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# 'Puerto Galera tourism losses to hit P5.3 M daily'

Puerto Galera will lose P5.3 million per day if the island is closed to tourists due to the oil spill from the sunken tanker *Princess Empress*, according to the Department of Tourism (DOT).

The DOT said around 11,000 tourism workers and 139 DOT-accredited businesses would be displaced.

The Department of Environment and Natural Resources had earlier reported that only nine of the 35 water sampling stations in Puerto Galera passed the DENR's criteria for water quality on oil and grease.

The DENR and Department of Health (DOH) warned the public against doing activities in areas where oil and grease were detected.

Tourism Secretary Christina Frasco clarified that there is no ban on swimming and other recreational activities in Puerto Galera despite the joint statement issued by the DENR and DOH.

"Our perception of this joint statement is that Puerto Galera tourism continues to be open... There has been no direct attribution in terms of the direct source of the findings, considering the presence of other human and economic activities in Puerto Galera," she said.

The DOT said Puerto Galera contributes 85 percent of tourism income in the entire province of Oriental Mindoro.

During peak seasons, the island had earned more than P1.2 billion.

Last year, 56,194 foreigners visisted the town, resulting in tourism revenues of more than P590 million.

- Ghio Ong, Alexis Romero



The Manila Times



04-20-23

### Effects of oil spill immeasurable – Haribon exec

AN executive of a conservation group believes that the long-term are "immeasurable."

. Speaking to The Manila Times in a recorded video interview, Haribon Foundation's Anna Varona said as long as it is not mitigated, the effects will keep growing.

"The long-term effects are immeasurable," she said.

"The effects of the oil spill is elevating, as the days and

weeks go by, you are hearing will have less income for fisher- boats, there is oil." and hearing more effects of effects of the oil spill on marine the oil spill, so it affects the could get contaminated by oil, so tected areas have been affected biodiversity in Oriental Mindoro whole spectrum of marine environment of the deep sea, to the phytos (phytoplanktons) ... and it dominos from there also when it comes to the ecosystem."

Varona explains that the phytoorganisms are eaten by the fish as far as Tingloy in Batangas. and when those die, the fish have nothing to eat.

"The fish will also diminish in are coming in their bangka

folk, and if ever we eat fish, they people would get sick," she said.

Varona added that the water quality can get toxic because the biodiversity area. oil slick is still there.

gone, so right now, it's spreading," she said, citing that it went pened," Varona said.

"There are already signs of the oil spill there [in Tingloy]. People

Varona said 20 marine proby the oil spill, with Pola in Oriental Mindoro being a critical

"We were just talking to them "You don't know how far it's about tree-planting mangroves spill will go. in that area, and then this hap-

> She also revealed that the oil spill has also spread to Western Visayas near Marinduque.

population, which means that we (boats) and underneath their P200 million worth of coastal

livelihood from fishing has already been lost from February 28 - the day MT Princess Empress sank - to April.

She, however, admitted that she does not know how far or in and help us." how long the effects of the off

"The health of our ecosystem affects the neighboring countries, probably as far as China," she

"Our impact is big. The thing Varona claimed that around is, we are very insufficient. If this points to something, the

insufficiency is apparent, caused by a lack of preparedness, lack of foresight; we don't have the technology to clean up the oil spill. In fact, Japan had to come

The Haribon executive also said the MT Princess Empress should not be passing through the Verde Island passage at all.

"The government should rethink ways on the passage of tankers to keep them away from critical habitats," she said.

ARIC JOHN SY CUA





04-20-23

Philippine Coast Guard personnel check mangrove areas for oil slick in Barangay Calima in Pola, Oriental Mindoro in this photo courtesy of the PCG. The PCG said mangrove trunks in five areas in the town were found to have sporadic oil stains.



## **BusinessMirror**

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## SC issues 'kalikasan' writ on

## GM rice, eggplant

By Joel R. San Juan

@jrsanjuan1573

HE Supreme Court has issued writ of kalikasan enjoining the commercial release of genetically modified rice and eggplant products.

This was announced by the SC-Public Information Office (PIO) in a statement released Wednesday in connection with the petition for the writ of kalikasan filed by Magsasaka at Siyentipiko Para sa Pag-Unlad ng Agrikultura (Masipag).

The petition sought to stop the government from commercially releasing the products, insisting that Golden Rice and Bacillus

thuringiensis Eggplant (Bt Eggplant) are genetically modified organisms, a cause for environmental concern.

The writ of kalikasan was issued during the regular en banc session of the SC on April 18.

In 2015, the SC permanently enjoined the government from further conducting field trials, propagation and commercialization, and from importing GMOs being used on plants due to risks it these supposedly pose to human health and the environment.

The SC affirmed the Court of Appeals decision in 2013, granting the petition of Greenpeace and copetitioners Magsasaka at Siyentipiko sa Pagpapaunlad ng Agrikultura (Masipag) and several other individuals for the issuance of a writ of kalikasan against the field testing of BT talong.

The groups argued that the conduct of BT talong field trials has violated the constitutional right of the people to a balanced and healthful ecology.

During its regular en banc session last April 18, the Court also required the respondents—Secretaries of the Department of Agriculture, of the Department of Environment and Natural Resources, of the Department of Health; the Director of the Bureau of Plant Industry of the Department of Agriculture, the

Philippine Rice Research Institute, and University of the Philippines-Los Baños (UPLB)—to file a verified return within 10 days from service.

The group filed last October 12, 2022 the petition for writ of kalikasan and continuing mandamus (With Prayer for Issuance of Temporary Environmental Protection Order) before the SC, seeking the issuance of a temporary environmental protection order (TEPO).

The petition sought to direct the respondent DA to refrain from commercially propagating Golden

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Rice and issuing biosafety permits for commercial propagation of Bt Eggplant; cease and desist from commercially propagating Golden Rice and Bt Eggplant until such time that proof of safety and compliance with legal requirements is shown; declare all biosafety permits for Golden Rice and Bt Eggplant null and void; and perform independent risks and impact assessments, obtain the prior and informed consent of farmers and indigenous peoples, and implement liability mechanisms in case of damage, as required by law.

Petitioner's alleged, among others, that Bt Eggplant are genetically modified organisms.

They added that Golden Rice, which is patented to Syngenta, a transnational agrochemical corporation, has been modified by inserting a gene from maize and a gene from bacteria found in soil which allows the plant to biosynthesize beta-carotene in the edible parts of rice.

They also argued that Bt Eggplant was designed so that the plant would produce its own toxin, to kill the fruit and shoot borer, which is one of several common pests that consume and damage eggplants.

A Writ of Kalikasan is a legal remedy for the protection of one's right to "a balanced and healthful ecology in accord with the rhythm and harmony of nature," under Section 16, Article II of the Constitution.

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## Lawmakers push passage of single-use plastics bill

LAWMAKERS from the House of Representatives sought the passage of a bill to regulate the manufacture, sale, use and importation of single-use plastic products. This is in keeping with the advocacy for a greener and more sustainable economy for the country.

Benguet Rep. Eric Yap, Quezon City Second District Rep. Ralph Tulfo, and ACT-CIS party-list Representatives Edvic Yap and Jocelyn Tulfo joined Davao City First District Rep. Paolo Duterte's call as the country observes Earth Month this April and Earth Day on April 22.

The five lawmakers filed House Bill (HB) 507, which regulates non-compostable single-use plastics as well as their distribution, recovery, collection, recycling and disposal.

"As we mark Earth Day on April 22, I urge my colleagues in Congress to act on this bill and similar other pending measures so that we can finally phase out singleuse plastic products. They remain among the most pervasive kinds of waste that pollute our land, choke our oceans and bring harm to our precious marine resources," Duterte said.

Duterte mentioned that in Davao City, an ordinance prohibiting single-use plastics and limiting their sale and distribution has been in effect since 2021. His Congressional District Office in Davao City had previously started the "Save the Earth — No to Plastic Bags" program.

Duterte stated that their proposal under House Bill 507 includes various single-use plastics such as plastic utensils and dinnerware, containers, packaging, drinking straws, stirrers, sachets, and pouches.

Duterte and his co-authors suggested that their use be gradually phased out over a period of 1 to 4 years.

They said that bill "seeks to build an integrated and comprehensive strategy for plastic waste management, notably the control of the production, importation, sale, distribution, supply, use, recovery, collection, recycling and disposal of single-use plastics."

They pointed out that the Philippines is one of the world's worst offenders when it comes to marine plastic pollution, with 280,000 to 750,000 tons of plastic entering the oceans each year from Manila Bay's coastal areas.

"This is equivalent to 60 billion plastic sachets per year, the majority of which are single-use plastics such as plastic drinking bottles, bottle caps, food wrappers, plastic grocery bags, plastic lids, straws and stirrers, other types of plastic bags, and foam take-away containers," Duterte said.

"As a consequence, economic growth, combined with enhanced production and consumption, is leading to higher waste generation in our country," he added.

The bill requires the Department of Trade and Industry to develop a consumption, reduction and recovery program for single-use plastic products in partnership with the Department of Environment and Natural Resources, the Department of Science and Technology, the Food and Drug Administration, and stakeholders.

"Such measures shall include national consumption reduction, waste recovery targets, and other measures ensuring that reusable and compostable alternatives to single-use plastic products are made available and that the said products are not free of charge at the point-of-sale to the final consumer," Duterte said.

Commercial establishments covered by the bill are obligated to encourage the use of recyclable, reusable, and retrievable products in their stores, charge P5 to customers for each single-use plastic bag or container used for delivery or takeout, and promote the return of used plastic items to the retailer.

According to the severity of the infractions committed under the bill, the proposed penalties range from fines of P50,000 up to P500,000 for micro-businesses and P250,000 up to P1 million for small and medium enterprises to the cancellation of business licenses.

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### COMMENTARY

MARIAN LEDESMA

# Why we need a global plastics treaty

very year in April, the world celebrates Earth Day. But as the excitement fades, the question remains: What have companies and leaders touting sustainability really accomplished?

Take the plastic crisis, for example, which has for decades been burdening humankind and threatening our climate. Despite plastic being responsible for over 2 billion tons of carbon emissions a year, with an estimated 170 trillion plastic particles floating in our oceans, annual plastic production has ballooned to over 300 million tons and is predicted to double in the next 10 to 15 years. While we hear countries and businesses speak about acting on this crisis, we have yet to see concrete actions to phase down production and, consequently, protect communities and nature from the plastic lifecycle.

This year's Earth Day theme, "Invest in Our Planet," aims to mobilize governments, businesses, and citizens to do their part in investing in a green and just economy. In a statement, earthday.org states that everyone must be accounted for and be accountable in the shift to sustainable models. But for the billions of people who are affected by plastic pollution and who are merely getting by in our current economies, the choice to avoid single-use plastics is made impossible by existing systems controlled by corporations. The onus to change should be on the latter, and governments should speed this up by focusing on regulating these industries, instead of putting the blame on people.

This is why we need a global plastics treaty that will not only mandate a cap on and a dramatic reduction in plastic production and the elimination of harmful single-use plastics, but will also drive states and industries to invest in genuine, green, and just solutions. We need a treaty that will catalyze systems change, not continue broken systems. Moreover, in creating this legally binding agreement, we must have a process to secure a just transition for vulnerable stakeholders. A just transition to phase out single-use plastic requires that the treaty create an intentional and equitable process, ensuring that groups and communities are not displaced or adversely affected by the transition.

To achieve this, it is important for all stakeholders, including waste pickers, industry workers, small businesses, and low-income communities, who currently rely on plastic, to be able to participate in the transition planning process. The process must take into account the social and economic impact on these communities; no one must be left behind.

How can a just transition happen? Support must be provided for impacted communities to lead, develop, and have roles in developing and implementing solutions, and to ensure that they are not marginalized. Opportunities should be made available for affected workers to transition to new, sustainable jobs. Support should be given to street vendors and small businesses to shift to sustainable alternatives, while large corporations must be mandated to reduce plastic packaging with clear regulations. Programs for training, education, and financial assistance must be established for workers to develop new skills, and for businesses to transition to new industries.

The treaty must also embrace authentic, environmentally sound approaches, and reject false solutions like incineration and waste colonialism, which create further harm. The treaty would also be well-served to look at community-led reuse solutions in the global South, as well as traditional sustainable practices of indigenous peoples and local communities. It should compel governments and corporations to give financial support and incentives for the development and advancement of reuse and refill systems. It must also support research to create durable, nontoxic, and reusable alternatives.

A just transition to phase out plastic requires collaboration and commitment from all stakeholders. But the biggest actors—governments and corporations—have to step up. We need them to invest resources, time, and effort into addressing the negative impact of plastic, and to develop safe, green, and just solutions to prevent plastic pollution at its source. But more importantly, their actions have to be coupled with inclusivity. We want to protect our planet for future generations, while ensuring that no one gets left behind in the journey to a better future. To invest in our planet is to invest in a safer, brighter, plastic-free future for all.

Marian Ledesma is a zero-waste campaigner for Greenpeace Southeast Asia-Philippines. She is an official delegate to the upcoming Intergovernmental Negotiating Committee session on plastic pollution in Paris to be held in May. Corners Test

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The Manila Times





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### Bishops ask Marcos to stop Palawan mining

AT least two Catholic bishops asked President Ferdinand Marcos Jr. to end mining operations in a biodiversity-rich island in the province of Palawan, the Catholic Bishops' Conference of the Philippines (CBCP).

In a statement late Tuesday, Bishops Socrates Mesiona of Puerto Princesa and Broderick Pabillo pired on Feb. 1, 2023, and the loof Taytay Diocese in Palawan urged Marcos to "permanently stop" the operations of Ipilan Mining Corp. (INC) and other mining activities in watersheds and protected areas.

The appeal was contained in a joint pastoral statement released following what the bishops described as "violent dispersal and unlawful arrests" of anti-mining protesters in Brooke's Point town.

The incident, they said, was perpetrated by dozens of INC security guards, "backed up by a contingent of 30 police force who silently watched and abetted them."

CBCP said several farmers, fisherfolk and Indigenous peoples have been manning a barricade harsh dispersal and illegal arrests.

ing trucks containing nickel ore from entering a private port.

"They have endured hunger, heat, rain, and grave threats to their life and safety to make a collective stand up in preserving and protecting our beautiful Palawan," the statement said.

The mayor's permit of INC excal government of Brooke's Point issued a cease and desist order against its operations.

Rather than fully complying with the rule of law, Ipilan Nickel Corp. acted in blatant defiance of the law by continuously operating its mine," the bishops said.

"Worse, the company took the law into its own hands by deploying its large private security force in violently dispersing the peaceful

The church leaders urged the provincial prosecutors to dismiss all the "trumped-up charges" against the rallyists and hold accountable the people behind the

since February 18 to prevent min- CHRISTIAN CROW MAGHANOY



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Binay opposes BuCor plans on Masungi

Sen. Nancy Binay vowed to block the Bureau of Corrections' (BuCor) plan to develop a portion of the protected Masungi Georeserve in Rizal province. "This area is meant to be an ecotourism destination," Binay said after inspecting the reserve on Tuesday. The visit was part of an investigation into the BuCor's plan to develop a 270-hectare portion of the area for its new headquarters and housing units for its personnel. But Binay said the protected site, which straddles four villages in Tanay, Rizal, was not fit for such development due to the terrain and that flattening the property would be too costly. —MARLON RAMOS

#### Should we be wary of the planned dumping of Fukushima wastewater into the Pacific?

N the spring or summer of 2021, Japan Talarmingly announced that it would release around 1.3 million tons of contaminated water or wastewater from the destroyed Fukushima Daiichi Nuclear Power Plant into the sea. This contaminated water has been accumulating at the Fukushima plant after treatment and dilution. These 1.3 million tons of wastewater can fill up around 500 Olympic-sized swimming pools.

Countries in East Asia, like South Korea and China, immediately protested Japan's unilateral decision. But it's not just neighboring countries that have expressed their opposition and resistance to the plan. Even the Japanese people themselves are opposed to it. For instance, the local fisherfolk of Fukushima publicly announced their opposition saying, "... the said plan will undo the years of work rebuilding their industry's reputation since the plant was destroyed and ruined by the huge tsunami in March 2011.

Two years later, at a ministerial meeting in January 2023, the Japanese government announced that it was pressing ahead with the release of the 1.3 million tons of radioactive wastewater from the deceased Fukushima into the Pacific Ocean this spring or summer despite widespread opposition from local Japanese fisherfolk, marine scientists, and from countries and civil society organizations across the Asia-Pacific region.

The primary contention of those opposing the dumping of Fukushima nuclear wastewater is that such an act will be hazardous to the marine ecosystem and resources and will affect the fishing industries of countries in East Asia and the wider Asia-Pacific region like the Philippines. If it pushes through, the planned dumping of nuclear wastewater into the Pacific will cause serious damage to the marine ecosystem and resources and adversely impact international public health and safety and the vital interests of the Asia-Pacific region and its people.

#### No precedent

What is very disquieting is that there is no precedent in the world or actual practice of discharging such a massive volume of nuclear wastewater into the sea, which makes it hard to assess the long-term effects of such planned dumping of radioactive waste into the Pacific Ocean. According to some reports, no independent testing of the nuclear wastewater has been allowed or conducted thus far, which makes the whole venture quite a risky gamble for the Japanese government.

What's even more bothersome and worrisome is that the International Atomic Energy Agency (IAEA) is not opposed to Japan's unilateral decision in this regard. The Tokyo Electric Power Co. (Tepco), which owns the power station, claims that the IAEA has given the green light to proceed with the planned discharge of the contaminated water into the sea. Accordingly, last Jan. 20, 2023, in a briefing, IAEA nuclear



safety official Gustavo Caruso, who heads a special agency task force on Fukushima, said Japan's Nuclear Regulation Authority (NRA) has procedures in place to ensure that the discharge meets international safety standards. This is a rather outrageous and dreadful statement from the IAEA, given that it has no concrete study on the possible adverse impact of dumping 1.3 million tons of nuclear wastewater into the sea.

#### **US supports plan**

Many marine scientists and opposition groups said that no thorough study has been made with enough details, information and data on the possible undesirable impacts of dumping 1.3 million tons of nuclear wastewater into the sea. A marine biologist at the University of Hawaii Manoa, Robert Richmond, said that this will set a dire and terrible precedent. "There is a strong consensus internationally that continued use of the ocean for dumping waste is simply not sustainable," Richmond said.

On another note, though unsettling and perplexing, due to geopolitical considerations and geostrategic interests, the United States seems to agree with the unilateral decision of the Japanese government. As expected, Washington is willing to sacrifice the welfare of the wider Asia-Pacific region to prioritize its geopolitical and geostrategic interests in the region in cahoots with the Japanese government by turning a blind eye to the risks and dangers posed by the planned dumping of nuclear wastewater into the Pacific Ocean. Such a phony act on the part of the US colluding with Japan on this issue is indeed morally, ethically, socially, and environmentally retrograde and backward.

#### Conclusion

No doubt, given the uncertainty of the adverse impacts, risks and safety on the marine environment of not just Japan but of neighboring countries in the Asia-Pacific of the plan to dump 1.3 million tons of nuclear wastewater into the Pacific Ocean, the Japanese government as an act of courtesy should at least

conduct comprehensive and sufficient consultations with countries in the Asia-Pacific region to discuss further the issue, possible alternative solutions and its adverse impacts. The unilateral plan of the Japanese government to dump wastewater into the Pacific Ocean needs to be reconsidered and studied further.

Moreover, this unilateral plan of the Japanese government is akin to Japan's disregard for its adherence and compliance with international law on the protection of the environment, which is a set of principles that aims to curb pollution and depletion of natural resources. The spirit and principles of international environmental law purport that we are one ecosystem, that we are interconnected, and that the polluter must pay.

The bodies of water in Asia are very much connected, and pollutants originating from the Fukushima nuclear wastewater will no doubt reach nearby areas, affecting local marine and coastal environments and people's health. Thus, if Japan is indeed a responsible member of the community of nations, it should think twice before proceeding with its plan and prudently consult with countries directly affected by such a decision.

However, Japan, a privileged country, may not heed the call of its neighbors, probably because it has the backing of the US. But if something goes wrong with the plan, developing countries like the Philippines will undoubtedly be adversely affected and left alone to suffer the negative consequences.

We all depend on our natural environment. When we destroy our environment, we all suffer. Hence, we should remember that environmental problems and issues, such as the planned discharge of Fukushima wastewater into the ocean, threaten humanity and all species and certainly warrants serious and equal attention. Asia-Pacific countries must speak out and oppose one of the most critical environmental issues that might soon cause marine pollution in the Pacific Ocean and beyond.

Prof. Anna Rosario Malindog-Uy is a PhD economics candidate at the Institute of South-South Cooperation and Development in China's Peking University. She is analyst, director and vice president for external affairs of the Asian Century Philippines Strategic Studies Institute (ACPSSI), a Manila-based think-tank.





## The Manila Times









D4-20-23

### Editorial

#### The reality of energy transition

N Tuesday, the Withdraw from Coal (WFC) campaign, a coalition of several environmental groups, released its annual Fossil Fuel Divestment Scorecard, which rates Philippine banks on their financial involvement — or lack thereof - in investments in the fossil fuel energy sector. in particular coal- and gas-fired electricity generation. While the report is well-researched and written, and does make a number of key points that should be considered as part of energy policy, it is unfortunately ultimately based on an unrealistic premise, and is misleading in a number of ways.

Distilling the details of the 42-page report down to its essential themes yields four main arguments. First, in spite of the 2019 moratorium on new coal plant development, most Philippine banks still have significant financial exposure to coal, either through direct lending or as underwriters, issue managers, or selling agents of coal-related bond issuances. Second, banks are increasing their financial involvement in the development of gas-fired power, which essentially cancels out any progress in coal reduction, as natural gas is still a fossil fuel. Third, most banks do not have adequate coal and/ or gas divestment plans, nor sufficient policies to increase financing for renewable energy (RE) projects. And finally, any measures on the part of the government or the financial sector that do not lead to a complete elimination of all fossil fuel plants and their replacement with RE by 2040 are inadequate, as that is what is required for the Philippines to do its part in limiting global warming to 1.5 degrees Celsius over preindustrial levels in accordance with the 2015 Paris Agreement.

Where we do agree with the WFC report is in its assertion that banks' facilitating investment in coal, such as managing bond issues, is not substantially different from directly investing by way of lending, and that banks that are doing so while maintaining some form of "no coal" policy are being disingenuous, perhaps even engaging in outright greenwashing. Invest in coal or do not, but either way, for the sake of credibility, policies should be clear and transparent. Along those lines, the WFC's call for more public disclosure and transparency in banking policies is also a valid concern. Likewise, clearer policies, and more importantly, more aggressive action on the part of banks to support RE development in line with the government's energy goals is a good call.

However, we must take exception to two faulty presumptions made in the WFC report. Renewable energy that does not produce harmful emissions is of course preferable to any greenhouse gas-producing coal, gas or oil plant, but the presumption that the country can fully provide its electricity needs with RE in the space of a few years is at this point completely unrealistic. RE technology is developing rapidly, but except for expensive options such as hydropower or geothermal - which take years to develop, and are typically met with a great deal of resistance due to their other environmental and social impacts - RE cannot yet serve as the always available baseload energy supply the country requires. The answer to that challenge that is typically given, battery storage, is problematic in its own right and perhaps even a bit hypocritical; the supply chain for materials such as lithium is anything but "green," and subject to the same kind of geopolitical risks as the country's oil and gas supplies. Batteries are, at best, a transitional solution, a step in the right direction, but not the destination.

The same can be said of the country's turn to gas-fired generation as a substitute for coal and other petroleum fuels. "Transition" is the important word in the phrase "energy transition," and gas, while by no means ideal, is an improvement, a reliable partway solution while more sustainable energy sources are developed.

It is unfortunately probably true that a switch away from coal power to gas will not help the world — to the minuscule extent the Philippines actually affects the global environment - meet the 1.5 C target, but the reality is that target is already out of reach, an unfortunate fact that was established at the last COP climate summit. Using that as an argument, rather than accepting the realistic approach and encouraging the country to do whatever is within its present means to minimize climate damage, simply consigns one to irrelevancy.

# WB pushes climate stress testing by banks

By LOUELLA DESIDERIO

kommercer Service

The World Bank is pushing for the conduct of climate stress testing by banks to better understand and cope with climate and environmental risks.

"Banking regulators should consider climate stress testing – both at the system level and by individual banks – to build further understanding of climate and environmental impacts under various historical and future scenarios," World Bank economists said in the multilateral lender's blog.

This, as climate change and environmental-related natural disasters, which could lead to massive human losses, physical damages and economic and fiscal losses, are seen to pose risks to the stability of the financial system and affect the ability to meet development goals.

The World Bank experts said their study that looked into the impact of climate and environmental risks on the stability of the banking system found that severe climate and environmental disasters can lead to an increase in the level of system-wide non-performing loans (NPL) to total gross loans.

Based on a data set covering 184 economies over the period from 1980 to 2019, the World Bank experts said NPL ratios are estimated to increase by 0.37 percentage point after disaster episodes associated with an official declaration of emergency.

Two and three years after an episode involving multiple types of disasters, they said the cumulative increases in NPL ratios stand at 0.56 and 0.6 percentage point, respectively

In the Philippines, which is exposed to frequent natural disasters, the experts said they looked at the impact of typhoons on NPL ratios between 2011 and 2018 and found that "a one percentage point increase in the typhoon damage ratio, defined as the amount of damage divided by regional GDP (gross domestic product), would lead to an increase in the NPL ratio as large as 2.3 percent."

In its Philippines Country Climate and Development Report released last year, the World Bank said the economic damage to the country could reach up to 7.6 percent of GDP by 2030, and 13.6 percent by 2040, if climate change would be left unaddressed.

Given the results, the experts said it is important for the banking sector to monitor climate and environmentalrelated natural disasters.

The results also show the critical role of financial sector supervisors and regulators in the monitoring, assessment and mitigation of climate-related risks.

"The World Bank is actively supporting financial sector authorities to better understand and manage climate and environmental risks," the experts said.

Activities being undertaken by the World Bank in this space range from stress testing climate risks to supporting supervisors with climate data catalogues and risk management regulations.