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A Filipino has joined seven other citizens of multiple nations in filing a transnational criminal case against the world's sixth-biggest carbon emitter.

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## Extreme heat in PH made worse by climate change - study

By: Jiselle Anne Casucian

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### **JAPAN TIMES**

## Asia's killer April heat wave was made much worse by climate change

By: Lou Del Bello

The April heat wave that swept through Asia, bringing temperatures as high as 46 degrees Celsius in some places, was much more severe and likely to occur than it would have been in a world without climate change, scientists have concluded.

## **MINDANAO TIMES**

## Hospitals choose renewable energy as power source

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## **NIKKEI ASIA**

## COP29 host urges funding and transparency for 1.5-degree target

By: Akane Okutsu

Increasing funding and transparency are key for enabling action to keep global warming below 1.5 degrees Celsius from pre-industrial levels, Yalchin Rafiyev, the chief negotiator of the presidency for the 29th United Nations Climate Change Conference, told Nikkei Asia on Wednesday.

#### THE MANILA TIMES

# <u>Sites with radioactive material more vulnerable as climate change increases wildfire, flood risks</u>

As Texas wildfires burned toward the nation's primary nuclear weapons facility, workers hurried to ensure nothing flammable was around buildings and storage areas.

#### THE PHILIPPINE STAR

## <u>Climate change made April heat in Asia hotter, more likely — scientists</u> Gaea Katreena Cabico

Extreme temperatures that gripped Asia, including the Philippines, in April were made worse and more likely by human-caused climate change, according to an analysis by climate scientists.

## What is flight turbulence and why does it happen?

By: Lucie Aubourg

Airplane turbulence, which led to the death of a passenger on a Singapore Airlines flight on Tuesday, is a complex phenomenon that is becoming increasingly common due to climate change, according to experts.

#### **CCC IN THE NEWS:**

## PHILIPPINE INFORMATION AGENCY

## CCC reiterates PBBM's call for climate-resilient agriculture in the country

The Climate Change Commission echoed President Ferdinand Marcos Jr's call to boost sustainable and climate-resilient agriculture in the country during the inauguration program of the Calamansi Processing Center (CPC) and Provincial Agriculture Center (PAC) of Oriental Mindoro.

## **PHILIPPINE NEWS AGENCY**

# Media vital in public preparedness vs. climate change – CCC

By Ma. Cristina Arayata.

The media plays a crucial role in the public's preparedness and climate change adaptation, an official of the Climate Change Commission (CCC) said Wednesday.

**Information and Knowledge Management Division** 

### **BUSINESS WORLD**

## Filipino joins int'I climate case against oil company

By: Chloe Mari A. Hufana

A FILIPINO has joined seven other citizens of multiple nations in filing a transnational criminal case against the world's sixth-biggest carbon emitter.

Frank Nicol M. Marba, 29, of Dinagat Islands, is among the multi-national plaintiffs suing an oil company's board and main shareholders for contributing to climate change and its devastating effects on lives.

The petition is suing the company for deliberately endangering the lives of others, involuntary manslaughter, neglecting to address a disaster, and damaging biodiversity. Each offense is punishable by at least one year of imprisonment and a fine.

"We demand [the company] to pay not just for the destruction of our properties, but more importantly for the loss of our livelihood and the trauma that we are still dealing with up to now," Mr. Marba said in a statement.

Mr. Marba claimed that his family's house was damaged and that his grandmother got sick after super typhoon Odette in 2021.

It is the second most destructive typhoon to hit the Philippines after typhoon Yolanda in 2013. About P3.9 billion in damages to infrastructure and agriculture were recorded with 34,000 families adversely affected.

The other plaintiffs are from Pakistan, Zimbabwe, France, Belgium, Greece, Australia, and Mexico. The case was filed in Paris, France last May 21.

Despite the International Energy Agency recommending the stop to new fossil fuel projects since 2021, the international oil company kept opening oil and gas sites around the planet, Greenpeace said.

"Oil and gas companies must take accountability for their role in abetting the climate crisis," it said.

#### **GMA NEWS**

## Extreme heat in PH made worse by climate change - study

By: Jiselle Anne Casucian

Climate change played a role in the hotter-than-normal days seen in various parts of Asia, including the Philippines, in April, a group of scientists said.

Guided by peer-reviewed methodologies, scientists from the World Weather Attribution examined how human-induced climate change affected the probability and severity of the extreme heat in West, South, and parts of Southeast Asia in April.

For the Philippines, the climate scientists analyzed the average daily maximum temperature for the period April 15 to 29, 2024, or 15 days.

"To estimate the influence that human-caused climate change has had on extreme heat in West Asia and the Philippines, we combine climate models with observations. Observations and models both show a strong increase in likelihood and intensity. In the Philippines, the change in likelihood is so large that the event would have been impossible without human-caused climate change. In West Asia, climate change increased the probability of the event by about a factor of 5," the World Weather Attribution study said.

"In terms of intensity, we estimate that a heatwave such as this one in West Asia is today about 1.7 °C warmer than it would have been without the burning of fossil fuels. In the Philippines, the intensity increase due to human-induced climate change is about 1.2 °C."

In their study, the World Weather Attribution found that the Philippines may experience extreme heat once every 10 years when the El Niño weather phenomenon exists and once every 20 years when it does not.

The study also said the current El Niño made the heatwave in the Philippines "about 0.2°C hotter."

"If the world warms to 2°C above pre-industrial global mean temperatures, in both regions the likelihood of extreme heat would increase further, by a factor of 2 in West Asia and 5 over the Philippines, while the temperatures will become another 1°C hotter in West Asia and 0.7°C hotter in the Philippines," the scientists said.

Reacting to the study, Khevin Yu of the environmental group Greenpeace Philippines said the government "must stop delaying the transition to renewable energy."

"It must scrap its plans for fossil gas expansion and demand payment from the biggest climate-polluting companies most responsible for the crisis we're suffering," he added.

"Addressing current and future extreme weather events through climate adaptation and disaster risk reduction measures, Yu said, is "not enough to ensure a safe and sustainable future for Filipinos."

## LPA seen to enter PAR, may develop into tropical depression —PAGASA

State weather bureau PAGASA is monitoring a low pressure area (LPA) spotted east of Mindanao outside the Philippine area of responsibility.

"As of 8 AM today, the cloud cluster east of Mindanao, outside the PAR, has developed into a Low Pressure Area (LPA)," PAGASA said Wednesday.

According to PAGASA's forecast, the LPA may enter PAR on Wednesday night or Thursday morning and possibly affect — and make landfall — in the Bicol Region-Eastern Visayas area by late Friday or on Saturday.

"Development into TD (tropical depression) not ruled out but less likely," PAGASA said.

The LPA, if ever it develops into a tropical depression and enters PAR, will be named "Aghon."

Another scenario, according to PAGASA, is the LPA will "recurve" over the Philippine Sea near Bicol Region-Eastern Visayas and develop into tropical depression by Friday or Saturday.

PAGASA earlier said the Philippines could experience 13 to 16 tropical cyclones this year. The Department of Science and Technology (DOST) has said that there is 62% that the La Niña, which is usually associated with above normal rainfall conditions, would be felt this June.

La Niña is characterized by unusually cooler than average sea surface temperatures (SSTs) in the central and eastern equatorial Pacific (CEEP).

PAGASA has warned of La Niña's potential adverse impacts, including floods and landslide, in vulnerable areas.

The country is now in the "weak El Niño" stage that is expected to end by June.

The El Niño phenomenon is characterized by the abnormal warming of sea surface temperature in the central and eastern equatorial Pacific Ocean and below-normal rainfall. https://www.gmanetwork.com/news/scitech/weather/907577/lpa-outside-par/story/

## **JAPAN TIMES**

## Asia's killer April heat wave was made much worse by climate change

By: Lou Del Bello

The April heat wave that swept through Asia, bringing temperatures as high as 46 degrees Celsius in some places, was much more severe and likely to occur than it would have been in a world without climate change, scientists have concluded.

Extreme heat affected hundreds of millions across the region last month, adding to the plight of 1.7 million people displaced by the war in Gaza as well as those without access to cooling. Hundreds of people died from heat-related causes, although more fatalities were likely to have gone unreported, according to the researchers.

The World Weather Attribution (WWA) group used computer models and ground observations to trace the footprint of heat-trapping gases in the affected area.

"What we wanted to know is whether such temperatures were possible in the past, and whether they will be like this going into the future." said Mariam Zachariah, a climate change researcher at the Grantham Institute of Imperial College London and lead author of the study.

The scientists found that in countries such as Palestine and Israel, climate change made the heat wave five times more likely than it would have been in pre-industrial times, and 1.7 degrees Celsius hotter.

In the Philippines, where temperatures were 1.2 degrees Celsius higher, the researchers estimated that this year's heat wave would have been impossible without decades of burning fossil fuels.

In South Asia, which was the focus of two such studies in 2022 and 2023, abnormal heat was found to be 45 times more likely to occur, and to be 0.85 degrees Celsius higher due to climate change.

The WWA researchers also looked at whether El Niño, the naturally occurring warm current in the Pacific Ocean, may have played a part in the event. They concluded that while it raised temperatures in the Philippines by about 0.2 degrees Celsius, it did not influence the West Asian heatwave.

The study drives home the prospect of "wide-ranging systemic impacts on the economy," said Ashish Fernandes, chief executive officer of the consultancy Climate Risk Horizons. "If you look at the major economic indicators that are problematic right now in India, you see food inflation, low level productivity, unemployment," all of which will worsen with each new heat wave.

A separate study in 2022 found that heat may contribute to 650 billion hours a year of lost labor globally, having cost an estimated \$2.1 trillion equivalent in 2017 alone.

"I would describe this is as a chronic inflammation of the body," Fernandes said. "You are not collapsing and dying, but it makes your life harder in every way."

Heat action plans are in place in countries like India, the WWA scientists note, albeit not at a sufficient scale to protect the most vulnerable from temperature stress.

"The scale of the problem and people impacted in a country like India is enormous," said Jaya Dhindaw, a sustainability expert at the World Resources Institute, citing the many people who lack resources to protect themselves from extreme heat. "It is a matter of survival."

The reality on the ground is also complex, said Aditya Valiathan Pillai, a fellow with the think tank Sustainable Futures Collective who in 2023 carried out an extensive analysis of India's heat action plans at a state level.

"Putting preparedness front and center as a major strategy across the many thousands of local governments in this country is a very big challenge," he said. Funding is often scarce, but public awareness about heat exposure risks is what's still lacking in India, as people are only now starting to understand that high temperatures can kill as well as decrease productivity.

None of this is easy, he said, but getting myriad local administrations to work together "may well result in a resiliency framework for the country which would be an example for other heat-prone nations in the developing world."

### **MINDANAO TIMES**

## Hospitals choose renewable energy as power source

The Green Energy Option Program (GEOP) is a viable pathway for hospitals and health facilities to transition towards cleaner and cheaper energy while supporting climate mitigation. This was recognized during The Climate Reality Project Philippines' REalize for Hospitals: Empowering a Climate-Resilient Health Sector with Renewable Energy, organized in partnership with Health Care Without Harm, on 13 May 2024.

"We aim to have an efficient health infrastructure with an aim of decarbonization. We are very excited about GEOP. We want at an early stage to incorporate green initiatives knowing that our operations are 24/7," said Assistant Secretary Charade B. Mercado-Grande, lead of the Health Regulation and Facility Development Cluster of the Department of Health (DOH).

## Choosing renewable energy

The DOH presented its 8-Point Action Agenda, a comprehensive plan stipulating the sector's strategies to provide Filipino communities with holistic healthcare services. One of the strategies is Handa sa Krisis, which aims to adopt green health facilities and low-carbon infrastructures where renewable energy is the cornerstone.

"Renewable energy is a readily accessible and increasingly cost-effective solution to meet our energy needs while mitigating climate change and transitioning towards a more sustainable energy future," explained Engr. Jephraim Manansala, chief data scientist of the Institute for Climate and Sustainable Cities (ICSC).

According to the Department of Energy (DOE)'s Grid Planning and Competitive Renewable Energy Zones in the Philippines Report shared by Manansala, the hydropower resource alone can harness 655,034 megawatts, which exceeds the country's peak demand of 16,000 megawatts. Being an indigenous resource, renewable energy meets the energy requirement of Filipinos in a least-cost manner.

"Renewable has reduced the settlement price of electricity by 28% during peak hours even with less than 3% share in the energy mix," he added.

Matthew Carpio, head of Transaction Advisory of Climate Smart Ventures, applauded DOE's exemplary initiatives to expand the development and utilization of renewable energy in the country.

"We are liberated in terms of power generation. DOE just came out with new standards for 100% foreign ownership. It unlocked a new set of investors that were not previously open to the Philippines," he cited.

## Greening the health sector with GEOP

"Healthcare's climate footprint is 4.4% of global net emissions equivalent to 514 coal-fired power plants. If healthcare were a country, it would be the fifth largest climate polluter on the planet," described Manjit Kaur Sohal, regional climate manager of Health Care Without Harm Southeast Asia.

This poses an urgency for the national government to decarbonize health sectors by powering operations with 100% renewable energy, investing in zero-emission infrastructures, producing low-carbon pharmaceuticals, and implementing circularity within the healthcare system.

During a roundtable discussion with the Asian Development Bank (ADB) in March, the DOH recognized the critical role of renewable energy in achieving a climate-smart healthcare infrastructure and system. To achieve this, the DOH called for an expedited process for public healthcare facilities across the country to access GEOP.

"Through GEOP, hospitals can source 100% of their power from renewable energy resources without spending on infrastructure, significantly reducing their carbon footprint and achieving substantial power cost savings. This makes GEOP an ideal springboard for the healthcare sector's journey towards decarbonization," said Nazrin Camille Castro, the branch manager of The Climate Reality Project Philippines.

GEOP is a pathway for the healthcare sector to begin its transition to cleaner energy and attain its net-zero agenda. Hospitals with a monthly average peak demand of at least 100 kWh have the power to choose renewable energy as their power source without upfront costs. This protects hospitals from fossil fuel crises and price volatility in the global market.

Engr. Jordan Ballaran, senior science research specialist of the DOE, also regarded GEOP as a mechanism that can empower the health sector to contribute to realizing the country's renewable energy targets. Engr. Patrick Pondevida, Senior Accountant Manager of ACEN Corporation, affirmed this by emphasizing that hospitals entering into a contract with GEOP paves the way for new renewable energy plans and development in the Philippines; thus, veering away from reliance on traditional sources of power like coal and fossil gas.

ACEN Corporation is one of the renewable energy suppliers under GEOP that supplies power to EL Laboratories, a pharmaceutical manufacturing company in Biñan, Laguna.

## Switching to GEOP

Renewable energy emerges as the cheapest energy source that is reflective of the competitive generation rates offered in GEOP, saving hospitals a significant amount of their operational expenses. These savings can be redirected to enhance services, improve equipment, or expand access to care. Moreover, the program also assures hospitals with 100% renewable energy in cases where replacement or backup power is needed.

"Most of the customers say that once you shift to renewable energy [GEOP], there is reliability in power. We will ensure that the supply is there. Let us say, 1,900 MW are down. The renewable energy supplier should be the one responsible for replacing the power for our customers," Engr. Pondevida explained.

In order to switch to GEOP, hospitals need to find their renewable energy supplier among the 18 accredited entities of the program and inform their local distribution utility about the intent to switch. Learn more about the switching process here.

Climate Reality Philippines assists end-users across different industries to realize their vision of more sustainable and climate-resilient operations with GEOP through a series of REalize Conferences slated throughout the year. Health is the first focus sector of the series and will be targeting the tourism, telecommunications, and academic sectors in the succeeding legs.

### **NIKKEI ASIA**

## COP29 host urges funding and transparency for 1.5-degree target

By: Akane Okutsu

Increasing funding and transparency are key for enabling action to keep global warming below 1.5 degrees Celsius from pre-industrial levels, Yalchin Rafiyev, the chief negotiator of the presidency for the 29th United Nations Climate Change Conference, told Nikkei Asia on Wednesday.

Rafiyev is the deputy foreign minister of Azerbaijan, which will host COP29 in November and has set out a vision for the annual summit to enhance climate goals and find ways to meet them.

"All countries, in order to stick to their commitments deriving from the Paris Agreement and at the same time to stay within 1.5 degrees, should enhance their ambitions constantly," said Rafiyev during a visit to Tokyo.

"Enabling action is only possible through the means of implementation to be available to the parties," he said. "When I refer to means of implementation, finance is coming at the top."

The 1.5-degree target to prevent worsening impacts of climate change is increasingly regarded as challenging, with some estimates suggesting that the global average temperature in 2023 was already 1.48 degrees higher than the pre-industrial period. Providing enough funds for mitigation and adaptation measures in less-developed countries has been one of the key aspects of climate negotiations.

At COP29, building on the previous financial commitments by developed countries to mobilize \$100 billion per year, countries are set to adopt a new funding target. "The current financial flow is not sufficient to provide relevant means of implementation for the countries to ensure their transition," said Rafiyev.

In addition to government-level commitments, Rafiyev referred to the roles of multinational development banks, such as the World Bank and the Asian Development Bank, and private companies in facilitating investments.

Transparency and accountability by countries on the progress of climate efforts would be key to making these funds accessible for developing countries, Rafiyev said.

"One of the major problems in the private-sector engagement is the false perception of risks in investing in the developing countries," he suggested. He gave as one example Africa, where investment is lacking despite the continent's vast solar power resources.

Countries are now required to submit a "biennial transparency report" (BTR), in which they lay out their progress and financial estimates on achieving their climate targets, with the first one due by the end of this year.

The chief negotiator is pushing countries to submit their BTRs by COP29, before the official deadline. He said the reports would help facilitate investments because "the private sector is very much interested in investing in an environment that they think they have all the information about."

Rafiyev added that players such as development banks should provide de-risking measures, including investment guarantee platforms for the private sector.

During his visit to Japan, he said his team is encouraging the country's official development aid provider, the Japan International Cooperation Agency, to increase its portfolio of climate-related projects in the Global South.

Azerbaijan exports oil and gas, and its COP29 president-designate, Mukhtar Babayev, formerly worked for the State Oil Company of Azerbaijan (SOCAR).

"Most important is how you are using the revenues coming from [the oil and gas] sector," Rafiyev suggested. The country is investing in renewable energy and is committed to reducing methane emissions. SOCAR, the country's largest oil and gas producer, has announced that it plans to achieve net-zero emissions by 2050.

Regarding the host's approaches for driving the transition away from fossil fuels, Rafiyev said, "The most important is to bring together the supplier countries and the consumer countries to work together and bring about real measures and results to put the agenda forward."

Azerbaijan was announced as the host in December, after a selection process that was complicated by its conflict with Armenia.

Despite having less time to prepare compared to former host countries, the team for the COP29 presidency has so far done multiple tours and has received several delegations in the capital city, Baku, "to get the positions and views of all parties on the major expected deliverables" at the COP event, Rafiyev said.

The Group of Seven countries this year agreed in principle to stop using coal in power generation by 2035.

"G7 and G20 are important platforms that, when progress is achieved, can be replicated in the COP process," said Rafiyev. He said Azerbaijan is working with Brazil in "synergizing COP29 and G20 agenda to make climate finance be a top priority." Brazil is the Group of 20's chair this year and is going to host COP30 in 2025.

Babayev attended the meeting of G7 environment ministers in April. Rafiyev said, "We will continue to engage with the Italian presidency of G7 to see what could be our joint efforts to move forward."

## THE MANILA TIMES

# <u>Sites with radioactive material more vulnerable as climate change increases wildfire, flood risks</u>

As Texas wildfires burned toward the nation's primary nuclear weapons facility, workers hurried to ensure nothing flammable was around buildings and storage areas.

When the fires showed no sign of slowing, Pantex Plant officials urgently called on local contractors, who arrived within minutes with bulldozers to dig trenches and enlarge fire breaks for the sprawling complex where nuclear weapons are assembled and disassembled and dangerous plutonium pits — hollow spheres that trigger nuclear warheads and bombs — are stored.

"The winds can pick up really (quickly) here and can move really fast," said Jason Armstrong, the federal field office manager at Pantex, outside Amarillo, who was awake 40 hours straight monitoring the risks. Workers were sent home and the plant shut down when smoke began blanketing the site.

Those fires in February — including the largest in Texas history — didn't reach Pantex, though flames came within 3 miles (5 kilometers). And Armstrong says it's highly unlikely that plutonium pits, stored in fire-resistant drums and shelters, would have been affected by wildfire.

But the size and speed of the grassland fires, and Pantex's urgent response, underscore how much is at stake as climate change stokes extreme heat and drought, longer fire seasons with larger, more intense blazes and supercharged rainstorms that can lead to catastrophic flooding. The Texas fire season often starts in February, but farther west it has yet to ramp up, and is usually worst in summer and fall.

Dozens of active and idle laboratories and manufacturing and military facilities across the nation that use, store or are contaminated with radioactive material are increasingly vulnerable to extreme weather. Many also perform critical energy and defense research and manufacturing that could be disrupted or crippled by fires, floods and other disasters.

There's the 40-square-mile Los Alamos National Laboratory in New Mexico, where a 2000 wildfire burned to within a half mile (0.8 kilometers) of a radioactive waste site. The heavily polluted Santa Susana Field Laboratory in Southern California, where a 2018 wildfire burned 80% of the site, narrowly missing an area contaminated by a 1959 partial nuclear meltdown. And the plutonium-contaminated Hanford nuclear site in Washington, where the U.S. manufactured atomic bombs.

"I think we're still early in recognizing climate change and... how to deal with these extreme weather events," said Paul Walker, program director at the environmental organization Green Cross International and a former staff member of the House Armed Services Committee. "I think it's too early to assume that we've got all the worst-case scenarios resolved... (because) what might have been safe 25 years ago probably is no longer safe."

That realization has begun to change how the government addresses threats at some of the nation's most sensitive sites.

The Department of Energy in 2022 required its existing sites to assess climate change risks to "mission-critical functions and operations," including waste storage, and to develop plans to address them. It cited wildfires at Los Alamos and Lawrence Livermore national laboratories and a 2021 deep freeze that damaged "critical facilities" at Pantex.

Yet the agency does not specifically consider future climate risks when issuing permits or licenses for new sites or projects, or in environmental assessments that are reviewed every five years though rarely updated. Instead, it only considers how sites themselves might affect climate change — a paradox critics call short-sighted and potentially dangerous.

Likewise, the Nuclear Regulatory Commission considers only historical climate data rather than future projections in licensing decisions and oversight of nuclear power plants, according to a General Accounting Office study in April that recommended the NRC "fully consider potential climate change effects." The GAO found that 60 of 75 U.S. plants were in areas with high flood hazard and 16 were in areas with high wildfire potential.

"We're acting like... (what's) happening now is what we can expect to happen in 50 years," said Caroline Reiser, a climate and energy attorney at the Natural Resources Defense Council. "The reality of what our climate is doing has shifted dramatically, and we need to shift our planning... before we experience more and more of the extreme weather events."

The National Nuclear Security Administration's environmental safety and health division, which oversees active DOE sites, will conduct an internal review and convene a work group to develop "crucial" methodologies to address climate risks in permitting, licensing and site-wide assessments, John Weckerle, the division's director of environmental regulatory affairs, told The Associated Press.

The agency said last year that climate change could "jeopardize the NNSA mission and pose a threat to national security."

"We all know the climate is changing. Everybody's thinking about, what effect are we having on the climate?" Weckerle said. "Now we need to flip that on its head and say, 'OK... but what do we think is going to happen as a result of climate on a particular site?"

Assessments before and after projects are built are critical to protecting infrastructure and waste materials, said Dylan Spaulding, a senior scientist at the Union of Concerned Scientists. "We know that climate change makes it likely that these events will happen with increased frequency, and that brings the likelihood for unprecedented consequences," Spaulding said. Sites "can be better protected if you are anticipating these problems ahead of time."

### THE PHILIPPINE STAR

## <u>Climate change made April heat in Asia hotter, more likely — scientists</u> Gaea Katreena Cabico

Extreme temperatures that gripped Asia, including the Philippines, in April were made worse and more likely by human-caused climate change, according to an analysis by climate scientists.

Exceptionally hot weather across Asia triggered health warnings, forced thousands of schools to close down, killed hundreds of people, and damaged crops.

"From Gaza to Delhi to Manila, people suffered and died when April temperatures soared in Asia," said Friederike Otto, senior lecturer at the Grantham Institute-Climate Change and the Environment in the Imperial College London and co-author of the study by the World Weather Attribution group.

"Heatwaves have always happened. But the additional heat, driven by emissions from oil, gas and coal, is resulting in death for many people," Otto added.

Through published peer-reviewed methods, scientists analyzed the impact of climate change on the intensity of the three-day April heatwave in West Asia and a 15-day heatwave in the Philippines.

The scientists found that in the Philippines, similar heatwaves are expected to happen about once every 10 years during El Niño conditions and about once every 20 years in other years without the influence of El Niño.

They also said that a heatwave of this intensity would have been virtually impossible in the Philippines without human-caused climate change, even under El Niño conditions.

"Overall, climate change made this year's heatwave 1°C hotter, while El Niño made the heatwave a further 0.2°C hotter. If global warming reaches 2°C, similar heatwaves in the Philippines will occur every two to three years and will become another 0.7°C hotter," the study said.

In the Philippines, exceptionally hot weather prompted schools to shift classes online and threatened power grids. At least seven people have died from heat-related illnesses since the start of the year, according to the Department of Health.

## Heat planning

The researchers said the increasing risk of dangerous heat, particularly in rapidly growing cities like Manila, highlights the critical need for heat planning that protects vulnerable communities.

"Heat action plans set out measures for dealing with heat, like changing work and school hours," said Carolina Pereira Marghidan, a climate risk consultant at the Red Cross Red Crescent Climate Centre.

"Although various countries have made substantial progress on such plans, there is an urgent need to scale up and further strengthen them across Asia to deal with the rising heat," she added.

The Department of Education is gradually reverting back to the academic calendar year, when classes begin in June and end in March.

Meanwhile, labor groups like Kilusang Mayo Uno are calling on the government and employers to establish measures to ensure the safety of workers such as extended breaks, noting that extreme heat is a "health and safety hazard."

The World Weather Attribution study was conducted by 13 researchers, including scientists from universities and meteorological agencies in Malaysia, Sweden, the Netherlands, and the United Kingdom.

## What is flight turbulence and why does it happen?

By: Lucie Aubourg

Airplane turbulence, which led to the death of a passenger on a Singapore Airlines flight on Tuesday, is a complex phenomenon that is becoming increasingly common due to climate change, according to experts.

Storms, cold and warm fronts, and the movement of air around mountains can all cause turbulence in the air that planes fly through.

Turbulence can also occur in jet streams -- highways of strong wind that circulate around the globe at certain latitudes.

"While meteorologists have excellent tools to forecast turbulence, they are not perfect," said Thomas Guinn, professor in the aviation department at the Embry-Riddle Aeronautical University in Florida.

He added that airplane passengers should make sure they are wearing seat belts, which makes injuries far less likely.

Initial reports suggest the Singapore Airlines flight, in which more than 70 passengers were injured, may have hit clear-air turbulence, "which is the most dangerous type of turbulence," according to the Association of Flight Attendants.

Clear-air turbulence is defined by the Federal Aviation Administration as "sudden severe turbulence occurring in cloudless regions that causes violent buffeting of aircraft."

It is "especially troublesome because it is often encountered unexpectedly and frequently without visual clues to warn pilots of the hazard," the FAA says in a document on its website.

The agency says clear-air turbulence is typically found close to jet streams and associated with wind shear -- sudden changes in the speed or direction of the wind.

Turbulence continues to be a major cause of accidents and injuries despite a steady improvement in aviation accident rates, according to a 2021 report by the US National Transportation Safety Board.

But deaths linked to turbulence on commercial flights are "very rare," said Dr Paul Williams, professor of atmospheric science at the University of Reading.

"As far as I am aware there has not been a turbulence fatality on a commercial flight since 2009," Williams said in a statement shared with AFP.

Williams said that climate change is increasing the frequency of airplane turbulence.

"For clear-air turbulence, climate change is increasing the temperature difference across the jet stream between the cold poles and the warm tropics," he said.

"The tropics are warming faster than the poles at flight cruising altitudes. This effect is increasing wind shear in the jet stream, which is generating more turbulence," Williams said.

#### **CCC IN THE NEWS:**

#### PHILIPPINE INFORMATION AGENCY

## CCC reiterates PBBM's call for climate-resilient agriculture in the country

The Climate Change Commission echoed President Ferdinand Marcos Jr's call to boost sustainable and climate-resilient agriculture in the country during the inauguration program of the Calamansi Processing Center (CPC) and Provincial Agriculture Center (PAC) of Oriental Mindoro.

The Provincial Government of Oriental Mindoro (PGOM), with support from the Department of Trade and Industry (DTI) and the CCC, established the CPC and PAC to stimulate and foster growth of sustainable food production and processing industry in the province. The projects are fully funded by the Global Green Growth Institute (GGGI) and the Korean International Cooperation Agency (KOICA) as part of their Climate Resilient and Inclusive Green Growth Project.

In his last official visit to the United States last May 2023, President Ferdinand R. Marcos Jr., committed his utmost effort to boost climate-smart agriculture in the Philippines, institutionalizing a Ministerial-level study group to advance the matter.

Months following the visit, President Marcos directed the Department of Agriculture (DA) to urgently modernize agriculture and ensure food security for Filipinos through science-based agri practices.

On a more recent note, the President also welcomed Former United Nations Secretary-General Ban Ki-Moon, President of the Assembly & Chair of the Council of Global Green Growth Institute (GGGI) last February where he was able to reinforce GGGI financial and technical interventions towards building climate resiliency in the country.

GGGI's current notable area of work in the country includes boosting climate-smart agriculture and food production which fueled the establishment of the newly opened PAC and CPC of Oriental Mindoro.

In support of President Marcos' initiatives and recognizing the threats that climate change poses to the country's national food production, agriculture, and livestock, the CCC highlighted the urgency of supporting the development of climate-resilient and sustainable agriculture across the archipelago through research, development, investments, policies, and projects.

"Many Filipinos work in the agriculture sector. One in every four Filipinos, or over 10 million people, depend entirely on agriculture to support themselves and their families. Climate change-induced disasters such as extreme droughts and tropical cyclones, threaten their livelihoods. In the first quarter of this year alone, agricultural losses have already doubled our initial farmer support funds of PHP 10 billion. This underscores the critical importance of the agricultural sector," said CCC Vice Chairperson and Executive Director Robert E.A. Borje in his message of support.

Food security amid climate change is included as one of the sectoral outcomes in the draft National Adaptation Plan of the Philippines. It entails mechanisms that ensure the climate-proofing of the Philippine agriculture sector by empowering farmers to use climate information and services and climate-benign technologies to enable sustainable food production.

In response to the President's call for a climate-smart agriculture sector, the CCC is committed to build the capacity of farming communities and cooperatives to adapt to the devastating effects of climate change.

By forming partnerships with international, local and private organizations, and through the implementation of robust green policies and projects, the CCC aims to further strengthen policy framework and create an enabling environment for a climate-smart and climate-resilient agriculture industry in the Philippines.

For more information on the CCC 's climate mainstreaming activities, visit www.climate.gov.ph and www.facebook.com/CCCPhl. (CCC)

## PHILIPPINE NEWS AGENCY

## Media vital in public preparedness vs. climate change - CCC

By Ma. Cristina Arayata.

The media plays a crucial role in the public's preparedness and climate change adaptation, an official of the Climate Change Commission (CCC) said Wednesday.

"Journalism is an important part not only of democratic society but on the moves that we want to further enlighten and empower people (when it comes to) climate change," CCC Vice Chair Robert Borje said in a Bagong Pilipinas Ngayon televised briefing.

He said the media could amplify what needs to be talked about, and would help the public and institutions understand climate change better.

Borje said understanding, knowledge, preparedness and compliance are all essential as people deal with the effects of climate change.

"Adaptation efforts will require a lot of investments, work, science-based decisions. The media helps us with these," he said.

The media also plays a part in policy-making, he added.

"We need the media when it comes to policies, so the public would know what they could prepare. At the barangay level, for example, people could prepare rainfall water catchments to (collect) water. They could also talk about adaptive agriculture and setting up urban farms," Borje said.

Borje further underscored it is also important for the public to know the early warning signals of quick onset events, and for them to understand science and technology.

"Don't be afraid of science as this will identify the path and solution to climate change," he said, reiterating the media's role in explaining these.

Meanwhile, Borje said the stakeholders' testaments are also vital in climate change adaptation.

"Testimonies are real accounts not just of the challenges faced but of the successes of our country. When you provide true stories on the effects of climate change and the solutions we do, you're giving hope and real solutions to other people."

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