20 percent of households “sometimes” segregate their garbage while 20 percent never engage in segregation.

It also said 20 percent of households “sometimes” segregate their garbage while 20 percent never engage in segregation.

The pollster also found that garbage collection is the most common household waste disposal method with 64 percent of respondents saying that garbage trucks collect their trash.

Twenty-seven percent said they burn their garbage, 9 percent bury their garbage in the ground, 8 percent dump their garbage in an open pit, and 4 percent use other methods such as composting, feeding it to animals, or throwing it into rivers.

The SWS poll interviewed 1,200 Filipino household heads nationwide. It has a margin of error of  $\pm 2.8$  percent. PNA





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OPINION

## Going, going...

WHAT was once a beautiful sight to behold in the late afternoons and early evening, from the vantage point of Roxas Boulevard is going, going...soon gone.

The re-blocking, whatever that means, of Manila's famous seaside boulevard has caused heavy traffic, but it also allows one to pause and look at the bay where our fabled sunset, especially from December till early March, comes in a huge orb of orange glory.

While doing my regular brisk walks either in the boulevard's cramped sidewalk, or near the earlier reclamation areas of the Cultural Center complex and the MOA, I come across the ugly sight of islands of gray sand being feverishly dumped into the bay by barges and cranes - to "reclaim" land from the sea.

Manila Bay used to be the back view of beautiful Sofitel, with its huge swimming pool and garden area, appreciated as well from the western suites of the hotel. Now all you can see is gray sand, barged in from Zambales or the San Nicolas shoal.

Some enterprising businessmen leased property adjacent to Sofitel from the CCP, put up a hotel and eateries where patrons could view the sea and the setting sun. Now their customers reap ugly gray sand when a strong wind blows, which is almost always.

In late 2008, the Supreme Court issued an SC Mandamus on Manila Bay, directing 13 government agencies to clean up, rehabilitate and preserve Manila Bay, even to the extent of stating that its waters must be "fit for swimming, skin-diving and other forms of recreation."

*Then we will have ghostly and ghostly eyesores with barren islands floating in Manila Bay*

Instead of following the writ of the highest tribunal, what we pass for a clean-up is a fake white sand "beach" on a less than 2-kilometer stretch ordered by a general who lorded it over the DENR, and put up a tacky two story structure labelled "mandamus offices."

Worse, several local governments approved reclamation projects hastily, with careless concern for earlier approved metes and bounds, thereby in some cases creating legal conflicts which courts must now resolve.



SO  
I SEE  
LITO  
BANAYO

steal beauty from ordinary mortals who cannot afford to buy condominiums in the high-rises that will soon block our plebeian view of the glorious sunset.

While our country may not have a very big land area, we need not act like a Hong Kong or a Singapore whose sparse land and real estate demand necessitate reclaiming from the sea.

Move around the countryside and see hectares upon hectares of bare earth covered only by weeds.

You need not go far. The hills of Antipolo and Tanay alone beckon.

Since after the Second World War, with feverish reconstruction of the capital, people from the countryside have been enticed by "greener" urban pastures, crowding the cities and creating warrens of informal settlements.

This is true not only in Metro-Manila, but in Metro-Cebu as well.

Now of course, after 50 years or so of overseas employment being the sole poverty alleviation strategy, our OFWs come back and buy pricey condominium units in the metropolitan areas, badge of "having arrived."

Those who go back to their home province build mini-mansions in the middle of farmlands which their parents got through land reform, yet they do not farm, thus contributing to our food supply problems.

While the OFW diaspora is temporary economic savior, it has also imperiled our food security, at the same time creating a lack of professionals in critical services like health and education.

Other than robbing us of one of the simple pleasures of Manilans, gazing into the beautiful sunset in the bay's horizon apart from the environmental degradation they bring, I worry about the after-effect on the inner cities' demography after construction work in the reclaimed areas shall have been completed.

Obviously, much of the brawn power needed for the multitude of construction activity will be sourced from the provinces.

After the temporary work, these workers will not go back to the provinces, and would instead settle in the national capital region, compounding our extreme population density.

And where, pray tell, will they find habitat?

Surely not in the mega-expensive reclaimed land where costs per square meter will be reserved for the uber rich, most of them foreigners.





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Going, going...

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The Philippine Reclamation Authority under the Office of the President for its part sanctioned these projects despite an earlier avowal of Pres. Rodrigo Duterte that he did not approve of such projects defiling the bay.

And so, real estate developers rushed to start their reclamation, from a bigtime Mindanao-based contractor, to SM, to Waterfront holdings, to J. Legaspi, the heirs of FF Cruz, and Solar Corporation, whose application started as early as 25 years ago but was finally green-lighted only last year.

Some developers took advantage of the twilight of the PRRD regime and the start of PFRM Jr., whose government has yet to appoint new administrators of the reclamation authority, to rush their midnight entitlements.

It is as if the DENR dumped dolomite from Alcoy in Cebu upon Manila Bay to condition the minds of the people that soon more sand, this time gray, will be dumped into it, and

They will crowd the now over-crowded and destitute warrens of the informal settlers. Urban blight will worsen.

Of course, the developers may eventually lose their shirts. That is not an impossibility.

World economic conditions do not show immediate promise for massive relocation projects or even speculative investments in our real estate market by foreigners, whether Chinese or Korean.

And having voluntarily increased our chances to be drawn into the potential conflict between China and the USA, ours is not exactly a sure haven of peace and tranquility in the region.

What then happens, if the reclaimed islands are not populated enough, and investments in high-rise condominiums and commercial establishments do not come to fruition?

Then we will have ghostly and ghostly eyesores with barren islands floating in Manila Bay.

Their politically-connected developers will be neck-deep in debt, their local banks burdened with unpaid loans, the result of mindless pursuit of greedy profits.

We have seen that in Malaysia and African nations, where development halted when their foreign funders, mostly from China, stopped pouring in their promised investments.

Meanwhile, ordinary folks would do well to visit the promenades by the bay and seek whatever yet unblocked windows exist where they may view our sunsets and the splendor of our once-beautiful bay, while there is still time.

Manila Bay is going, going and soon gone.





STRATEGIC  
COMMUNICATION  
AND  
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## Uncharted life of extreme heat

**F**or three days last week, the world registered temperatures that one scientist described as "almost certainly" the hottest that planet Earth has seen for the past 100,000 years. Another scientist went further by declaring that it is "certainly plausible" that the past week was "the warmest days globally in 120,000 years." While other scientists were more restrained in their words, they nevertheless describe the exceptional heat with very disturbing words such as "extraordinary" and "terrifying."

Unless we spend our days 24/7 inside air-conditioned surroundings, we know what these scientists are talking about. We have been experiencing an alarming level of extreme heat, not only in the past week, but for a couple of months now. The heat becomes unbearable at times, even when we're inside our homes, and even with electric fans on.

I don't recall any other period in my more than half a century on this planet when the level of heat has been this intense. Even at night, the heat lingers. I swam in an Ilocos Norte beach one afternoon last week, and the water felt uncomfortably hot. We, in the Philippines, are probably fortunate because the onset of the rainy season brings cloud cover and rain that cools our surroundings now and in the coming months, but when the sky is clear, searing heat returns.

The more fortunate ones among us have access to air conditioning. But imagine life in the slums, especially for babies, old folk, and sick residents who have no choice but to grin and bear with the unforgiving heat. Imagine small entrepreneurs in brownout prone provinces who risk losses because of the spoilage of their frozen supplies. Imagine school children who have to suffer through classes in oven-like classrooms. Imagine farmers and



### FLEA MARKET OF IDEAS

JOEL RUIZ BUTUYAN

construction workers who toil under direct sunlight. Imagine poultry and piggery establishments that incur immense losses due to heat-related deaths and diseases. According to one meteorological expert, this period of astonishing heat "will have far-reaching repercussions for health, food security, water management, and the environment."

Scientists say that these record-shattering heat temperatures are due to several factors. The continuing emissions of heat-trapping gases caused by the fuels that humans burn in huge quantities each day. The return of the El Niño weather phenomenon, which is a cyclical weather pattern that causes drought in entire continents. And the massive deforestation that happens yearly worldwide. In a survey cited by the New York Times, the world lost 10.2 million acres of primary rainforest in 2022 alone.

Scientists are predicting that this period of high temperatures will continue up to the end of this year, and even until next year. In fact, weather experts forecast that it will even be hotter next year. Periods of extreme heat cause mankind to burn more fuel because of

the greater need for air conditioners. It also increases incidents of wildfire that worsen deforestation and aggravate the volume of smoke and soot in our atmosphere. Extreme temperatures trigger actions and events that further cause temperatures to rise.

Climate change is a global problem that requires concerted action from all countries. But apart from campaigning for state and worldwide action, local governments must do what they can to alleviate high temperatures in their areas. One only needs to sit under a tree to notice the lowered temperature caused by an abundance of foliage, and experts attest to the ability of greenery to lower temperatures. Provinces, cities, municipalities, and barangays should create pockets of forest within their communities, and embark on the planting of trees along their roads.

In the past couple of months, different parts of our country have experienced extreme heat beyond 40 degrees Celsius. With very hot days becoming threats to health and physical safety, our government should consider instituting heat signals that would trigger automatic suspension of classes and work, mandatory work-from-home protocols, or to serve as advisory to children and senior citizens to refrain from being under the sun. Just as we have typhoon signals, we should now have heat signal protocols because of our new climate reality.

The world is "walking into an uncharted territory," one climate expert said in an interview with CNN. "We have never seen anything like this in our life." Scientists have long been warning us that this day will come, if we don't mend our ways. They have all the right to say, "We told you so."

Comments to [fleamarketofideas@gmail.com](mailto:fleamarketofideas@gmail.com)





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## Mayon records more rockfalls, volcanic quakes

By ELLALYN V. RUIZ

The Philippine Institute of Volcanology and Seismology (Phivolcs) on Wednesday, July 12, continued to record rockfalls and volcanic earthquakes due to the ongoing effusive eruption of Mayon Volcano in Albay.

Phivolcs said Mayon Volcano had 423 rockfall events, 24 volcanic earthquakes, as well as eight dome and lava front collapse-triggered pyroclastic density currents (PDCs) between 5 a.m. on Tuesday, July 11, and 5 a.m. on Wednesday, July 12.

The "very slow" effusion of lava from Mayon Volcano's crater has persistently fed lava flows and collapsed debris on the Mi-isi and Bonga gullies on the southern and southeastern sides of the volcano.

Rockfalls and PDCs were also observed on these gullies, as well as on the Basud gully on the eastern flank of Mayon.

The approximate lengths of lava flow stayed at 2.8 kilometers

(kms) and 1.3 kms, respectively, on the Mi-isi and Bonga gullies, while collapsed debris was still deposited four kms on the Basud gully.

The Mayon Volcano also continued to emit "moderate" amounts of sulfur dioxide, producing a 750-meter-high steam plume that drifted west-southwest.

As of Wednesday, Mayon Volcano is still in a relatively high level of unrest and that a potentially hazardous eruption within weeks or even days is still be possible.

Phivolcs said Mayon Volcano remains under Alert Level 3.

Communities near the restive volcano were advised to maintain increased vigilance against lahars and sediment-laden stream flows on channels draining the volcano edifice, as heavy rainfall could cause channel-confined lahars and sediment-laden stream flows.

It was strongly advised that entry into the six-kilometer permanent danger zone be strictly prohibited.

Phivolcs also noted that ash fall is most likely to occur in areas south of Mayon Volcano due to current wind patterns.

Mayon Volcano's status was upgraded twice in the past month, first to Level 2 on June 5 and then to Level 3 on June 8 due to "intensified magmatic unrest."





## Albay tourism booms amid Mayon's unrest

LEGAZPI CITY – Mayon Volcano's restiveness is drawing more local and foreign tourists, the Albay Provincial Tourism, Culture and Arts Office (PTCAO) reported yesterday.

PTCAO chief Dorothy Colle said many hotels, restaurants and other tourist destinations around Mayon have reported increases in their customers.

Colle cited the Cagsawa Ruins in Barangay Busay in Daraga town, where visitors flock to view Mayon as it spews lava and other volcanic materials.

She said stores have been extending their business hours until 10 p.m. to cater to the surge of Mayon viewers.

"Before the eruption, Cagsawa Ruins Park visitors ran from 150 to 200 in a day. Now it peaks to 500 visitors a day," Colle told *The STAR*.

"We have a list of safe viewing places in Albay for our visitors when Mayon is erupting," she said.

Colle said non-cancel-

lation of flights to Albay despite Mayon's unrest has contributed to increased tourist arrivals.

Colle said flights at the former Legazpi City Airport were canceled during the 2018 Mayon eruption because of its proximity to the volcano.

"Now that the airport has been transferred to Daraga and is safe from Mayon's eruption hazards, no flight is canceled. That's why visitors continue to come to Albay," she said.

In the past 24 hours, the Philippine Institute of Volcanology and Seismology (Phivolcs) recorded eight pyroclastic density currents generated by a dome and lava-front collapse.

Up to 423 rockfall events, 24 volcanic earthquakes, plumes that rose to 750 meters and sulfur dioxide emission that averaged 1,128 tons were monitored.

Phivolcs said Mayon remains under Alert Level 3 due to "relatively high level of unrest." – **Cet Dematera, Romina Cabrera**





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## Bicol's dolphin population critical, researchers say

THE rare Irrawaddy dolphins (*Orcaella brevirostris*) of San Miguel Bay in Bicol are already at risk of disappearing from the region, researchers said.

A mission to find live Irrawaddy dolphins in the area of San Miguel Bay in Bicol led scientists from the University of the Philippines -Diliman College of Science Institute of Environmental Science and Meteorology (UPD-CS IESM) to validate the existence in the area of this critically-endangered species during a recent dolphin survey conducted from July 6 to 9, 2023.

Irrawaddy dolphins are characterized by gray or dark-blue backs and pale bellies, with a high tolerance to various levels of salinity that enables them to live in areas where salty seawater and freshwater meet, such as in the mouths of rivers and bays. They are among the world's most endangered dolphin species.

The team, led by IESM Professor and Marine Mammal Research and Conservation Laboratory (MMRCL) Head Dr. Lemnuel Aragon, sighted two Irrawaddy dolphins—one near Apuao Island and another near Canimog Island, both in the waters of Mercedes, Camarines Norte.





## Editorial

### Let's make the most of the Age of Man

**A**n intriguing piece of news emerged at the beginning of this week: scientists have determined that we are living in an entirely new epoch, which they have named the Anthropocene Epoch — the Age of Man. It is a profound moment in the history of the planet and of our human species, a moment that we believe represents unprecedented promise and opportunity and should be viewed with hope.

Scientists mark the beginning of the Anthropocene timeline at sometime in the middle of the 20th century, roughly corresponding to the end of World War 2. The fuzzy point in history also marks the end of the Holocene Epoch, which began about 11,700 years ago at the end of the last Ice Age.

The determination that a new age of the planet has begun was made from several markers in the physical world. The sudden appearance of non-naturally occurring radionuclides in the soil is one marker; all of those were put there by human activity, primarily nuclear weapons testing, beginning in the year 1945. A sudden increase in the concentrations of carbon dioxide (CO<sub>2</sub>) and methane (CH<sub>4</sub>) is also an indicator; these actually began about a century earlier but began to rise exponentially with the postwar economic boom. The presence of microplastics in the soil, water, air and even the bodies of humans is yet another indicator of a profound change to the planet from human activity.

However, the one piece of evidence scientists believe may be the best indicator of the Anthropocene Epoch is chicken bones, which are also found all over the planet, anywhere humans have been present. Chicken is the biggest source of protein for humanity as a whole — for one thing, it is acceptable to the dietary practices observed by every major religion — and the common domesticated chicken is a completely manmade species, genetically and biologically unique from its wild ancestors and counterparts. Chickens have been domesticated as a food source for thousands of years, of course, but those were all traceable descendants of wild species. The chicken as we know it today was not created through selective breeding and management until the end of the Second World War.

That ability to create an entirely new species, as well as the comprehensive changes we have made to the natural environment and Earth's climate, is what defines the Anthropocene Epoch. Until the news was widely shared earlier this week, most of us probably did not realize or stop to consider that we were changing the very evolution and form of our 4-billion-year-old world. And with this realization, most people would probably judge that we are not changing it for the better.

“  
*The discovery of a new epoch means that everyone who has been alive since the middle of the last century has had the unique experience of witnessing the dawn of a new geological age.*  
”

It does not have to be that way, however. The collapse of the climate due to human activity is not inevitable, nor is it inevitable that we will run out of food, energy, or natural resources to support our ever-expanding human population. Those things are certainly possible and perhaps even probable, but they are not inevitable. And the evidence for why they are not is the evidence of our ability to engineer the world, which identifies the beginning of the Age of Man.

We have already changed the world, even created entirely new life forms, to meet our needs and desires. If we can cooperate and work with purpose toward shared goals for the common good, we can certainly meet the challenges we face now. After all, those challenges are not bigger than mankind but are the result of our own activity; what we have done ourselves can be undone or done in a better way if only we choose to do what is best for ourselves, our families and communities, and the one small planet we all have to share.

And in a sense, only those who are here now are special enough to do that. The discovery of a new epoch means that everyone who has been alive since the middle of the last century has had the unique experience of witnessing the dawn of a new geological age. As civilization itself is only about 6,000 years old, no other society in history has had the same privilege. We should — we must — make the most of it.





# CANADIAN LAKE GROUND-ZERO FOR ANTHROPOCENE EPOCH

**PARIS:** Scientists on Tuesday (Wednesday in Manila) designated a small body of water near Toronto, Canada as ground-zero for the Anthropocene, the proposed geological epoch defined by humanity's massive and destabilizing impact on the planet.

Layered sediment at the bottom of Lake Crawford — laced with microplastics, fly-ash spread by burning oil

and coal, and the detritus of nuclear bomb explosions — is the single best repository of evidence that a new, and challenging, chapter in Earth's history has begun, members of the Anthropocene Working Group concluded.

"The data show a clear shift from the mid-20th century, taking Earth's system beyond the normal bounds of

the Holocene," the epoch that began 11,700 years ago as the last ice age ended, working group member Andy Cundy, a professor at the University of Southampton, told Agence France-Presse (AFP).

After years of deliberation, the Canadian lake was selected from among 12 candidate sites around the

► **Ground-zeroA8**

## ■ GROUND-ZERO FROM A1

# Canadian lake ground-zero

world — including another lake, coral reefs, ice cores and an ocean bay in Japan — as the Anthropocene's so-called golden spike.

"The sediment found at the bottom of the Crawford Lake provides an exquisite record of recent environmental change over the last millennia," said working group chairman Simon Turner, a professor at University College London. "It is this ability to precisely record and store this information as a geological archive that can be matched to historical global environmental changes."

Those changes are currently on dramatic display: last week was the hottest globally on record. Out-of-control forest fires have been ravaging Canada for months, while the US and China are coping with unprecedented heat, flooding and drought at the same time.

Humanity has burned so much fossil fuel that concentrations of planet-warming CO2, meanwhile, have increased by half. Sea surface temperatures have hit new highs in recent weeks, and Antarctic sea ice last month was 17 percent below the previous record low for June.

## 'Great Acceleration'

Last month, scientists reported that so much water has been pumped from underground reservoirs that Earth's geographic North Pole has shifted by nearly 5 centimeters (2 inches) per year.

According to the rules of the

International Commission on Stratigraphy (ICU), which in 2009 mandated a team of geologists to assess evidence for the Anthropocene, there must be a synchronous "primary marker" for a proposed boundary that is detectable in the geological record almost anywhere on the planet.

For the Anthropocene, plutonium cast off by hydrogen bomb tests provides that "global fingerprint," explained Cundy.

"The clearest marker for a single year — which gives an abrupt and effectively instantaneous snapshot — is plutonium, because there's so little of it naturally present." That means 1952 — when the United States first detonated a huge hydrogen bomb in the Marshall Islands as a test — could become the Anthropocene's boundary year, he said. Smaller atom bomb explosions before that left mostly regional imprints.

A sharp, hockey-stick increase across a dozen markers of humanity's growing impact — including population, water use, greenhouse gas emissions, and forest loss — bunched around the middle of the 20th century add up to what scientists call the Great Acceleration.

The "epoch of humans" first proposed in 2002 by chemistry Nobel Paul Crutzen is widely accepted within science as a reality, but faces daunting hurdles for formal validation by the gatekeepers of Earth's official geological timeline of eons, eras, periods and epochs, such as the

Jurassic and the Cretaceous.

Scientists at the press conference to announce Crawford Lake said they hoped the decision would encourage people to think more deeply about their responsibility to the planet.

Francine McCarthy, a professor at Brock University who has led the research into Crawford Lake, said it was not the first time humans had stamped their influence on the lake.

"But at no point was there a globally synchronous shift in the way the earth behaved until this Great Acceleration of the mid 20th century," she said, adding it marked a tipping point when the "Earth system ceased to behave the way it had for 11,700 years."

The recommendations must be approved by a super-majority vote of two separate committees before final validation by the International Union of Geological Sciences (IUGS).

The heads of those bodies have thus far expressed sharp skepticism toward the Anthropocene, mostly on technical grounds.

"The vote in the working group is on a routine step at the lowest level," IUGS General-Secretary Stanley Finney told AFP.

The working group has yet to submit its final recommendation to the International Commission on Stratigraphy, he noted.

"Only then can it be given peer review, and the evidence and arguments truly evaluated," Finney said.

AFP





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## BREAKTHROUGH

ELFREN S. CRUZ

### Climate crisis is worse than war

The debate on combating climate change has now shifted to how to finance the transition from dirty power like coal and fossil fuels to clean renewal energy. In recent meetings among the richer countries, this has become a major topic.

In a visit of President Biden to Europe, he met with the newly crowned King Charles and their topic was climate change. The developed countries have set an unrealistic policy for developing countries. It is a fact that the United States, Europe and China follow the "grow first and clean up later" pattern in their path to achieving their present economic status. Now that they have achieved this economic status, they are expecting the developing world to abandon this growth pattern and try to achieve growth without using cheaper sources of power that will pollute the environment.



In most of the developed countries, emissions have already peaked; and they have ready access to capital that will make it possible for them to shift to renewable energy and achieve net zero by 2050.

The developing world, which includes the Philippines, is just as concerned about climate change as those in the US, China and Europe. However, they do not have the means to achieve a low carbon economic growth. There is no question that the climate crisis is already upon us. Last week saw three straight days of record heat in the world. At the same time, there are floods and typhoons occurring out of season.

This climate financing conundrum must be solved if there is any hope of averting the climate change crisis. During the first two decades of this century, China set a record level of emissions because of its massive population size, high economic growth rate and heavy reliance on coal for energy.

**It is completely understandable that in the developing countries, poverty alleviation and economic growth are still the priority concerns.**

There are presently 15 emerging markets or developing countries that are in the same situation now. These are Bangladesh, China, Congo, Egypt, Ethiopia, India, Indonesia, Pakistan, Philippines, South Africa, Tanzania, Thailand, Turkey, Uganda and Vietnam.

The most carbon intensive fuel next to coal is petroleum. There are eight other developing countries that are deeply reliant on petroleum consumption. These are Algeria, Brazil, Iran, Kazakstan, Mexico, Nigeria, Russia and Saudi Arabia.

These two dozen or so countries could create a wave of emissions similar to the one caused by China from 2000 to 2020. If four countries alone - Indonesia, Iran, Nigeria and Saudi Arabia - continue on their present growth trajectory, their cumulate net emissions would be 197 billion metric tons between now and 2050. This would be equivalent to China's emission output between 2000 and 2020.

Many developing countries, including the Philippines, have pledged to try and reach net zero emission between 2050 and 2070. However, it is noted that none of these developing countries has produced a detailed plan on how to achieve its goal.

The biggest problem is the lack of financing for all these climate change projects. It is not enough to have good intentions to avoid climate change. They will need financing and technical support. It is completely understandable that in the developing countries, poverty alleviation and economic growth are still the priority concerns.

According to a UN report last year, it is estimated that the cost of adapting to climate change in developing countries will rise from \$70 billion today to up to \$500 billion by 2050. This may seem like an impossibly huge amount. However, it should be noted that the western countries have spent more than \$165 billion in less than a year to supply armaments to Ukraine in its war against Russian invasion.

The most critical area that has to be addressed is to be able to develop a model of economic growth that does not rely on fossil fuels and energy-intensive industrialization. The East Asian countries of Japan, South Korea and China adopted an economic growth model based on intensive manufacturing and export led with significant state intervention. Today, these three countries are among the top emitters of the world.

A study of investments from the World Bank, the International Finance Corporation and the Asian Development Bank in 2015 and 2016 found that only about 20 percent of the financing from these three institutions was aligned with the goal of staying below the global warming target of 2 degrees Celsius.

Most multilateral banks halted financing for coal a decade ago; but they have done too little to financially support alternative programs to carbon-intensive fuels.

Most emerging economies like the Philippines are willing to adopt policies to mitigate climate change. However, these countries cannot be blamed for refusing to give up their poverty alleviation and economic growth targets in order to focus solely on climate change.

They need support from rich economies which, by the way, became rich by pumping the overwhelming share of carbon into the atmosphere.

In recent talks between China and the United States to lessen tensions and look for common issues that they can cooperate on, the most obvious area is mitigating climate change, especially financing the efforts of developing countries to reduce emissions.

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# Shielding our nation from climate change trauma

“The world just had the hottest week on record, according to preliminary data,” the World Meteorological Organization (WMO), reported “after a series of scorching days saw global temperature records tumble” during the first week of July 2023, according to an Agence France Presse (AFP) dispatch. The WMO warned of “potentially devastating impacts on ecosystems and the environment,” especially with the unfolding of El Niño that could extend the deleterious impact of abrupt climate change into 2024.

Also according to AFP, more than 670 wildfires are currently raging in Canadian forests, with spillover effects on neighboring United States, affecting more than 100 million people.

A Vox report cites University of Pennsylvania climate scientist Michael Mann’s account: “Vermont was the site of heavy flooding that trapped people in their homes and shut down roads. Earlier this week, New York’s Hudson Valley similarly experienced torrential rains that led to severe flood warnings. Nationally, 11 million people remain under flood warnings as of Tuesday, while globally, countries including India, Japan, China, and Turkey have seen destructive flooding that has displaced millions of people and damaged property in the last year.”

Climate change “is out of control,” says UN Secretary General Antonio Guterres as extreme temperatures “also cause health problems ranging from heatstroke and dehydration to cardiovascular stress.” AFP also reports that according to new research published Monday more than 61,000 people died due to the heat during Europe’s record-breaking summer last year. Most of those who died were over 80 years old and women, according to the Nature Medicine journal.

Finally, the AFP news report said: “The world has warmed an average of nearly 1.2 C since the mid-1800s, unleashing extreme weather including more intense heatwaves, more severe droughts in some areas and storms made fiercer by rising seas.”

Dire warnings on climate change must be the most beaten down “broken record” in recent history.

Only last March 2023, UN’s Guterres warned: “Every year of

insufficient action to keep global warming below 1.5 degrees Celsius drives us closer to the brink, increasing systemic risks and reducing our resilience against climate catastrophe.” Specifically, he pitched to the Group of 20, composed of the world’s richest and most powerful countries, to fast-track the attainment of net-zero carbon emissions – originally targeted for 2050 – to be achieved decades earlier by agreeing to an acceleration agenda. This calls for solid commitments to the phasedown of oil- and gas-related activities, as well as clearcut targets in the shipping, aviation, steel, cement, aluminum, agriculture industries.

*The specter of massive destruction wrought by global warming and climate change is upon us. Ten years after the trauma inflicted by typhoon Yolanda, all Filipinos of goodwill must commit themselves for doing what it takes to create a huge dome of safety and resilience that will protect our people’s lives*

Flashback to COP 21 at which the global summit on climate change was held in Paris in November 2015. Speaking in behalf of the Climate Vulnerable Forum (CVF) – an international partnership of countries most severely affected by climate change – then President Benigno S. Aquino III recalled that he and then French President Francois Hollande launched the Manila Call to Action on Climate Change earlier that year. The CVC countries bear a disproportionate share of the climate change burden in terms of deadly typhoons and similar natural disasters.

Sounding a note of urgency, he said: “Since 2010, on an annual basis, climate injustice has claimed more

than 50,000 lives from V20 countries – and this number will

increase exponentially in the near future. Consider further the danger faced by island-nations such as Kiribati, Tuvalu, and the Maldives, whose existence is threatened by rising water levels. Their extinction will be a certainty, unless we pursue realizable goals that acknowledge that, for some nations, the fight against climate change is a matter of survival.”

He shared the Philippine experience: “We have been working to break the vicious cycle of destruction and reconstruction, where affected locales, especially our coastal communities, slide back into an impoverished state with one calamity. The primary challenge has been to move our countrymen to less vulnerable areas, on the assumption that such do exist – or to make interventions that mitigate the impacts of climate change. We are indeed hard pressed to build back better especially in the aftermath of Haiyan, and I must submit: we cannot do this in isolation.”

He ended his speech with a plea for solidarity: “Today, the Philippines, with the rest of the Climate Vulnerable Forum, a group that will soon grow to represent at least one billion people, makes our case. In the name of all our citizens, we ask you to give our proposal – for more climate financing for developing countries – the consideration it deserves. We likewise seek your support as the Climate Vulnerable Forum finalizes the Manila-Paris Declaration, which presents our aspirations for a world that is resilient and just, one where no one is left behind.”

It has been nearly 10 years since super-typhoon Haiyan (local name: Yolanda) left an indelible imprint on the nation’s consciousness. According to official figures, 6,300 people were killed by Haiyan, a further 1,062 were missing, and 28,688 were injured. But the emotional scars of that extremely traumatic episode will not simply fade. Far from simply saying, “Never again!” all Filipinos of goodwill must commit themselves for doing what it takes to create a huge dome of safety and resilience that will protect our people’s lives and homes.



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# Govt agencies urged to use solar power

BY FRANCIS EARL CUETO

**T**HE Inter-Agency Energy Efficiency and Conservation Committee (IAEECC), in a resolution promulgated on July 7, 2023, urged all government agencies, including government-owned and -controlled corporations, state universities and colleges, and local government units to use solar power to minimize the country's reliance on crude oil as fuel.

All government entities are given three years from the effectivity of the resolution to install solar photovoltaic systems or any equivalent renewable energy technology that will give them an initial supply of at least 20 percent of their electricity requirements.

Energy Secretary and IAEECC chief Raphael Lotilla said the money saved through the reduction of monthly electricity consumption would be used to fund other government services, such as health and education.

Lotilla added available military lands, camps and reservations could also host solar farms. This, he said, would allow the government to maximize the job-creation potential of using renewable energy.

The IAEECC is composed of the Department of Energy as lead agency with the Department of Budget and Management, Department of Finance, De-

partment of the Interior and Local Government, Department of Public Works and Highways, Department of Transportation, Department of Science and Technology, Department of Trade and

Industry, and National Economic and Development Authority as members.