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THE GUARDIAN

[Atlantic Ocean circulation nearing 'devastating' tipping point, study finds](#)

The circulation of the Atlantic Ocean is heading towards a tipping point that is “bad news for the climate system and humanity”, a study has found.

THE PHILIPPINE STAR

[Canada gives Philippines P1.1 billion aid for climate, healthcare efforts](#)

By: Cecille Suerte Felipe

Canada has announced some P1.1 billion in development assistance for the Philippines to support the latter's efforts in climate adaptation, resilience against natural disasters and improved health care services.

[\[Opinion\] In search of sustainable energy solution together](#)

By: Korean Serenade - Lee Sang-Hwa

Elon Musk, founder of SpaceX, recently posted a photo taken at night from a satellite on the Korean peninsula, titled “Night and day difference.” He hinted at what happened 70-plus years after a country was divided into half capitalist and half communist.

Information and Knowledge Management Division

ABS CBN

[Hi-tech plane roaming around Metro Manila](#)

By: Izzy Lee

Just in case you see a white airplane going around the skies of Metro Manila in the next couple of days, don't be alarmed, it's not a spy plane.

The aircraft is a flying science laboratory from the National Aeronautics and Space Administration (NASA) testing the air quality in the capital region.

The project will also the air quality in other parts of the Philippines and Asia as part of efforts to combat climate change.

The DC-8 aircraft, equipped with 26 advanced instruments, will navigate at low altitudes over Metro Manila, Cebu, Ilocos Norte, Palawan, and other parts of the country from February 11 to 15.

"When you take this DC-8 in low altitude, you'll get the air molecules themselves... As low as 50 feet, what we do is we find a suitable air fill. We'll configure the airplane to land. And then, we'll fly as low as landing but we won't touch down," said DC-8 pilot Gregory Slover.

Engineers and air quality specialists from the Philippines' environment department will join the project, together with collaborators from the Philippine Space Agency (PhilSA), Manila Observatory (MO), Ateneo de Manila University (AdMU), and the University of the Philippines (UP).

The DC-8 aircraft will later head to South Korea, Malaysia and Thailand.

BUSINESS MIRROR

Nuclear energy push in PHL seen 'too late' amid climate crisis

By: Sheldeen Joy Talavera

Developing nuclear energy in the Philippines could be too late due to the climate crisis, an analyst said, suggesting a focus on building renewable energy capacities instead.

“If we’re waiting for 10 years for something to all come together and miraculously work together and agree on that, it’s too late,” Paolo Pagaduan, renewable energy lead at Asian Peoples’ Movement on Debt and Development, said on the sidelines of a forum last week.

“Why wait if we can do it with solar and wind?,” he said.

In a report published by the Intergovernmental Panel on Climate Change of the United Nations (UN) in 2018, it said there is a need to limit global warming from rising more than 1.5 degrees Celsius, which means cutting carbon dioxide emissions by 45% by 2030.

During the 2019 UN meeting about climate and sustainable development, it was said that there were just 11 years left to prevent the “irreversible damage” caused by climate change.

“I was hoping that the plan would be a bit faster because if there’s one thing that’s not being highlighted now is that the reason why we have to do all of these — why we have to shift to renewables [and] why they have to consider nuclear energy — is because of the climate crisis in the first place,” Mr. Pagaduan said.

With a current share of 22%, the government aims to increase the proportion of renewables in the country’s power mix to 35% by 2040 and 50% by 2050.

Under the proposed new energy roadmap, the government aims to introduce nuclear energy, with a targeted capacity of 1,200 megawatts (MW) by 2032, Energy Undersecretary Sharon S. Garin said during the forum.

“It is not an easy task to start a nuclear energy program. That is why it is slow because we have to make sure that everything is safe, secure, has safeguards and compliant with all the international requirements,” she said.

“Because nobody will sell any technology or teach you about any technology if you do not comply with all these requirements of the IAEA (International Atomic Energy Agency),” she added.

The Department of Energy (DoE) is aiming to work with the Phase 2 which is the preparatory work for the contracting and construction of a nuclear power plant after a policy decision has been taken.

Ms. Garin said that the DoE is ramping up the nuclear energy roadmap which is eyed to be published within the month.

“We will still follow these phases, but we believe, and we are confident that we can be faster because we are ready. We have been preparing for Phase 2 in the last two years and even the years before that,” she said.

Froilan J. Savet, first vice-president and head of network at Manila Electric Co., said that nuclear energy will not replace renewables but rather complement it.

“You’ll need a baseload plant with a high-capacity factor and high-energy density. Imagine, a one gram of uranium is equivalent to many tons of coal and 1,800 liters of oil,” Mr. Savet said.

Carlo A. Arcilla, director of the Philippine Nuclear Research Institute, said that “the fastest way to go nuclear” is to rehabilitate the mothballed Bataan Nuclear Power Plant (BNPP).

The 620-MW BNPP will require a jeepney-sized fuel which could last for 18 months, he said, with an estimated cost of \$30 million.

“If that were a coal plant running for 18 months, 620 megawatts... [it will require] \$800 million,” Mr. Arcilla said.

DAILY TRIBUNE

[Marcos: Fast track Mindanao projects](#)

By: Tiziana Celine Piatos

Mindanao is back in Malacañang's consciousness days after former President Rodrigo Duterte threatened that Mindanao would secede from the rest of the country.

Political experts, however, attributed the statements of the predecessor of President Ferdinand Marcos Jr. as part of his practice of using hyperbole to drive home a point.

In a statement, the Palace said Marcos directed all government agencies to prioritize the construction of climate-resilient infrastructure amid the recent flooding in Mindanao.

In his speech after the signing of the civil works contracts for the Davao Public Transport Modernization Project in Davao City on Wednesday, Marcos highlighted the importance of adapting to changing weather patterns caused by climate change, noting that relying on outdated data is no longer sufficient.

In the same speech, Marcos instructed the Department of Transportation and the Department of Finance to collaborate on exploring financing options for the long-stalled 103-kilometer Tagum-Davao-Digos railway project, originally planned to be funded by loans from China.

The President emphasized the importance of completing infrastructure projects within the designated timeframe, adhering to specifications, and staying within budget.

"Thus far, this ambitious project has been stalled by lack of funding," the President said, "so let us go and hunt for the right funding engine that will pull this project to the finish line."

Additionally, he stressed the necessity for these projects to proactively consider various circumstances, especially those influenced by climate change.

"The infrastructure we are building must not only address past shortcomings but must also meet the present needs and anticipate future challenges," Marcos said.

"Building for our children's future requires infrastructure that can withstand the worst that the Earth's rising temperature and increasing precipitation can throw at us," Marcos added.

He stressed that ignoring climate change in infrastructure planning would leave the Philippines vulnerable to further disasters.

Marcos contended that the government's effectiveness in serving the populace is hindered when it becomes bogged down by outdated data.

"We cannot build climate-resilient infrastructure for our children based on the rainfall and temperature records during our parents' time," Marcos said.

Expressing optimism about innovative financing models, Marcos pointed to examples where different project components were funded by distinct stakeholders.

He mentioned scenarios where civil works could be handled by private investors while rolling stock could be financed through official development assistance or ODA.

"There are some examples of ways we can explore different modes of financing to accelerate delivery," he said, emphasizing the government's responsibility for securing the right-of-way.

The President stressed the importance of "being in the driver's seat of innovation" when it comes to transportation management.

He highlighted that modernization doesn't always require expensive technology, citing walkable pedestrian lanes as an example.

[Pinoys to benefit from NASA's metro air testing - DENR](#)

By: Jing Villamente

Air pollution is a major global issue that poses significant risks to human health, leading to chronic heart and lung diseases, lung cancer, stroke, and respiratory infections.

This was how Department of Environment and Natural Resource Secretary Maria Antonia Yulo Loyzaga over the weekend gave importance to the National Aeronautics and Space Administration's air quality monitoring mission here.

Loyzaga said this will benefit Filipinos in several ways as she also highlighted the importance of international cooperation in addressing air pollution, as the secretary tagged along selected media and toured the National Aeronautics and Space Administration's DC-8 aircraft on 8 February in Asian Aerospace in Clark, Pampanga.

She said the Airborne and Satellite Investigation of Asian Air Quality, a project led by NASA is an international collaborative research initiative with South Korea's National Institute of Environmental Research, University Kebangsaan Malaysia, Thailand's Geo-Informatics and Space Technology Development Agency, and the Philippines' DENR, Philippine Space Agency, Manila Observatory and the University of the Philippines.

Loyzaga said that working together will contribute to a better understanding and management of air pollution, which ultimately protects the health and well-being of the populations of the participating countries.

"It contributes to the climate crisis and hastens global warming. With the world in need of cleaner air, governments are now working to prioritize preventing air pollution as an essential solution to one of the most pressing environmental problems in the world," Loyzaga explained.

She added that the project will enhance air quality monitoring through access to advanced air quality monitoring techniques including satellite data, ground-based observations, and atmospheric modeling tools. Improved monitoring capabilities will result to accurate and comprehensive assessment of air pollution that will help the local government executives implement interventions to address air pollution hotspots.

"By utilizing the data and knowledge provided by this mission, we can enhance our air quality monitoring systems, develop evidence-based policies, and implement effective measures to improve public health and combat climate change," Loyzaga said.

By participating in the collaboration, Loyzaga said, the Philippines can also learn from the experiences of the other countries in the region and contribute its expertise, leading to more efficient and comprehensive air quality management approaches.

She added that the project can help policymakers and government agencies gain access to advanced research findings and analysis, enabling evidence-based policy-making and targeted interventions. This can lead to the strengthening of air quality regulations, the implementation of effective emission control measures, and the development of sustainable strategies for improving air quality in the country.

Five engineers and air quality specialists from the DENR-Environmental Management Bureau will join top NASA scientists on board the scientific research flights from 11 to 15 February to measure ultraviolet and visible light, collecting information about the common pollutants in Metro Manila and adjacent areas. The exploration was guided by NASA's Tropospheric Composition Program Manager Dr. Barry L. Lefer.

"The EMB team of young and dedicated engineers and air quality specialists will join the flights to learn and observe so we can build technical capacity and expertise," Loyzaga said.

ASIA-AQ project in the Philippines is under the Joint Understanding of the DENR and NASA, represented by Loyzaga and Gilbert R. Kirkham, respectively.

"To complement the project, DENR will also be enhancing its air quality instrumentation network this year, made possible by the 2024 national budget and by partnerships with development partners," Loyzaga said.

The Ambassadors of the Republic of Korea and Thailand to the Philippines, Tulll Traisorat and Lee Sang-hwa, and Malacañang Press Briefer Daphne Osen-Paez joined the expedition.

GMA

Canada invests \$28.15 million on PH climate, healthcare initiatives

By: Jon Viktor Cabuenas

The Canadian government announced a \$28.15-million investment to support the Philippines in its efforts for climate adaptation, resilience against natural disasters, and improved health care services.

The announcement was made by Canada's Minister of International Development Ahmed Hussen in a statement released on the country's government website, citing 75 years of "strong bilateral relations" between the two countries.

"Canada and the Philippines share a close relationship. During my recent visit to the region, I met with local leaders to discuss our important shared work on improving biodiversity protection, climate adaptation, women's empowerment, and health-care services — all areas that Canada is supporting through its development assistance," he said.

"By working together, we'll build healthier and more resilient communities in the Philippines and here at home," he added.

The investment will support the Forest Foundation Philippines' \$8-million project which seeks to assist in financing and capacity building to support "gender-responsive, nature-based solutions" to climate change and biodiversity loss.

It will also cover Alinea International's \$12.5-million project that centers on boosting the capacities of national and local governments, as well as women-led organizations, on gender-responsive climate adaptation.

Also included is Plan International Canada's \$7-million project that supports health-promotion campaigns, and boosts services in remote communities, along with providing training for local health practitioners as a tie-up with the University of Montréal School of Public Health.

"The projects announced today demonstrate Canada's commitment to addressing global challenges such as climate change and biodiversity loss," said Canada's Parliamentary Secretary to the Minister of Foreign Affairs Robert Oliphant.

"The Philippines and Canada have shared a close partnership, built on shared values and close people-to-people ties, for decades. Our government will continue to be there for the Philippines through our development programming," he added.

MANILA BULLETIN

[BSP strengthens nature-related financial risks monitoring](#)

By: Lee Chipongian

The Bangko Sentral ng Pilipinas (BSP) has been improving how it monitors and scrutinize nature-related risks in the financial system as it encourages more funding in sustainable finance, according to BSP Governor Eli M. Remolona Jr.

“The BSP’s mandate is to promote financial stability. Thus, we have been building our analytical and research capabilities to monitor the nature-related risks in the financial system,” he said during the International Workshop on “Nature, Macroeconomy, and Finance” held recently at the BSP.

Part of developing and promoting financing for projects that will address climate change and other nature-related issues, is the establishment of a sustainable finance taxonomy by the BSP and other agencies.

This taxonomy is the “foundational for further climate initiatives, such as the development of carbon markets,” said the BSP.

During the workshops, Remolona stressed the need and urgency to understand the impact of nature on emerging economies such as the Philippines, and to better analyze its risks, opportunities, and policy challenges.

“Taken from the perspective of emerging market economies, the workshop delved into the dynamics, dependencies, and impact of nature on ecosystem services, opportunities, and financial risks; and policy challenges of nature on the macroeconomy and the financial sector,” said the BSP in a statement on Friday, Feb. 9.

The BSP also said that “beyond managing the risks (they want to) encourage financing for projects and activities aligned with the country’s climate objectives.”

“The workshop tackled the importance of green taxonomy and prospects for integrating nature in financial policy; the current state and challenges of compiling data on nature; potential policy implications for supervisors of nature-related risks; and cutting-edge research themes on nature,” said the BSP.

It further noted that during the Jan. 29 and 30 event, a panel session on financial inclusion was the highlight, as it discussed how micro, small, and medium enterprises (MSMEs) could improve its environmental-related actions. The panel was moderated by Monetary Board Member V. Bruce J. Tolentino.

The workshop was a joint initiative of the BSP, the London School of Economics and Political Science-Grantham Research Institute on Climate Change and the Environment. It is also participated by the World Wide Fund for Nature (WWF), and the International Network for Sustainable Financial Policy Insights, Research, and Exchange (INSPIRE).

The two-day event gathered researchers, policymakers, regulators, and representatives from the academe, multilateral agencies, and financial institutions.

“(They) discussed urgent risks due to the degradation of nature, through economic activities including deforestation and land use change. Protecting nature and biodiversity, especially for a country like the Philippines, is integral to climate-resilience,” said the BSP.

The workshop in the Philippines is the fourth by INSPIRE in Southeast Asia. Other workshops have been held in Singapore, Indonesia and Malaysia.

Meanwhile, the BSP in September 2023 released its proposed Philippine Sustainable Finance Taxonomy Guidelines (SFTG) to help the country raise the estimated \$168 billion in green investments in the next seven years or so.

The Philippines has conditionally committed to a 75 percent reduction in greenhouse gas emissions by 2030.

The BSP-led Financial Sector Forum (FSF), an inter-agency group that regulates and supervises the financial sector, are the ones that prepared the SFTG. It includes the BSP, the Securities and Exchange Commission, Insurance Commission, and the Philippine Deposit Insurance Corp.

MANILA STANDARD

[Climate monitor: World sees first 12 months above 1.5C warming level](#)

Earth has endured 12 months of temperatures 1.5C hotter than the pre-industrial era for the first time on record, Europe's climate monitor said Thursday, in what scientists called a "warning to humanity."

Storms, drought and fire have lashed the planet as climate change, supercharged by the naturally-occurring El Niño phenomenon, stoked record warming in 2023, making it likely the hottest in 100,000 years.

The extremes have continued into 2024, Copernicus Climate Change Service (C3S) service said, confirming that February 2023 to January 2024 saw warming of 1.52 degrees Celsius above the 19th century benchmark.

That is a grave foretaste of the Paris climate deal's crucial 1.5C warming threshold, but it does not signal a permanent breach of the limit, which is measured over decades, scientists said.

"We are touching 1.5C and we see the cost, the social costs and economic costs," said Johan Rockstrom, of the Potsdam Institute for Climate Impact Research.

"1.5 is a very big number and it hurts us really badly in terms of heat waves, droughts, floods, reinforced storms, water scarcity across the entire world. That is what 2023 has taught us."

Recent months have seen an onslaught of extremes across the planet, including devastating drought gripping the Amazon basin, sweltering winter temperatures in parts of southern Europe, deadly wildfires in South America and record rainfall in California.

"It is clearly a warning to humanity that we are moving faster than expected towards the agreed upon 1.5C limit that we signed," Rockstrom told Agence France Presse (AFP), adding that temperatures will likely fall back somewhat after the El Niño comes to an end.

Copernicus said last month was the hottest January on record—the eighth month in a row of historic high monthly temperatures—with temperatures 1.66C warmer overall than an estimate of the January average for 1850-1900, the pre-industrial reference period.

“2024 starts with another record-breaking month—not only is it the warmest January on record, but we have also just experienced a 12-month period of more than 1.5C above the pre-industrial reference period,” said Samantha Burgess, C3S Deputy Director.

Planet-heating emissions, mainly from the burning of fossil fuels, have continued to rise in recent years, when scientists say they need to fall by almost half this decade and the UN’s IPCC climate panel has warned that the world will likely crash through 1.5C in the early 2030s.

“The succession of very hot years is bad news for both nature and people who are feeling the impacts of these extreme years,” Joeri Rogelj, professor of climate science and policy at Imperial College London, told AFP.

“Unless global emissions are urgently brought down to zero, the world will soon fly past the safety limits set out in the Paris climate agreement.”

‘Off the charts’

Copernicus said January temperatures were well above average in north-western Africa, the Middle East and central Asia, as well as eastern Canada and southern Europe.

But they were below average in parts of northern Europe, western Canada and the central region of the United States.

And while parts of the world experienced an unusually wet January, swathes of North America, the Horn of Africa and the Arabian Peninsula saw drier conditions.

In Chile, which has struggled with a brutal summer heatwave and drought, the dry conditions have helped stoke wildfires, Copernicus said.

Those conditions have continued into February, with fires that started on Friday whipping into a deadly inferno that tore through neighbourhoods in the coastal Valparaiso region over the weekend leaving more than 130 people dead.

The El Niño, which warms the sea surface in the southern Pacific leading to hotter weather globally, has begun to weaken in the equatorial Pacific, Copernicus said.

Meanwhile, sea surface temperatures have continued to smash records.

Rockstrom said 2023 “is a year where ocean dynamics have simply gone berserk, it’s off the charts”.

Oceans cover 70 percent of the planet and have kept the Earth’s surface liveable by absorbing 90 percent of the excess heat produced by the carbon pollution from human activity since the dawn of the industrial age.

Hotter oceans mean more moisture in the atmosphere, leading to increasingly erratic weather, like fierce winds and powerful rain.

PHILIPPINE DAILY INQUIRER

Climate change fueling disappearance of Central Asia's Aral Sea

Toxic dust storms, anti-government protests, the fall of the Soviet Union — for generations, none of it has deterred Nafisa Bayniyazova and her family from making a living growing melons, pumpkins and tomatoes on farms around the Aral Sea.

Bayniyazova, 50, has spent most of her life near Muynak, in northwestern Uzbekistan, tending the land. Farm life was sometimes difficult but generally reliable and productive. Even while political upheaval from the Soviet Union's collapse transformed the world around them, the family's farmland yielded crops, with water steadily flowing through canals coming from the Aral and surrounding rivers.

Now, Bayniyazova and other residents say they're facing a catastrophe they can't beat: climate change, which is accelerating the decades-long demise of the Aral, once the lifeblood for the thousands living around it.

The Aral has nearly disappeared. Decades ago, deep blue and filled with fish, it was one of the world's largest inland bodies of water. It's shrunk to less than a quarter of its former size.

Much of its early demise is due to human engineering and agricultural projects gone awry, now paired with climate change. Summers are hotter and longer; winters, shorter and bitterly cold. Water is harder to find, experts and residents like Bayniyazova say, with salinity too high for plants to properly grow.

"Everyone goes further in search of water," Bayniyazova said. "Without water, there's no life."

History and demise

For decades, the Aral — fed by rivers relying heavily on glacial melt, and intersecting the landlocked countries of Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan — held meters-long fish, caught and shipped across the Soviet Union.

The region prospered, and thousands of migrants from across Asia and Europe moved to the Aral's shores, for jobs popping up everywhere from canning factories to luxury vacation resorts.

Today, the few remaining towns sit quiet along the former seabed of the Aral — technically classified as a lake, due to its lack of a direct outlet to the ocean, though residents and officials call it a sea. Dust storms whip through, and rusted ships sit in the desert.

In the 1920s, the Soviet government began to drain the sea for irrigation of cotton and other cash crops. By the 1960s, it shrunk by half; those crops thrived. By 1987, the Aral's level was so low it split into two bodies of water: the northern and southern seas, in Kazakhstan and Uzbekistan, respectively.

The United Nations Development Program calls the destruction of the Aral Sea “the most staggering disaster of the 20th century.” It points to the Aral's demise as the cause of land degradation and desertification, drinking water shortages, malnutrition, and deteriorating health conditions.

National governments, international aid organizations and local groups have tried — with varying degrees of effort and success —to save the sea. Efforts range from planting bushes for slowing the encroaching dunes to building multimillion-dollar dams.

But experts say climate change has only accelerated the death of the Aral, and will continue to exacerbate residents' suffering.

‘Only us locals’

Without the moderating influence of a large body of water to regulate the climate, dust storms began to blow through towns. They whipped toxic chemicals from a shuttered Soviet weapons testing facility and fertilizer from farms into the lungs and eyes of residents, contributing to increased rates of respiratory diseases and cancer, according to the U.N.

Fierce winds caused dunes to swallow entire towns, and abandoned buildings filled with sand. Residents fled. A dozen fish species went extinct, and businesses shuttered.

Madi Zhasekenov, 64, said he watched as his town's once-diverse population dwindled.

“The fish factories closed, the ships were stranded in the harbor, and the workers all left,” said Zhasekenov, former director of the Aral Sea Fisherman Museum in Aralsk, Kazakhstan. “It became only us locals.”

Dust storms, rising global temperatures, and wind erosion are destroying the glaciers the sea's rivers rely on, according to a U.N. report. The remaining water is getting saltier and evaporating faster.

Melting ice and changing river flows may further destabilize drinking water supply and food security, the report warns, and hydropower plants could suffer.

During a recent summer in the small desert village of Tastubek, Kazakhstan, farmer Akerke Molzhigitova, 33, watched as the grass her horses fed on dried up from extreme heat. To try and save them — a major source of income and food — she moved them 200 kilometers (125 miles) away.

Still, dozens died. Her neighbors, fearing the same fate, sold their animals.

Contrast along the Aral

Near Sudochoye Lake in Uzbekistan, Adilbay and his friends fish in the Aral's remaining water pockets. Their catch is tiny.

He holds his arms wide, the size of fish from years ago. "Now there is nothing," said Adilbay, 62, who goes by only one name.

As the water disappeared, a nearby fish processing warehouse closed. Adilbay's friends and relatives moved to Kazakhstan, seeking new jobs.

There, fisherman Serzhan Seitbenbetov, 36, and others find success. Sitting in a boat rocking in gentle waves, he pulled his net. In an hour, he hauled in a hundred fish, some 2 meters (6.5 feet) long. He'll make 5000 Kazakhstani Tenge (\$10.50), he said — five times his previous daily pay as a taxi driver in a neighboring city.

"Now all the villagers make good money being fishermen," he said.

That's the result of an \$86 million dike project led by Kazakhstan, with assistance from the World Bank, completed in 2005.

Known as the Kokaral Dam, the dike cuts across a narrow stretch of the sea, conserving and gathering water from the Syr Darya River. The dike surpassed expectations, leading to an increase of over 10 feet in water levels after seven months.

That helped restore local fisheries and affected the microclimate, causing an increase in clouds and rainstorms, according to the World Bank. Population grew.

But it couldn't replicate life before the water started drying up, said Sarah Cameron, an associate professor at the University of Maryland who's writing a book about the Aral.

"It does not support the same amount of people and the fishing industry in the same way," Cameron said.

And building the dike in Kazakhstan cut off the south part of the sea in Uzbekistan from its crucial water source.

Uzbekistan has been less successful in restoration efforts. The government hasn't undertaken large projects like the Kokaral. Instead, the country planted saxaul trees and other drought-resistant plants to help prevent erosion and slow dust storms.

Agriculture, especially the export of water-intensive cotton, continued to be a main staple of the economy. Millions of people worked — for years in forced-labor campaigns — in the cotton-picking industry, which further sapped water resources.

The discovery of oil and natural gas in the Aral's former seabed brought the building of gas production facilities — and shows Uzbekistan has little interest in restoration, experts said.

"While there has been some restoration," said Kate Shields, assistant professor in environmental studies at Rhodes College, "there was a sort of an acceptance that ... the sea was not coming back."

Government officials from Uzbekistan and Kazakhstan didn't respond to questions emailed by AP about restoration efforts, water scarcity and the effects of climate change.

'Barely surviving'

On her Uzbekistan farm, Bayniyazova's family has dug an earthen well, hoping to hold on to the precious little water that's left.

"If there is no water, it will be very difficult for people to live," Bayniyazova said. "Now people are barely surviving."

She doesn't plan to leave her farm yet but knows more hardships are likely ahead. Her family will dig deeper wells, see smaller harvests. They'll do whatever it takes to hang on to the only life they've known.

PHILIPPINE NEWS AGENCY

[\\$1-B NASA satellite launched to gather data on earth, climate change](#)

In a successful liftoff early Thursday, SpaceX launched NASA's nearly USD1 billion PACE satellite to monitor the health of the planet, from its oceans to its atmosphere, offering crucial data for understanding and combating climate change, according to the US space agency.

Though the mission faced multiple cancelation threats, PACE's liftoff was secured by soaring on a SpaceX Falcon 9 rocket.

PACE is now on its way to a precise orbit where it will begin its observations above the International Space Station.

It will collect data on aerosols and clouds, scanning Earth every two days to analyze their chemical composition, movement, and interactions.

NASA's PACE mission aims to explore Earth's environment by studying ocean health, atmospheric conditions, and ecosystems.

It will monitor plankton, aerosols, clouds, and oceanic conditions to better understand their interactions and influence on the planet's climate and overall health.

Scientists anticipate that PACE data will provide crucial insights into the effects of aerosols on cloud formation and differentiate between various cloud types. Understanding these factors is vital for interpreting climate changes and air quality shifts, said NASA.

In addition, data from PACE's polarimeters will enhance climate models by providing more accurate atmospheric information, replacing current estimates with direct measurements.

The new polarimetry data will also provide real-time insights into air pollution.

THE GUARDIAN

[Atlantic Ocean circulation nearing 'devastating' tipping point, study finds](#)

The circulation of the Atlantic Ocean is heading towards a tipping point that is “bad news for the climate system and humanity”, a study has found.

The scientists behind the research said they were shocked at the forecast speed of collapse once the point is reached, although they said it was not yet possible to predict how soon that would happen.

Using computer models and past data, the researchers developed an early warning indicator for the breakdown of the Atlantic meridional overturning circulation (Amoc), a vast system of ocean currents that is a key component in global climate regulation.

They found Amoc is already on track towards an abrupt shift, which has not happened for more than 10,000 years and would have dire implications for large parts of the world.

Amoc, which encompasses part of the Gulf Stream and other powerful currents, is a marine conveyor belt that carries heat, carbon and nutrients from the tropics towards the Arctic Circle, where it cools and sinks into the deep ocean. This churning helps to distribute energy around the Earth and modulates the impact of human-caused global heating.

But the system is being eroded by the faster-than-expected melt-off of Greenland's glaciers and Arctic ice sheets, which pours freshwater into the sea and obstructs the sinking of saltier, warmer water from the south.

Amoc has declined 15% since 1950 and is in its weakest state in more than a millennium, according to previous research that prompted speculation about an approaching collapse.

Until now there has been no consensus about how severe this will be. One study last year, based on changes in sea surface temperatures, suggested the tipping point could happen between 2025 and 2095. However, the UK Met Office said large, rapid changes in Amoc were “very unlikely” in the 21st century.

The new paper, published in Science Advances, has broken new ground by looking for warning signs in the salinity levels at the southern extent of the Atlantic Ocean between Cape Town and Buenos Aires. Simulating changes over a period of 2,000 years on

computer models of the global climate, it found a slow decline can lead to a sudden collapse over less than 100 years, with calamitous consequences.

The paper said the results provided a “clear answer” about whether such an abrupt shift was possible: “This is bad news for the climate system and humanity as up till now one could think that Amoc tipping was only a theoretical concept and tipping would disappear as soon as the full climate system, with all its additional feedbacks, was considered.”

It also mapped some of the consequences of Amoc collapse. Sea levels in the Atlantic would rise by a metre in some regions, inundating many coastal cities. The wet and dry seasons in the Amazon would flip, potentially pushing the already weakened rainforest past its own tipping point. Temperatures around the world would fluctuate far more erratically. The southern hemisphere would become warmer. Europe would cool dramatically and have less rainfall. While this might sound appealing compared with the current heating trend, the changes would hit 10 times faster than now, making adaptation almost impossible.

“What surprised us was the rate at which tipping occurs,” said the paper’s lead author, René van Westen, of Utrecht University. “It will be devastating.”

He said there was not yet enough data to say whether this would occur in the next year or in the coming century, but when it happens, the changes are irreversible on human timescales.

In the meantime, the direction of travel is undoubtedly in an alarming direction.

“We are moving towards it. That is kind of scary,” van Westen said. “We need to take climate change much more seriously.”

THE PHILIPPINE STAR

Canada gives Philippines P1.1 billion aid for climate, healthcare efforts

By: Cecille Suerte Felipe

Canada has announced some P1.1 billion in development assistance for the Philippines to support the latter's efforts in climate adaptation, resilience against natural disasters and improved health care services.

Canada's Minister of International Development Ahmed Hussen confirmed the investment of \$28.15 million in development programming for the Philippines on <https://www.canada.ca/>

Of the amount, Forest Foundation Philippines will implement an \$8-million project to support vulnerable communities as they mitigate the impact of climate change and biodiversity loss, according to Husdem.

The project will assist in financing and capacity-building to support gender-responsive, nature-based solutions to climate change and biodiversity loss.

The Canadian minister said that Alinea International would implement a \$12.5-million project to enhance climate resilience in six vulnerable provinces in the Philippines.

"This project will focus on building the capacity of national and local governments and women-led organizations on gender-responsive climate adaptation and disaster risk reduction and management," he added.

Hussen also noted that Plan International Canada would implement a \$7-million project to support health promotion campaigns and increased health care services in remote communities.

"This project will also provide training for local health professionals in partnership with the University of Montréal School of Public Health," he said.

"Once again, Canada demonstrates its commitment to its Indo-Pacific strategy and acts in the spirit of International Development Week, observed from Feb. 4 to 10, 2024, alongside Canadians and development-focused organizations nationwide," he added.

The Filipino-Canadian community in Ottawa joined Philippine embassy personnel, led by Ambassador Maria Andrelita Austria, last Wednesday in a simple yet meaningful

thanksgiving mass in celebration of the 75th anniversary of Philippine-Canadian diplomatic relations.

During his homily, Rector Rev. Fr. David Bergeron highlighted the loving and hospitable nature of Filipinos, both in the Philippines and in Canada.

The celebration was accompanied by liturgical songs sung in Filipino by the Filipino choir of the Assumption Parish in Ottawa with Roberto Madlansacay as pianist.

The thanksgiving mass is the Philippine embassy's inaugural event to kick off a series of commemorative activities to mark this important milestone in Philippine-Canadian relations.

[\[Opinion\] In search of sustainable energy solution together](#)

By: Korean Serenade - Lee Sang-Hwa

Elon Musk, founder of SpaceX, recently posted a photo taken at night from a satellite on the Korean peninsula, titled “Night and day difference.” He hinted at what happened 70-plus years after a country was divided into half capitalist and half communist.

The sharp contrast between bright South and dark North reminded me of the movie “Oppenheimer” I watched last year. The satellite image and the film lay bare another stark difference where North Korea aggressively pursues nuclear weapon capabilities, while the South serves as a model for developing nuclear energy for peaceful purposes.

I vividly remember my visit to Pyongyang in February 2010 which left a lasting impression on the sad reality in North Korea. Witnessing oxen-pulled carts in the streets of a country hell-bent on nuclear armament was surreal. Despite severe energy scarcity and widespread poverty, North Korea’s leadership continues to prioritize nuclear ambitions – a huge hypocrisy.

Having traveled extensively during my tenure at the Executive Office of the UN Secretary-General from 2007 to 2014, I observed firsthand the critical importance of energy security worldwide. Energy plays a central role in various aspects of our lives, from fueling economies to achieving Sustainable Development Goals, combating climate change and ensuring global security. Energy poverty continues to affect billions, limiting access to education and prosperity. Sustainable energy is emphasized as crucial for sustainable growth, as highlighted during COP28 in December last year.

The massive blackout in West Visayas at the dawn of the new year rattled the Philippines. While the country stands on the threshold of the upper-middle income country group, the incident should serve as a reminder of the current state of energy. Lack of energy and high electricity cost are key stumbling blocks to the government’s noble endeavors to create a more attractive environment for foreign investors. In my opinion, this is the area where Korea and the Philippines can build a win-win partnership as the two nations mark the diamond jubilee of diplomatic ties this year.

In the past few months, I embarked on a so-called “energy tour.” Starting with my visit to the Cebu coal-fired power plant, run by the Korea Electric Power Corporation (KEPCO), to the Angat Dam operated by Korea Water Resources Corporation (K-Water) and finally to a fact-finding mission to the Bataan Nuclear Power Plant (BNPP), my trip covered a variety of power sources, from fossil fuels to carbon-free resources. When the modernization of the Angat Dam is completed in 2025, its capacity for water supply, power generation and flood control will be significantly enhanced. I am proud of the

humble yet positive contributions of KEPCO and K-Water for the Philippines' energy security.

At the COP28, 22 countries with active nuclear industries, including Korea, the US, the UK and France, pledged to triple nuclear powered generation by 2050. Their message is straightforward: nuclear power is the most practical and reliable carbon-free resource in finding sustainable future energy solution.

At the World Economic Forum Annual Meeting 2024 in Davos, the fast-growing application of AI was a buzz word. It is noteworthy, in this context, that more affordable and greener power supply will be in greater demand in the future AI era. OpenAI CEO Sam Altman said that nuclear fusion might be the solution to address the energy needs of powerful AI models like OpenAI's GPT and Google's Bard. By the same token, French President Emmanuel Macron outlined his strategy for achieving carbon neutrality and ensuring a sustainable energy provision amidst the increasing energy demands of generative AI. President Macron emphasized that France currently boasts one of Europe's most affordable, reliable and low-carbon energy grids, with approximately 70 percent of electricity sourced from nuclear power.

In this regard, my recent trip to the BNPP was an eye-opener. BNPP is a sister reactor of Kori-2 plant in Korea. Since its commercial operation in 1983, Kori-2 has run for 40 years without any major incidents. Now it is being temporarily suspended for safety assessment to extend its lifespan, a growing trend among countries employing nuclear power plants.

In fact, if the BNPP had been activated in 1986, the Philippines, as a peace-loving country like Korea, could have become the first and only nation in the ASEAN utilizing nuclear power, and it would have led to a fundamentally different situation in its current energy security. Given the hiatus, it is timely that Korea Hydro & Nuclear Power has offered a feasibility study to commission the BNPP at this juncture.

Nuclear energy has played a significant role in Korea's development. At present, Korea has 25 operational nuclear reactors, with more planned to be constructed. Korea, which is known for building safe nuclear reactors on time and within budget, also has a proven track-record in transferring nuclear reactors and its technologies abroad, including the Barakah nuclear power plant in the UAE. At the 2023 UN General Assembly, President Yoon Suk Yeol articulated his proposal for a Carbon Free Coalition, which aims to promote an active employment of nuclear power and green hydrogen as alternative energy sources to achieve the global Net Zero goal. Indeed, Korea is best positioned to transfer knowhow and technical expertise required for operators and regulators.

The Philippines can be a good partner in this enterprise. President Marcos Jr. announced his vision for the country by introducing a nuclear energy option in its energy mix. Coupled with the signing of the so-called “123 Agreement” between the Philippines and the US, the adoption of the “Philippine National Nuclear Energy Safety Act” by the Congress in November last year was an encouraging development. The Philippines’ participation in the Nuclear Energy Summit in Brussels from March 21-22 will allow the country’s energy experts to gain a better understanding of the desirability of the nuclear option as a main source of energy for the foreseeable future.

In the movie “Oppenheimer,” J. Robert Oppenheimer noted, “The optimist thinks this is the best of all possible worlds. The pessimist fears it is true.” As Korea and the Philippines celebrate the 75th year of bilateral relations this year, I am optimistic that the frontier of our future-oriented partnership will evolve into clean energy and green growth.

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