



## NEWS ROUNDUP

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#### [New Zealand proposes taxing cow burps to reduce emissions](#)

By George Wright

New Zealand has proposed taxing the greenhouse gasses that farm animals produce from burping and urinating in a bid to tackle climate change.

#### [Use Covid lessons to curb climate change, Lords tell government](#)

By Georgina Rannard

Information campaigns like those used in the Covid-19 pandemic would help individuals act on climate change, a House of Lords report has said.

## **BUSINESS MIRROR**

### **[Globe aims to hasten PHL's transition to green economy](#)**

By: Lorenz Marasigan

Globe Telecom Inc. said on Wednesday it is “ready” to partner with the government in “greening the economy,” citing its group’s sustainability efforts.

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By Lade Kabagani

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## **DAILY MAIL ONLINE**

### **[World's supply of clean energy must double by 2030](#)**

before climate change starts to jeopardise our energy supplies, World Meteorological Association warns

By Sam Tonkin

The world's supply of clean energy must double in the next eight years before climate change starts to jeopardise our energy supplies, a new report has warned.

## **GMA NEWS ONLINE**

### **[UN urges 'complete transformation' of global energy system](#)**

By Nina Larson, Agence France-Presse

GENEVA — The world needs to double the supply of electricity from renewables by 2030 to avoid climate change undermining global energy security, the United Nations said on Tuesday.

## **MANILA BULLETIN**

### **[DENR: Kaliwa Dam project put on hold](#)**

By Mario Casayuran

The Department of Environment and Natural Resources (DENR) has put on hold the issuance of an Environment Compliance Certificate (ECC) for the construction of the controversial Kaliwa Dam project in Quezon province.

## **PHILIPPINE DAILY INQUIRER**

### **[Meralco unit to build 1.5-MW solar farm for Riverbanks mall](#)**

By: Jordeene B. Lagare

Spectrum, a wholly owned subsidiary of power distributor Manila Electric Co. (Meralco), will construct a solar farm on the rooftop of Riverbanks shopping mall in Marikina City.

## **PHILIPPINE NEWS AGENCY**

### **[DENR pursues sustainable 'green, blue' economy](#)**

By: Perfecto Raymundo

MANILA – The Department of Environment and Natural Resources (DENR) spent the first 100 days under the new administration of President Ferdinand “Bongbong” Marcos Jr. pursuing sustainable management and development of the environment while creating "green" jobs and ensuring investments and revenue for the government.

## **PHYS.ORG**

### **[Maps of the past may shed light on our climate future](#)**

By Mikayla Mace Kelley, University of Arizona

Reconstructed surface air temperature (left) and rainfall amount (right) during the Paleocene-Eocene Thermal Maximum warming event, 56 million years ago. The maps were created by blending geological data with climate model simulations using a technique called paleoclimate data assimilation. Credit: Jessica Tierney  
About 56 million years ago, volcanoes quickly dumped massive amounts of carbon dioxide into the atmosphere, heating the Earth rapidly.

## **THE MANILA TIMES**

### **[UN: World must triple investment in renewables](#)**

By: Xinhua News Agency

Geneva: Global investments in renewable energy should be tripled by 2050 in order to put the world on the track to reduce emissions to zero, the World Meteorological Organization (WMO) said on Tuesday.

## **UN NEWS**

### **[Climate change: WMO report urges faster action on transition to clean energy](#)**

In its new report the World Meteorological Organization (WMO) said that in order to limit the global temperature rise which is undermining energy security, electricity tapped from clean energy sources must double over the next eight years.

## **CCC IN THE NEWS:**

### **BUSINESS MIRROR**

#### **[Pitmaster focuses support on climate change mitigation initiatives](#)**

By: BMPLUS

Pitmaster Foundation has extended its helping hand as it branches to environmental conservation efforts in a bid to support the government's effort to eliminate carbon emissions and create the eco-friendly Philippines.

**Information and Knowledge Management Division**

## BBC NEWS

### [New Zealand proposes taxing cow burps to reduce emissions](#)

By George Wright

New Zealand has proposed taxing the greenhouse gasses that farm animals produce from burping and urinating in a bid to tackle climate change.

The world-first scheme will see farmers paying for agricultural emissions in some form by 2025.

The country's farming industry accounts for about half of its emissions.

But farmers have been quick to criticise the plan, with one lobby group saying it would "rip the guts out of small-town New Zealand".

Prime Minister Jacinda Ardern said money raised from the proposed levy will be pumped back into the industry to finance new technologies, research and incentive payments for farmers.

"New Zealand's farmers are set to be the first in the world to reduce agricultural emissions, positioning our biggest export market for the competitive advantage that brings in a world increasingly discerning about the provenance of their food," she told reporters while announcing the proposals from a farm in Wairarapa.

The pricing has not yet been decided on, but the government says that farmers should be able to make up the cost of the levy by charging more for climate-friendly produce.

But some farmers have condemned the plans, saying they could prompt many of them to sell up.

Federated Farmers national president Andrew Hoggard said the plan will "rip the guts out of small-town New Zealand", leading to farms making way for trees.

He added that the body was "deeply unimpressed" with the government's interactions with farmers while examining alternative proposals.

Farmers will now be selling their land "so fast you won't even hear the dogs barking on the back of the ute (pickup truck) as they drive off", he added.

Some have also argued that the plans could actually increase emissions if food production was to move to countries with less efficient farming methods.

In 2019, methane in the atmosphere reached record levels, around two-and-a-half times above what they were in the pre-industrial era.

## [Use Covid lessons to curb climate change, Lords tell government](#)

By Georgina Rannard

Information campaigns like those used in the Covid-19 pandemic would help individuals act on climate change, a House of Lords report has said.

To meet climate goals, a third of cuts to UK emissions by 2035 must come from people changing their behaviour, it says.

It calls the government's current approach "seriously inadequate".

In response the government said it is fully committed to its legally binding net zero climate goals.

The House of Lords report also advises government to financially support people to move to greener diets, transport and homes.

But calls to drive behaviour changes are at odds with Prime Minister Liz Truss's focus on not intervening in people's lives.

"I'm not going to tell you what to do, or what to think or how to live your life," she told the Conservative party conference.

Ms Truss also ruled out a public information campaign to reduce energy use this winter.

"People will have different lifestyles and make different choices about what changes they need to make, but we're quite clear that people need to be helped to take this forward," Baroness Kate Parminter, chair of the House of Lords Environment and Climate Change Committee, which wrote the report, told BBC News.

The Covid-19 pandemic provided important lessons in how to communicate clearly, using science, to the public, she said.

"Covid was a crisis, the climate is a crisis. We can learn some very important messages around the communications and the scale of the problem," she adds.

Transport, food and energy are the key areas where we will need to change our behaviour, the report says.

It recommends the government provide grants so people can switch to electric cars, and that it make it much easier to cycle and walk instead of driving.

The committee strongly urges the government to consider a frequent-flyer levy, which charges regular flyers more.

To address the carbon footprint of our homes and high energy bills, the committee says the government must introduce a nationwide home-insulation drive.

It calls on the government to expand its ELMS scheme that rewards farmers for environmental work - a scheme Ms Truss's government is now reviewing.

But the committee concluded that taxes on foods that are bad for the environment should not be introduced now.

Baroness Parminter says there is "big reluctance" by the government to "be open with the public about how much change is needed in terms of how we travel, how we heat our homes, and what we eat and buy".

"We remain fully committed to the legally binding target of achieving net zero greenhouse gas emissions by 2050," a government spokesperson from the Department for Business, Energy & Industrial Strategy told BBC News.

The committee was told the public are eager for action and that 85% of people are very concerned by climate change.

Public messaging campaigns have huge power to change behaviour, the report says, highlighting the huge uptake of recycling nationwide.

But it insists that fairness must be at the heart of change. The wealthiest 10% in Britain have a carbon footprint nearly double the national average, and greater responsibility to reduce their emissions, the committee was told.

It also warned that corporate interest may try to prevent behaviour change - pointing to tobacco companies that undermined anti-smoking campaigns - and the government must guard against this.

## **BUSINESS MIRROR**

### **Globe aims to hasten PHL's transition to green economy**

By: Lorenz Marasigan

Globe Telecom Inc. said on Wednesday it is “ready” to partner with the government in “greening the economy,” citing its group’s sustainability efforts.

In a statement, Globe Chief Sustainability and Corporate Communications Officer Yolanda C. Crisanto said Globe shares the country’s vision of a more sustainable path towards economic recovery “towards a new and better normal.”

“Globe has been at the forefront of integrating sustainable practices in our operations. We are in full support of the government’s call to steer the country towards a green economy, and we are ready to share our best practices and industry-leading systems and innovations to see this to fruition on a national scale,” she said.

Crisanto said Globe has been an advocate for sustainable business practices, committing to support the United Nations Sustainable Development Goals since it came into force in 2016.

She added that Globe is the “first and only Philippine publicly-listed company” to commit to set science-based targets through the Science Based Target initiative (SBTi), aligned with the Paris Agreement, which aims to limit global warming to 1.5 degrees Celsius.

Globe is likewise a participant in the Race to Zero UN-backed global campaign, rallying non-state actors to halve global emissions by 2030 and deliver a healthier, fairer zero-carbon world by 2050.

Crisanto noted that Globe started “greening its network in 2012, as it recognized the need to manage the environmental impact of its business.”

So far, Globe has deployed over 8,500 green network solutions such as fuel cell systems, direct current (DC) Hybrid Generators, free cooling systems, and lithium-ion batteries to achieve energy and resource efficiency in its cell sites.

It likewise started getting into renewable energy through power purchase agreements, having 14 facilities running on renewable energy alone.

Crisanto said Globe is also a party to CDP, a global non-profit that runs the world’s leading environmental disclosure platform for investors, and has committed to participate in the Global Climate Action Fund in Seoul, South Korea.



## DAILY TRIBUNE

### [Improved policies vs natural hazards sought](#)

By Lade Kabagani

The government is pursuing the institutionalization of the Disaster Risk Reduction Management Program that will be implemented in all levels of the local government units

The Office of the Civil Defense and the National Risk Reduction and Management Council are keen on intensifying efforts to improve the national government's policies and programs to effectively address the country's vulnerability to natural hazards and calamities.

NDRRMC spokesperson and OCD Assistant Secretary Raffy Alejandro said the government is pursuing the institutionalization of the Disaster Risk Reduction Management Program that will be implemented in all levels of the local government units including in regional, provincial, and municipalities nationwide.

"Because of the extreme effects of climate change, we need to adapt new technologies or systems that would really enhance our country's disaster response and risk management capability," Alejandro said.

He said that there is a need to integrate the master plans on hazards and risk reduction into the local planning as well as to further improve the risk-informed planning at the local levels.

Because of the extreme effects of climate change, we need to adapt new technologies or systems that would really enhance our country's disaster response and risk management capability.

"When we do local planning, the land used must be integrated to the hazards and other elements on risk reduction in coming up with our local plans," Alejandro said.

He added that the OCD continues to provide capacity-building efforts to the national, provincial, and local officials "to better address risk reduction and disaster response."

Meanwhile, Alejandro said that as the Philippines is considered a hazard-prone country, preparedness against possible hazards brought by natural calamities and disasters must be improved and people must adapt to the current climate situation.

"The Philippines is really in the heart of every disaster, our country is a hazard-prone area. Our population is increasing and with that — our capacity to respond, to conduct resilient disaster management program should be evolving and need to be adaptive," Alejandro said, referring to the result of the World Risk Index report 2022.

## DAILY MAIL ONLINE

### [World's supply of clean energy must double by 2030](#)

before climate change starts to jeopardise our energy supplies, World Meteorological Association warns

By Sam Tonkin

- Experts warn world's supply of clean energy must double in the next eight years
- Otherwise they say climate impacts will begin to jeopardise our energy supplies
- The warnings feature in a new report by the World Meteorological Association
- The report focuses on how to develop clean energy to achieve net zero by 2050

The world's supply of clean energy must double in the next eight years before climate change starts to jeopardise our energy supplies, a new report has warned.

Scientists at the World Meteorological Association (WMO) say solar, wind, hydropower and energy efficiency are the key to a cleaner energy future.

However, the impact climate change is already set to have on weather means early warning systems are required to prevent severe weather events from impacting energy supplies, including from renewable energy sources.

The report focuses on how we can develop clean energy to achieve net zero emissions by 2050.

It states that energy adaptation must be a top priority for tackling climate change and countries need to invest more in the sector.

'The energy sector is the source of around three-quarters of global greenhouse gas emissions,' said WMO Secretary-General Professor Petteri Taalas.

'Switching to clean forms of energy generation, such as solar, wind and hydropower – and improving energy efficiency – is vital if we are to thrive in the twenty-first century. Net zero by 2050 is the aim.

'But we will only get there if we double the supply of low-emissions electricity within the next eight years.'

He added: 'Time is not on our side, and our climate is changing before our eyes. We need a complete transformation of the global energy system.'

The WMO's State of Climate Services annual report, which includes inputs from 26 different organisations, focuses on energy this year.

Experts said the reason for this was because energy holds the key to international agreements on sustainable development and climate change and, indeed, to the planet's health.

Access to reliable weather, water and climate information and services will be increasingly important to strengthen the resilience of energy infrastructure and meet rising demand (an increase of 30 per cent in the past ten years), they added.

Despite issuing warnings, the report also highlights the opportunities for green-powered grids to help tackle climate change, improve air quality, conserve water resources, protect the environment and create jobs.

It states that by 2050, global electricity needs will mainly need to be met through renewable energy, with solar the single largest supply source.

African countries have an opportunity to seize untapped potential and be major players in the market, the WMO says, with the continent home to 60 per cent of the best solar resources globally.

'We urgently need to respond to the growing impact of climate change on energy systems if we are to maintain energy security while accelerating the transition to net-zero,' said Dr Fatih Birol, from the International Energy Agency.

'This requires long-term planning and bold policy action to spur investment, which in turn needs to be underpinned by comprehensive and reliable weather and climate data.'

Francesco La Camera, from the International Renewable Energy Agency, added: 'Now is the time to accelerate the transition to a renewable energy future. Anything short of radical and immediate action will ultimately eliminate the chance of staying on the 1.5°C (2.7°F) path.'

'The intertwined energy and climate crises have dramatically exposed the weaknesses and vulnerabilities of an economic system heavily reliant on fossil fuels.'

'Advancing the transition to renewables is a strategic choice to bring affordable energy, jobs, economic growth and a resilient environment to the people and communities on the ground.'

Climate change directly affects fuel supply and energy production, expert say, as well as the physical resilience of current and future energy infrastructure.

Heatwaves and droughts are already putting existing energy generation under stress, making it even more important to reduce fossil fuel emissions.

Scientists say the impact of more frequent and intense extreme weather, water and climate events is already clear.

For example, in January 2022, massive power outages caused by a historic heatwave in Buenos Aires, Argentina affected around 700 000 people.

In November 2020, freezing rain coated power lines in the Far East of the Russian Federation, leaving hundreds of thousands of homes without electricity for several days.

Concerns about the impact of global temperature increases on energy security are therefore paramount in the race to net zero emissions (NZE).

Supply from low-emissions sources needs to double by 2030 if the world is to reach net zero by 2050, according to the report.

A transition to renewable energy will help alleviate growing global water stresses because the amount of water used to generate electricity by solar and wind is much lower than for more traditional power plants, either fossil-fuel- or nuclear-based.

But current pledges by countries fall well short of what is needed to meet the objectives set by the Paris Agreement, leaving a 70 per cent gap in the amount of emissions reductions needed by 2030.

#### THE PARIS AGREEMENT: A GLOBAL ACCORD TO LIMIT TEMPERATURE RISES THROUGH CARBON EMISSION REDUCTION TARGETS

The Paris Agreement, which was first signed in 2015, is an international agreement to control and limit climate change.

It hopes to hold the increase in the global average temperature to below 2°C (3.6°F) 'and to pursue efforts to limit the temperature increase to 1.5°C (2.7°F)'.

It seems the more ambitious goal of restricting global warming to 1.5°C (2.7°F) may be more important than ever, according to previous research which claims 25 per cent of the world could see a significant increase in drier conditions.

The Paris Agreement on Climate Change has four main goals with regards to reducing emissions:

- 1) A long-term goal of keeping the increase in global average temperature to well below 2°C above pre-industrial levels
- 2) To aim to limit the increase to 1.5°C, since this would significantly reduce risks and the impacts of climate change
- 3) Governments agreed on the need for global emissions to peak as soon as possible, recognising that this will take longer for developing countries

4) To undertake rapid reductions thereafter in accordance with the best available science

Source: European Commission

## **GMA NEWS ONLINE**

### **[UN urges 'complete transformation' of global energy system](#)**

By Nina Larson, Agence France-Presse

GENEVA — The world needs to double the supply of electricity from renewables by 2030 to avoid climate change undermining global energy security, the United Nations said on Tuesday.

Not only is the energy sector a major source of the carbon emissions that drive climate change, it is also increasingly vulnerable to the shifts that come with a heating planet, the UN's World Meteorological Organization stressed.

In its State of Climate Services annual report, the WMO warned that increasingly intense extreme weather events, droughts, floods and sea-level rise—all linked to climate change—were already making energy supply less reliable.

It pointed, for instance, to a historic heatwave that caused the massive power outages in Buenos Aires in January.

In 2020, a massive 87 percent of global electricity generated by thermal, nuclear and hydroelectric power plants directly depended on having freshwater for cooling, the WMO said.

But a third of power plants running on fossil fuels are in areas of high water stress, as are 15 percent of existing nuclear power plants—a share expected to swell to 25 percent in the next 20 years.

Eleven percent of hydroelectric dams are also located in highly water-stressed areas, while more than a quarter of existing hydropower schemes and nearly as many planned ones are in river basins that currently struggle with medium to high water scarcity, the WMO said.

Nuclear power plants, it added, are also often located in low-lying coastal areas, leaving them potentially vulnerable to sea-level rise and flooding.

"Time is not on our side and our climate is changing before our eyes," WMO Secretary-General Petteri Taalas stressed.

"We need a complete transformation of the global energy system."

### **Part of the problem**

Taalas pointed out that the energy sector is itself a part of the problem since it is the source of around three quarters of global greenhouse gas emissions that are changing the climate.

"Switching to clean forms of energy generation... and improving energy efficiency is vital," he said.

But he cautioned that reaching net-zero emissions by 2050 would only be possible "if we double the supply of low-emissions electricity within the next eight years."

Net-zero, or carbon neutrality, means carbon dioxide emitted by human activities are balanced globally by CO<sub>2</sub> removed from the atmosphere over a specified period.

The WMO report stressed the growing importance of access to reliable weather, water and climate services to ensure power infrastructure was resilient and to meet rising energy demand.

The report, which WMO drafts with input from more than two dozen organizations, said shifting to renewable energy would help alleviate growing global water stress, pointing out that the amount of water used by solar and wind is much lower than for traditional power plants.

### **Invest in Africa**

But it warned that the current pledges by countries to cut carbon emissions "fall well short" of what is needed to meet the objectives set by the 2015 Paris Agreement on climate change.

The report said global investments in renewable energy "need to triple by 2050 to put the world on a net-zero trajectory."

It called in particular for more clean energy investments in Africa.

The continent, which is already facing massive droughts and other severe effects from climate change, has seen only two percent of clean energy investment in the past two decades.

And yet with 60 percent of the best solar resources on the planet, it has the potential to become a major player in solar energy production, the report said.

However, significant investments are required.

"Bringing access to modern energy for all Africans calls for an investment of \$25 billion annually," the report said.

That is the equivalent of around one percent of global energy investment today. — AFP

## MANILA BULLETIN

### [DENR: Kaliwa Dam project put on hold](#)

By Mario Casayuran

The Department of Environment and Natural Resources (DENR) has put on hold the issuance of an Environment Compliance Certificate (ECC) for the construction of the controversial Kaliwa Dam project in Quezon province.

This was disclosed today by DENR Undersecretary Ernesto Adobo Jr. during a public hearing on the proposed 2023 P23 billion budget of DENR chaired by Senator Cynthia A. Villar when Senator Raffy Tulfo expressed opposition to the project.

Adobo said issuance of the ECC on the project was put on hold because its zoning in the protected areas has not yet been done.

He also said the Indigenous Peoples (IPs) have not given their Free and Prior Informed Consent (FPIC) – a requirement under the Indigenous Peoples' Rights Act of 1997 – which recognizes the IPs' rights to their ancestral lands.

FPIC is also a prerequisite for the issuance of a Special Use Agreement in Protected Areas from the environment department.

Tulfo said several sectors are opposing there Kaliwa dam project because of its environmental impact and the ill-effects on the lives and livelihood of indigenous peoples (IPs) living in the area.

New Centennial Water Source – Kaliwa Dam Project is aimed at meeting increasing water demand by constructing a dam for Metropolitan Waterworks and Sewerage System (MWSS) service area's domestic water supply.

It is located in Quezon province with projected tunnel traversing to Teresa, Rizal. Tulfo said "it's music to my ears" that the project would not push through as he believed that Sierra Madre mountains should be protected, along with the lives and livelihood of IPs in the area.



## PHILIPPINE DAILY INQUIRER

### [Meralco unit to build 1.5-MW solar farm for Riverbanks mall](#)

By: Jordeene B. Lagare

Spectrum, a wholly owned subsidiary of power distributor Manila Electric Co. (Meralco), will construct a solar farm on the rooftop of Riverbanks shopping mall in Marikina City.

The partnership between Spectrum and Riverbanks Development Corp. entails the installation of a 1.5-megawatt peak solar photovoltaic system for Riverbanks Center. Completion is seen by March next year.

Once switched on, the facility is projected to produce about 2 million kilowatt-hours of clean energy yearly.

Riverbanks is seen to save about P14 million in energy cost every year from the solar project. The company is also expected to reduce its carbon footprint by about 1,400 metric tons a year, equivalent to the planting of almost three million trees in 20 years and the reduction of 5.8 kilometers in vehicle travel in a year.“

Providing a clean energy solution specifically designed for Riverbanks’ needs and goals is Spectrum’s mandate as a renewable energy company.

“This pilot solar rooftop project with Riverbanks is just the beginning, and Spectrum will be with them as they embark on this journey toward becoming a sustainable business,” said Spectrum chief operating officer Patrick Henry Panlilio.

“Spectrum gave us the opportunity to achieve sustainability through solar energy. As their partner, we expect to reap huge energy savings while contributing to environmental care. It’s a win-win situation for all parties, including Mother Earth. It’s the best kind of synergy,” Riverbanks president Rosario Carlos said.

Riverbanks Center is situated in a 23-hectare property along A. Bonifacio Avenue. It was developed as an eco-friendly and integrated development for business and recreation.

Spectrum is Meralco’s solar power company which offers tailor-fit renewable energy solutions for industrial, commercial and residential customers.

Using solar technology, it has energized five business centers of PLDT Inc. in the Visayas, the manufacturing plant of Avon in Laguna and five branches of Wilcon Depot Inc. outside Metro Manila.

## PHILIPPINE NEWS AGENCY

### [DENR pursues sustainable 'green, blue' economy](#)

By: Perfecto Raymundo

MANILA – The Department of Environment and Natural Resources (DENR) spent the first 100 days under the new administration of President Ferdinand “Bongbong” Marcos Jr. pursuing sustainable management and development of the environment while creating "green" jobs and ensuring investments and revenue for the government.

In an accomplishment report dated Sept. 29, the DENR said it has been pursuing a "blue" and "green" economy, referring respectively on the fisheries and marine sectors, and agriculture and forestry sectors, into which strategies to address climate mitigation and adaptation are incorporated.

The DENR said it has prepared four resiliency roadmaps and Investment Portfolios for Risk Resilience (IPRRs) for the climate-vulnerable provinces of Eastern Samar, Northern Samar, and Siquijor, as well as climate-vulnerable city of Metro Iloilo.

By December 2022, 12 more resilience roadmaps are expected to be completed for nine climate vulnerable provinces and three major urban areas.

For the "green" economy," the DENR said from July to August 31, it developed 646 hectares of forestland and produced 702,470 seedlings benefitting 3,605 CBFM-People's Organization (PO) members nationwide, and provided Enterprise Livelihood equipment to POs in Regions 5, 6, 9, 10, and Cordillera.

A total of 944 Forest Extension Officers and 154 Technical Staff have also been hired under the Enhanced National Greening Program, while a total of 1,937 jobs were generated and 1,548 persons were employed in nursery establishment, seedling production, plantation establishment, maintenance and protection, the DENR said.

The agency also strengthened the government's Anti-Illegal Logging and Forest Protection Program by renewing a total of 3,215 forest patroller contracts to implement the Lawin Forest Protection and Biodiversity System.

Also, 163 lawyers/legal researchers/legal assistant contracts were renewed to speed up the resolution of forestry-related cases, it added.

For the "blue economy," the the DENR said from July 1 to Sept. 15, 2022, it monitored 50 priority water bodies with 44 of them passing the water quality standards for Dissolved Oxygen (DO) and 42 waterbodies passing the water quality standards for Biochemical Oxygen Demand (BOD).

Still part of its Clean Water Program, pursuant to Republic Act 9275 or The Philippine Clean Water Act of 2004, the agency also monitored 268 esteros/water bodies, of which

156 exhibited significant improvements in BOD, while 160 other water bodies showed water quality improvements in DO.

A total of 2,365 estero/river rangers were also hired to monitor, protect, clean up, and rehabilitate the bodies of water draining to the Manila Bay, the DENR said in its report.

As to Boracay Island in Malaybalay, Aklan, the DENR hired a total of 40 Boracay Environmental Lawin patrollers and 22 support staff for the Boracay Action Plan.

Some 19 Lawin patrollers/beach watch patrollers in Panglao and 19 personnel in Siargao were also hired to protect beaches designated as Green Economy Model sites, the installation of signage for no build zone, and other activities.

The DENR has also issued one Community-based Forest Management Agreement (CBFMA) to the Kawasan-Inuralan Farmers Association, Inc. covering a total area of 49.36 hectares in Region 10; and two Provisionary CBFMAs to the Singclot National Greening Program Consumers Cooperative covering 136.57 hectares and the San Isidro Upland Farmers Consumers Cooperative covering 356.66 hectares in Region 9.

### **Responsible mining**

In the mining sector, the DENR said the Mines and Geosciences Bureau has issued 797 mining permits/contracts from July to Sept. 15, 2022.

Currently, 79 mining projects are being planned to start near-term and/or medium-term mining operations that will bring in total investments of PHP430 billion, revenues of PHP93.14 billion, and jobs to 16,275 individuals, the agency said.

"All priority mining projects are expected to earmark a total of PHP6.904 billion in Environmental Protection and Enhancement Programs expenditures," the DENR added.

The DENR also monitored the handling of infectious wastes in 42 treatment, storage, and disposal facilities.

Of these, four facilities were found non-compliant, hence, issued with Notice of Violations.

**PHYS.ORG**

[Maps of the past may shed light on our climate future](#)

By Mikayla Mace Kelley, University of Arizona

Reconstructed surface air temperature and rainfall amount during the Paleocene-Eocene Thermal Maximum warming event, 56 million years ago. The maps were created by blending geological data with climate model simulations using a technique called paleoclimate data assimilation. Credit: Jessica Tierney

About 56 million years ago, volcanoes quickly dumped massive amounts of carbon dioxide into the atmosphere, heating the Earth rapidly.

This time period—called the Paleocene-Eocene Thermal Maximum, or PETM—is often used as a historic parallel for our own future under climate change, since humans have also rapidly poured carbon dioxide into the atmosphere over the last 250 years.

A University of Arizona-led team of researchers published a study in Proceedings of the National Academy of Sciences that includes temperature and rainfall maps of Earth during the PETM to help better understand what conditions were like in that time period and how sensitive the climate was to soaring levels of carbon dioxide.

The team, led by UArizona geosciences professor Jessica Tierney, combined previously published temperature data and climate models to confirm that the PETM is, in fact, a good indicator of what might happen to the climate under future carbon dioxide level projections.

"The PETM is not a perfect analog for our future, but we were somewhat surprised to find that yes, the climate changes we reconstructed share a lot of similarities with future predictions as outlined in the latest IPCC (Intergovernmental Panel on Climate Change) AR6 report," Tierney said.

The long-ago time period and our future both are characterized by faster warming at the poles than the rest of the globe—a phenomenon called arctic amplification—as well as stronger monsoons, more intense winter storms and less rainfall at the edges of the tropics. The researchers also found that as more carbon dioxide is pumped into the air, the climate becomes more sensitive than previous studies predicted.

"Overall, our work helps us to understand our future under climate change better," Tierney said. "It gives some confirmation that the basics of climate change—such as polar amplification, more intense monsoons and winter storms—are features of high greenhouse gas climates both past and future."

Tierney and her team built their maps of the PETM by combining what's called proxy temperature data with climate models. Paleoclimatologists like Tierney can deduce temperatures from the past by chemically analyzing certain types of fossils from a given time period. That proxy temperature data, combined with modern climate modeling

technology, allowed Tierney and her collaborators to create global temperature maps of the PETM.

The climate models used by the researchers to create the maps of the past are typically used to make future climate predictions—including those in the IPCC assessment reports. Tierney and her team instead used them to generate simulations of what Earth looked like 56 million years ago.

"We moved the continents around to match the PETM and then we ran some simulations at a bunch of different levels of carbon dioxide, anywhere from three to 11 times today's levels—or from 850 parts per million to a really high value of 3,000 parts per million—because those are all possible levels of carbon dioxide that could have occurred in the PETM," Tierney said. "For context, carbon dioxide in our atmosphere today is about 420 parts per million and it was about 280 parts per million before the Industrial Revolution. By adding in the geological evidence, we narrowed down simulations to the ones that best matched that evidence."

Tierney and her team have used this method in past studies to reconstruct the climate in more recent time periods.

The new study also more precisely estimates how much the globe warmed during the PETM. Previous studies suggested the PETM was 4 to 5 degrees Celsius warmer than the time period right before it. Tierney's research, however, revealed that that number is 5.6 degrees Celsius, suggesting the climate is more sensitive to increases in carbon dioxide than previously thought.

Climate sensitivity is how much the planet warms per doubling of carbon dioxide.

"Nailing this number down really matters, because if climate sensitivity is high, then we'll see more warming by the end of the century than if it's lower," Tierney said. "The IPCC AR6 predictions span 2 to 5 degrees Celsius per doubling of carbon dioxide. In this study, we quantify that sensitivity during the PETM and found that the sensitivity is between 5.7 to 7.4 degrees Celsius per doubling, which is much higher."

Ultimately, this means that under higher levels of carbon dioxide than we have today, the planet will get more sensitive to carbon dioxide, which, according to Tierney, "is something that's important for thinking about longer-term climate change, beyond the end of the century."

## THE MANILA TIMES

### [UN: World must triple investment in renewables](#)

By: Xinhua News Agency

Geneva: Global investments in renewable energy should be tripled by 2050 in order to put the world on the track to reduce emissions to zero, the World Meteorological Organization (WMO) said on Tuesday.

In its 2022 State of Climate Services report, the United Nations weather agency said the supply of electricity from clean energy sources must be doubled within the next eight years or global energy security could be undermined.

Climate change is putting global energy security at risk, it said, adding that the effects of climate change — including more frequent and intense extreme weather events — were directly affecting fuel supply, energy production and energy infrastructure.

Although water resources are scarce on a global scale, 87 percent of global electricity generated from thermal, nuclear and hydroelectric systems in 2020 directly depended on the availability of water. About 33 percent of the thermal power plants that rely on freshwater for cooling are in high water stress areas, as are 15 percent of existing nuclear power plants — a figure that could rise to 25 percent in the next 20 years.

"Net zero by 2050 is the aim. But we will only get there if we double the supply of low-emissions electricity within the next eight years," WMO Secretary-General Petteri Taalas said.

"The energy sector is the source of about three-quarters of global greenhouse gas emissions. Switching to clean forms of energy generation, such as solar, wind and hydropower — and improving energy efficiency — is vital if we are to thrive in the twenty-first century," he added.

"Time is not on our side, and our climate is changing before our eyes. We need a complete transformation of the global energy system," the WMO chief warned.

Africa could be a major renewables player in the future, the report says. The continent is already facing severe effects from climate change, including massive droughts. The declining cost of clean technology holds new promise for Africa's future, and there is a huge opportunity for it to help close the gap in the need for renewable energy.

By 2050, global electricity needs will mainly be met with renewable energies, with solar power set to be the single largest source. However, although Africa is home to 60 percent of the best solar resources globally, it only has 1 percent of installed photovoltaic capacity.

In order to provide access to modern energy for all Africans, an investment of \$25 billion annually is required, the report said. This represents about 1 percent of current global energy investment.

## UN NEWS

### [Climate change: WMO report urges faster action on transition to clean energy](#)

In its new report the World Meteorological Organization (WMO) said that in order to limit the global temperature rise which is undermining energy security, electricity tapped from clean energy sources must double over the next eight years.

With the energy sector responsible for around 75 per cent of global greenhouse gas emissions, WMO chief Petteri Taalas said that switching to cleaner energy generation and improving energy efficiency – is “vital if we are to thrive in the 21st century”.

“Net zero by 2050 is the aim. But we will only get there if we double the supply of low-emissions electricity within the next eight years”.

### **Fighting against time**

The 2022 State of Climate Services, which includes inputs from 26 different organizations, zeroes in on energy – a key factor for realizing international agreements on sustainable development, climate change, and planet health.

Access to reliable weather, water and climate information and services, will be increasingly important to strengthen the resilience of energy infrastructure and meet rising demand, which has jumped 30 per cent over the past ten years.

“Time is not on our side, and our climate is changing before our eyes”, said the WMO chief calling for “a complete transformation of the global energy system”.

### **Energy security**

Climate change directly affects fuel supply, energy production, and the physical resilience of current and future energy infrastructure.

Heatwaves and droughts are already putting existing energy production under stress, making it even more important to reduce fossil fuel emissions and illuminating the impact of more frequent and intense extreme weather, water and climate events.

### **Adaptation boost**

Yet, despite these risks, just 40 per cent of climate action plans submitted by governments to the UN Framework Convention on Climate Change (UNFCCC) prioritize adaptation in the energy sector – and investment is correspondingly low.

A transition to renewable energy will help alleviate the growing stress on water supply, because the amount of water used to generate electricity by solar and wind is much lower than for more traditional power plants, either fossil-fuel or nuclear-based.



But current renewable energy pledges by countries fall well short of what is needed to reach the goal of universal access to affordable, reliable, sustainable and modern energy, by 2030, said WMO.

### **Water stress**

In 2020, 87 per cent of global electricity generated from thermal, nuclear, and hydroelectric systems, depended directly on water availability.

Meanwhile, located in high water stress areas, are 33 per cent of the thermal power plants reliant upon freshwater for cooling, around 11 per cent of hydroelectric operations; and approximately 26 per cent of hydropower dams.

And nuclear power plants, which depend on water for cooling, are also often situated in low-lying coastal areas – leaving them vulnerable to rising sea levels and weather-related flooding.

### **Renewable investments**

To put the world on a net zero trajectory by 2050, the report concludes that renewable energy investments must triple by then.

However, international public finance flows to developing countries in support of clean energy, has only decreased.

It fell in 2019, for the second year in a row, to \$10.9 billion - which was 23 per cent lower than the \$14.2 billion provided in 2018 - and less than half of the peak of \$24.7 billion in 2017.

### **Focus on Africa**

Africa is already facing severe effects from climate change, including massive droughts. To meet its energy and climate goals, in addition to a huge increase in adaptation, energy investment must double this decade, says WMO.

An annual infusion of \$25 billion, equivalent to one per cent of all global energy investment, is now required, says the report.

Meanwhile, Africa is home to around 60 per cent of the most solar rich environments in the world, and African countries have an opportunity to capitalize on that untapped potential and be major players in the energy market moving forward.

### **Looking ahead**

Climate services in the energy generation field, may include planning the purchases of gas and electric power; managing emergency responses; and optimizing power plants from renewable sources – especially reservoirs and hydropower operations.

In the energy sector, studies have demonstrated the economic value of very short-term, seasonal and sub-seasonal forecasts for fuel purchasing.

Temperature forecasts allow more accurate calculations that enable optimal power generation scheduling, to meet demands at a lower cost.

Meanwhile, daily, weekly and seasonal rain and streamflow forecasts, are helpful to optimize hydropower operations.

## CCC IN THE NEWS:

### BUSINESS MIRROR

#### [Pitmaster focuses support on climate change mitigation initiatives](#)

By: BMPLUS

Pitmaster Foundation has extended its helping hand as it branches to environmental conservation efforts in a bid to support the government's effort to eliminate carbon emissions and create the eco-friendly Philippines.

Atty. Caroline Cruz, the foundation's Executive Director said that as the planet aims to transition to the use of green technology, they are in support of the initiative while stressing that their relief operations coincide with environmental efforts.

The foundation sponsors relief operations in typhoon-hit areas and COVID-19 relief efforts, alongside providing dialysis assistance to individuals suffering from kidney-related diseases.

With this, the foundation sponsored a Disaster and Climate Emergency Policy Forum dubbed "2023-2028 Policy Roadmap: Charting the Urgency of the PBBM Climate Agenda and the Philippine Contribution to Achieve the Global Goal of Net Zero 2030 and 2050 Targets," wherein stakeholders from different sectors were invited to talk about Climate Emergency measures.

"We are here to support the government's call on the climate change issue. We are here to support [undermine] the root cause of the disaster," Cruz said in a forum organized by the foundation to address climate-related issues on Thursday, September 29.

Cruz also said that they want solutions that are focused on environmental conservation.

"We want solutions that will both create growth and solve our climate problems. We are proud to have engaged in environmental conservation since early in our founding as a non-profit organization," she added.

Some of the agencies that participated in the said event were the Department of Finance, Climate Change Commission, Local Climate Change Adaptation for Development, National Economic and Development Authority, Bangko Sentral ng Pilipinas, Department of Energy, Department of Environment and Natural Resources, and the Department of Interior and Local Government, among others.

The foundation initially partnered with the DENR for tree planting activities in the province of Laguna to plant more than 6,000 trees in trees across 250 hectares.

As of today, the foundation has helped the University of the Philippines Resilience Institute, 4K Foundation, and Komunidad to plant 7,225 trees.

Similarly, they are also working with UP Los Baños for planting endangered species.

They are also open to partnering with non-government offices, academe, student organizations, or government agencies for reforestation projects to ensure ecological benefits for Filipinos now and in the future.

The said measure is also in response to President Bongbong Marcos' initiative to bring justice to the country as it suffers more than it should when it comes to carbon emissions, noting that addressing climate change is the true test of our time.

The Philippines is the 4th country that suffers the most vulnerable country to climate change even if it only brings .04 percent of the total carbon emissions in the last two decades.

Pitmaster Foundation Executive Director Atty. Caroline Cruz pose with Albay 2nd District Representative Joey Salceda, Climate Change Commission Secretary Robert Borje, Department of Finance Assistant Secretary Niel Cabiles, National Economic and Development Authority Undersecretary Rosemari Edillon, and Department of Energy Undersecretary Feliz William Fuentesbella at a side conference during the "2023-2028 Policy Roadmap: Charting the urgency of the PBBM Climate Agenda and the Philippine Contribution to Achieve the Global Goal of Net Zero 2030 and 2050 Targets," event on September 22, at the Discover Primea Hotel in Ayala, Makati.

They talked about how government agencies can team up to offer solutions that can mitigate the effects of climate change through their respective agencies.

**- END -**