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DENR

IN THE NEWS

Strategic Communication and Initiative Service



Department of Environment and Natural Resources
Strategic Communication Initiatives Service

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2 companies donate solar-powered vehicles for rescue service in Boracay

By ELLALYN DE VERA-RUIZ

To make Boracay a sustainable eco-tourism destination, the Department of Environment and Natural Resources (DENR) will be utilizing solar-powered vehicles for the patrol and rescue service in the world-famous resort island.

The vehicles—one patrol boat, three electric bikes (e-bikes) and one ambulance—were donated by Star 8 Green Technology Corp. and Southwest Travel and Tours to DENR.

The donation was covered by a

memorandum of agreement (MOA) signed by the two companies and the DENR, the lead agency in the Boracay Inter-Agency Task Force (BIATF) that is in charge of Boracay's rehabilitation.

BIATF chair and DENR Secretary Roy Cimatu thanked the two companies for their initiative.

Cimatu said the donated vehicles would "not only help sustain enforcement and sustainability efforts, but also minimize air and noise pollution in Boracay."

Star 8 chief executive officer Jacob Maimon said the vehicle donation is

their "way of helping maintain a green environment in the island."

Each e-bike has a range of 150 kilometers (km) on a full charge, while the ambulance has a maximum speed of 90 kph and a 20-km range. Its top speed is 100 kph.

Meanwhile, the e-banca has a speed of 5 knots and can run continuously for eight hours before charging.

Southwest will provide operational and maintenance support services for the upkeep of the units for a period of two years from the date of the turnover.



Bucari Ecotourism Zone bill approved

TWO remote towns in Iloilo are trying to spike their tourism industry by developing a forested area in the mountain that sits astride 14 barangays in the two towns into an eco-tourism site.

House Bill 8854 or the proposed "Bucari Ecotourism Zone Act," calls for the preservation of the terrain by declaring it as Bucari Ecotourism Zone.

The Bucari area covers 14 barangays in the Municipality of Leon and seven adjoining barangays in the Municipality of Alimodian.

HB 8854, principally authored by Rep. Arcadio Gorriceta of Iloilo, recognizes that the State shall protect the right of the people to a balanced and healthful ecology, as well as to promote a viable and sustainable ecotourism industry in order to attract local and foreign tourists.

Ultimately, it aims to generate employment and investment opportunities for local communities while ensuring environmental protection and preservation of the area.

The bill provides that an Ecotourism Development Plan for the Bucari Ecotourism Zone shall be incorporated in the overall National Tourism Development Plan of the Department of Tourism, pursuant to Republic Act No. 9593 or the "Tourism Act of 2009."

The Development Plan shall be jointly implemented by the Municipalities of Leon and Alimodian, and the Tourism Infrastructure and Enterprise Zone Authority.

Meanwhile, the Department of Environment and Natural Resources, in coordination with the TIEZA and the two Municipalities, shall delineate well-defined geographic areas and coordinate the integrated development of the area for the optimal use of its assets and attractions. **Maricel V. Cruz**



Group 'dismayed' by election outcome, fears foreign ownership of mining firms

EXPRESSING "dismay" over the results of the recent election that was dominated by administration candidates, anti-mining groups vowed to respect the electoral exercise and the will of the people.

According to the Alyansa Tigil Mina (ATM) national coordinator Jaybee Garganera, the dominance of traditional politicians, convicted plunderers and political lackeys of the Duterte administration in the winning list of new senators does not bode well for transformative social change it aspires.

"We see new senators who are compromised by big corporate interests because, either they were financially supported by business enterprises, particularly mining and extractive interests, or they are actually beneficial owners of these

corporations," Garganera said.

The "erratic" performance of Commission on Elections was exemplified when its Transparency Server went down for several hours on May 13, which Garganera finds "deeply troublesome."

"We expect this new Congress to sideline again the Green Bills—the Alternative Minerals Management Bill, the National Land Use Act and the Forestry Management Bill. These bills will never be passed with the newly elected senators who will stop the passage of these bills that will protect our natural resources and ensure that we are able to respond appropriately with the realities of climate change," he said.

Garganera said their group fears that the bid for Charter change will be fast-tracked and that foreign ownership of mining companies and mining operations will be

allowed which will eventually result in more displacement of rural poor communities and additional deforestations, as more areas will be opened up for more the extractive industries.

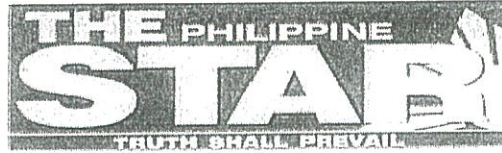
"We anticipate the federalism project will be fast-tracked as well, and we will be vigilant in working with affected communities and other environmental groups to protect our patrimony and natural resources from misplaced economic and industrial projects that threaten our environment," Garganera said.

According to Garganera, regrouping and assessing the new political landscape they are operating in is in order.

"We shall consolidate our members and work with local governments to resist the entry or expansion of more destructive mining operations," he said. *Jonathan L. Mayuga*



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DILG to bet: Clean up campaign materials

The Department of the Interior and Local Government (DILG) urged local officials and candidates in the midterm elections to immediately remove their campaign materials.

DILG Secretary Eduardo Año said politicians should be responsible enough to clean their own trash now that the elections are over.

"Win or lose, show that you are a good sport and that you have the best intentions for your communities by being part of the cleanup drive in your areas," he said yesterday in a statement.

Año said local officials from provincial governors down to barangay captains should lead in the removal

of campaign posters, sample ballots, flyers, tarpaulins and leaflets left by the candidates and their supporters.

He made the appeal as tons of trash have been left on the roads and public places leading to the polling precincts.

Cleaning up election trash, Año said, is an opportunity for the people to gather and work together for a common good.

Meanwhile, Green watchdog EcoWaste Coalition called on candidates and the general public to conduct post-election cleanup and upcycling.

Aileen Lucero, the group's national coordinator, said upcycling "or the

creative use of discards, is a practical way of saving resources from being burned or sent to the dumps and landfills for disposal."

She said paper-based campaign materials can be repurposed as bookmarks, envelopes, folders, mirror or photo frames, drawing pads, memo pads, name plates, scrap books and teaching aids such as flash cards and "tell the time" clocks.

Polyethylene plastic posters can be used as book and notebook covers while polyvinyl chloride tarpaulins can be converted into bags and pencil or mobile phone cases, Lucero said. — **Emmanuel Tupas, Rhodina Villanueva**



DILG to bets: Lead clean-up drive

By Francisco Tuyay

A DAY after the midterm elections, the Department of the Interior and Local Government called on all local officials and candidates to lead the clean-up drive and remove their election campaign materials immediately.

“The immediate task at hand is to call on your supporters to clean-up and rid our communities of poll trash,” said Interior Secretary Eduardo Año.

“Win or lose, show that you are a good sport and that you have the best intentions for your communities by

being part of the clean-up drive in your areas,” Año said.

Año said that all Barangay chairmen, mayors, and governors should lead in the clean-up together with LGU employees especially the Sanitation Division or Environmental

Management Office.

Año said, he expected that, as in previous elections, there would be tons of trash left in the roads and public places leading to and in the polling precincts because of the numerous election campaign posters, sample ballots, flyers, leaflets, tarpaulins distributed by the candidates.

Last year, the Metropolitan Manila Development Authority hauled numerous truckloads of garbage composed of posters, tarpaulins and plastics after the elections in several areas of Metro Manila alone.

Año stressed that cleaning up election trash would not only make the surroundings clean but “will also

be an opportunity for our people to gather and work together, turn a new page, and look forward to more good things for our people and for our nation.”

The DILG chief said the clean-up efforts in public schools which served as polling precincts should be fast tracked in time for the opening of classes in June. “We must clean-up the schools and adjoining areas to prepare for the opening of classes in June,” he says.

He called on everyone to work together and act fast in cleaning up election trash because these might clog canals and waterways which might later cause flooding.



DILG to poll bets, execs: Clean up campaign materials

By JUN I. LEGASPI

A DAY after the midterm elections, the Department of the Interior and Local Government (DILG) is calling on all local officials and candidates to lead the clean up drive and remove their election campaign materials immediately.

"Tapos na po ang halalan at nakapili na ang mga mamamayan kung sino sa palagay nila ang karapat-dapat na magsagwan sa kanila tungo sa tunay na pagbabago. The immediate task at hand is to call on your supporters to clean up and rid our communities of poll trash," said DILG Secretary Eduardo M. Año.

"Win or lose, show that you are a good sport and that you have the best intentions for your communities by being part of the clean-up drive in your areas," Año added.

Año stressed that all barangay captains,

mayors, and governors should lead in the clean up together with LGU employees especially the Sanitation Division or Environmental Management Office.

"Pagtulong-tulongan po natin ang pagtanggap ng mga kalat nitong nakaraang eleksyon. Ito ang ating unang hakbang para ipakita na magkakasama rin tayo sa pangangalaga at pagpapaulad ng ating mga komunidad," he said.

Año bared that he expects that, just like in previous elections, tons of trash left along the roads and in public places leading to and in the polling precincts because of the numerous election campaign posters, sample ballots, flyers, leaflets, tarpaulins that were distributed by the candidates.

"Nakakalungkot na may mga taong sadyang walang pakialam at kahit saan na lang nagtatapon at nag-iwan ng kanilang basura. Kailan kaya tayo matututo?" he said.

Last year, the Metro Manila Development Authority (MMDA) hauled numerous truckloads of garbage composed of posters, tarpaulins and plastics after the elections in several areas of Metro Manila alone.

Año said cleaning up election trash will not only make our surroundings clean but "will also be an opportunity for our people to gather and work together, turn a new page, and look forward to more good things for our people and for our nation."

"Ipakita natin na masinop at may disiplina tayong mga Pilipino. Alisin na natin ang anumang bahid ng katatapos na eleksyon at magsimula tayo ng malinis ang ating kapaligiran at malinis ang ating hangarin sa paglilingkod," said the DILG chief.

Año emphasized that clean up efforts in public schools which served as polling precincts should be fast tracked in time for the opening of classes in June.

"We must clean up the schools and adjoining areas to prepare for the opening of classes in June," he cited.

Año urged everyone to work together and act fast in cleaning up election trash because these might clog canals and waterways which may later cause flooding.

"Mas magiging mala ang sitwasyon kapag umulan dahil siguradong magdudulot ng baha ang basurang ikinalat natin kaya kumilos na agad tayo," he said.



Campaign materials litter the streets of Manila a day after elections.



Paalala ng DILG at Comelec sa mga kandidato **MAGLINIS NG KALAT SA HALALAN**

NAGPAALALA kahapon ang Department of the Interior and Local Government (DILG) at ang Commission on Elections (Comelec) sa lahat ng opisyal at tumakbo sa nakalipas na eleksiyon na linisin at alisin ang kanilang mga campaign paraphernalia.

SUNDAN SA PAHINA 15

Mula sa pahina 16

Himok ni DILG Secretary Eduardo Año, dapat magsanib-pwersa ang mga kandidato at kanilang supporters upang mapabilis ang pagtatanggal ng mga kalat nila tulad ng streamers, mga poster at leaflets. "Tapos na po ang halalan at nakapili na ang mga mamamayan kung sino sa palagay nila ang kara-

pat-dapat na magsagwan sa kanila tungo sa tunay na pagbabago. The immediate task at hand is to call on your supporters to clean up and rid our communities of poll trash," giit ni Año.

Inaasahan na ang tambak na basura na makikita sa iba't ibang pampublikong kalsada at eskuwelahan.

Nagbabala pa si

Año na kailangan bago magsimula ang klase sa Hunyo ay maayos na ang mga paaralan.

Sinuportahan ng Comelec ang pahayag ng DILG. Sa Twitter post ni Spokesperson James Jimenez ay sinabi nito na alisin sa lalong madaling panahon ang mga poster na ipinaskil ng mga nanalo at natalong politiko.



Editorial

Tagumpay ang eleksiyon pero nag-iwan ng basura

NAGING matagumpay at mapayapa sa kabuuan ang election noong Miyerkules. Bagama't nagkaroon ng pagkaantala sa pagboto ang ilan dahil sa pumapalyang Vote Counting Machines (VCMs) at naatrasado rin ang pagbibilang, naisaayos naman kaagad. Naipamalas ng Commission on Election (Comelec) ang kanilang kakayahan sa tulong ng mga guro na naging abala sa maghapon at inabot pa ng gabi sa voting centers.

Ang tanging naiwang bakas ng katatapos na election ay ang tambak ng basura na makikita sa paligid ng mga eskuwelahan na ginamit na presinto o voting centers. Nakita na naman ang kawalan ng disiplina ng mamamayang bumoto sa pagtatapon ng kanilang basura.

Kahit may mga basurahan sa paligid ng eskuwelahan, sa kalsada pa rin itinapon ang mga supot na plastic ng palamig, tray ng siomai, fishball, kikiyam at mga cup ng buko juice at plastic bottle ng mineral water. Nagmistulang malaking basurahan ang paligid ng school at maski sa loob mismo ay nagkalat din ang basura.

Lalo pang dumami ang basura nang mamigay ng mga polyetos o campaign list ang mga tauhan ng kandidato sa mga botanteng pumapasok sa school. Bawat botante ay inaabutan na may kasama pang pamaypay na karton, pero pagkatapos makaboto, itatapon na rin ito ng mga botante. Kaya lalong dumami ang basura sa paligid.

Tanong sa Comelec, sino ang maglilinis ng mga basura ng kandidato? Hindi ba maaaring obligahin ng Comelec ang mga kandidato na tumulong sa paglilinis lalo pa't basura naman nila ang mga iyon. Sino rin ang magbabaklas ng mga tarpaulin, streamers at iba pang campaign materials na nakakabit sa pader, punongkahoy at mga kawad ng cable at telepono?

Maraming kandidato ang lumabag sa pagkakabit ng kanilang campaign materials. Kahit saan-saan na lang nagkabit ng campaign materials ang mga kandidato kahit nagbabala ang Comelec. Malamang hindi na makasuhan ang mga kandidatong lumabag sa regulasyon.

Sana ay magkusa na lang ang mga kandidato (lalo na ang mga nanalo) na tumulong sa paglilinis ng mga basura. Kapag hindi naalis o nalinis ang mga basura, magdudulot ito nang pagbaha lalo't malapit na ang tag-ulan.



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Environment group appeals to candidates: Cleanup, upcycle

By **CHITO A. CHAVEZ**

Environmental group EcoWaste Coalition called on the winning and losing mid-term election candidates to now roll up their sleeves and conduct “post-election cleanup and upcycling activities.”

“Regardless of the outcome of your election bid, we appeal to all candidates and parties to take down your campaign materials without delay,” said Aileen Lucero, EcoWaste Coalition national coordinator.

“Sort the dismantled campaign materials and upcycle them as much as possible,” she added.

Lucero noted that “upcycling or the creative reuse of discards is a practical way of saving resources from being burned or sent to the dumps and landfills for disposal.”

The Quezon City based group asserted that decreased garbage volume, lower disposal cost, reduced greenhouse gas emissions, conservation of resources, cleaner surroundings, and enhanced environmental awareness are some of the benefits of upcycling election campaign materials.

EcoWaste said there are many functional uses of spent election propa-

ganda articles such as leaflets, posters and sample ballots.

At an event held at the MMDA temporary holding area for dismantled campaign materials under the Santolan-EDSA flyover, bag maker Lolita Calusayan, “Junk Not” advocate Wilhemina Garcia, informal recyclers from Capulong, Manila and the EcoWaste staff displayed some of the easy ways to make upcycled items.

Paper-based campaign materials were repurposed as bookmarks, envelopes, folders, mirror or photo frames, drawing pads, memo pads, name plates, scrap books, and teaching aids such as flash cards and “tell the time” clock.

Polyethylene plastic posters were reused as covering for books and notebooks while polyvinyl chloride (PVC) plastic tarpaulins were converted into ball bag, bean bag, body bag, carry bag, clutch bag, delivery bag, shoe bag, shopping bag, and string bag.

EcoWaste Coalition added “it’s even possible to make pencil or mobile phone cases out of tarps.”

The group noted that tarpaulins can also be reused as upholstery material, as a protection against rain or sunlight for vehicles, and as awnings for homes and stores.

EcoWaste Coalition reminded that

plastic PVC tarpaulins should only be reused for non-food and non-child applications as these may contain toxic additives such as cadmium and lead, which may leach and contaminate the food or expose children to chemical hazards.

To prevent and reduce trash in future elections, the EcoWaste Coalition urged the Commission on Elections (Comelec) to upgrade existing rules to ensure the judicious use of resources and eliminate the use of materials that are toxic and are difficult to reuse or recycle.

“There is also a need to make it the responsibility of candidates and parties the mandatory removal and environmentally sound management of campaign materials right after election,” Lucero said.

“Comelec and deputized agencies have to strictly enforce the ban on the distribution of sample ballots on polling day, which only contributes to the trashing of polling stations,” she noted.

Like the reported incidents of vote buying, Lucero said “littering has again tainted the democratic exercise of choosing our political leaders.”

“Next time, our citizens should come prepared with their own voting kodigo (guide) to render sample ballots irrelevant and avoid turning polling places into dumpsites,” she concluded.



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ECOWASTE MESSAGE. The Ecological Waste Coalition of the Philippines, a public interest network of community, church, school, environmental and health groups united by the common goal to end wasting through the promotion of environmental justice and stewardship, has a strong message to candidates, parties and the general public: Think Before you throw; To reduce the volume of post-election discards requiring disposal, find innovative uses for used campaign materials such as leaflets, posters and sample ballots instead of burning or dumping them, which can only contribute to environmental pollution. **Manny Palmero**



Trusted Since 1898

The Manila Times

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POLL TRASH Children help stack posters that littered streets on Tuesday, the day after the elections. EcoWaste Coalition urged the public to recycle posters and other materials used by political candidates. PHOTO BY ORVEN VERDOTE



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NOW that election was finally over and the counting is nearing to an end, environment group Ecowaste Coalition urges candidates and political parties to start cleaning up their campaign materials and dispose them properly by recycling them into something else. INQUIRER



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Garbage at sea

First of two parts

TWO weeks after the issue of floating garbage in the west Philippine Sea was exposed, the same had to be pushed back as news on the midterm election took center stage. Remember how the Supreme Court Mandamus relating to the cleanup of Manila Bay? Why is it necessary for the highest court of the land to tell government to mind the trash!

In 2018, the Philippines ratified Annex V of the International Convention on the Prevention of Pollution from Ships (Marpol) a bit late for an archipelago, indeed. But just the same it's good to have another compelling reason to check on ships navigating in the waters of this archipelago as possible source of marine litter. As a party to Marpol, the

Philippines is obliged to put up legislation and/or implementing regulations which will ensure that ship-generated wastes defined as garbage under the convention are properly collected, stored, treated and disposed. Each of these steps require detailed requirements for all ships, regardless of type, size and trading routes, i.e. in domestic or international waters. This means Marpol provisions are applicable to all ships including small crafts and fishing vessels.

Prohibited discharge at sea

Marpol Annex V prohibits the discharge of plastics of any kind into the sea. This is a tall order for a country that has a penchant for single-use plastics; the Philippines is recorded as one of three Asian countries with

plastics at sea. It is said that plastics is as damaging as an oil spill, yet not many would associate plastics as the effect is not as dramatically visible.

One intriguing question comes to mind — does the Philippines need to become party to Marpol Annex V in order to regulate garbage collection and disposal onboard ships? Good housekeeping should be an essential feature of any ship, it is after all the workplace of the crew. Much more is demanded of ships which cater to passengers as the volume of waste could be expectedly high.

Implementing Marpol Annex V is not as simple as it appears to be. The provision of garbage bins where passengers and crew can throw trash is easy, but getting people onboard to use these bins is another story. This becomes even more difficult when the bins identi-



SEA-THROUGH
ATTY. BRENDA V. PIMENTEL

fy segregated trash. What is biodegradable and nonbiodegradable garbage? Is paper plate covered with plastic cover biodegradable? Some say disposing a paper cup with plastic straw in different trash cans would be too cumbersome.

Food wastes are allowed to be discharged at sea BUT only if these are passed through a comminuter and when the ship is en route and is at least 12 nautical miles from the nearest land. Therefore, remnants of food can not just be thrown at sea and prohibiting such will have to be part of the implementing regulations of Marpol Annex V.

A pertinent question is asked: which agency is to implement Marpol Annex V? The bill implementing Marpol and all its annexes is still pending in Congress for the last fifteen years or so. Nonetheless, there is nothing that should stop the maritime administration from formulating and adopting regulations to ensure cleanliness at sea as part of the service standards required in the grant of the certificate of public convenience.

Port reception facilities

Then there is the issue of how garbage is to be received ashore? By whom? And what regulations govern the disposal. Parties to Marpol Annex V commit to provide reception facilities for accepting garbage from ships.

Again, this may turn up to be complicated not as much as to the receipt but more on how these landed garbage are transported and eventually disposed. In this respect, the role of local governments has to be clearly defined. The Supreme Court mandamus issued to local governments bordering the Manila Bay to cleanup the coastal waters should include the putting up of a system of receiving ship-generated garbage.

One wonders, is part of the garbage said to be coming from ashore the same garbage that were landed from ships? Maybe this question has no basis if the system for receiving, transporting, treating and finally disposing of garbage from ships is known. And to this, the role of local governments is highlighted. This is beyond Marpol Annex V.



Risking another water shortage?

By NEY VILLASEÑOR

WE live in a country thirsty for change. In these tumultuous times where the rules seem to bend and break, one thing remains constant for every Filipino—the need for reliable water supply.

When taps ran dry last March, residents of eastern Metro Manila, armed with their mighty plastic jugs, took to the streets. Newspapers were filled with photos of painfully long lines as Filipinos waited for fire trucks that deliver water. That month, people living in high-rise condos or in the slums suffered the same fate when water suddenly became a rare, sought-after commodity.

It was a trying period for everyone in the metropolis, as people questioned how something as common as taking a shower became a "privilege."

In 2010, the United Nations (UN) declared March 22 as World Water Day, recognizing that "the right to safe and clean drinking water and sanitation...is essential or the full enjoyment of life and all human rights."

That month, private concessionaire Manila Water Co. struggled to provide adequate water supply to its consumers, failing to fulfill its end of the contract. Citing

decreasing water levels in La Mesa Dam, what came after was endless finger-pointing as concerned authorities and officials of the water concessionaire tried to look for someone to pin the blame on.

What was missing from the discourse on water shortage was a definite action to tackle the root of the problem, to restore what we had lost, our natural providers of water—our forests. Water is unquestionably the source of life. It is a basic human right, a necessity. And yet, in the Philippines, a country gifted with natural resources, we continue to take this resource for granted.

According to the UN, 75 percent of the world's freshwater come from forests, which filter, store and supply freshwater. Forests are natural infrastructures that prevent soil erosion and sedimentation. These processes improve water quality. Forests, through transpiration, also seed clouds, thus resulting in better rainfall patterns. These functions make

them essential to water security.

Despite this, reports in 2011 from Conservation International placed the Philippines as one of the most threatened forest hot spots in the world. From 17.8 million hectares in 1934, the country's remaining forest cover is now only at 7.168 million hectares. In 2006, the Food and Agriculture Organization (FAO) said the Philippines had lost 2.1 percent of its forest cover annually, one of the fastest deforestation rates in the world.

With a depleting forest cover, the Philippine water reserves may also be put at risk. For instance, according to the World Wildlife Fund (WWF), forest cover in the Ipo watershed dropped drastically from 85 percent to 40 percent, destroyed by deforestation and other activities. Ipo is part of the Angat-Umiray-Ipo watershed systems, the main source of Metro Manila's water needs.

Organizations such as the WWF continue to hold tree-planting activities and fundraisers to help forest rangers restore and protect the watershed.

In particular, the WWF aims to push for a sustainable watershed management plan, create an efficient management body for watersheds, and minimize erosion and siltation, which could result to higher costs for

water cleaning facilities. WWF also creates projects that could help mitigate pollution, monitor and evaluate efforts to reforest the denuded areas, and provide livelihood opportunities to the communities in Ipo.

FAO highlighted in a report the critical relationship between forest lands and water supply, noting an "urgent need for better understanding of the interactions between forests and water, for awareness-raising and capacity-building in forest hydrology, and for embedding this knowledge and the research findings in policies."

What we do to our forests directly affects our day-to-day lives. Trees give us the clean air we breathe, the water we drink and some food that sustain us. Our environment is our life source, and yet we fail to focus on its needs. What we need now is not bickering between authorities and among politicians, but solid steps toward the protection of our environment.

We need policies paired with stricter implementation from the government, plans for better water management and a good foresight. Filipinos must stop private groups from destroying our natural resources. The government must help protect our environmental

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assets by setting a policy agenda that would help preserve our forests. The recent water crisis in Metro Manila is an ominous warning of what's to come if we continue to ignore the long-term consequences

of this pressing problem.

Ney Villaseñor is a corporate communications and public affairs professional who currently leads the corporate communications group of a Tech Fin company. He is passionate about the environment, social justice and equal opportunity. He has worked in different industries and is committed to pursue graduate studies in Leadership, Business and Management.



Drought! Is this global warming?

COMMENTARY

RODEL D. LASCO

The answer is more complex. While climate change is projected to lead to more extreme events such as droughts, the scientific understanding of how climate change can affect the occurrence of such events is still murky.

In the Philippines, droughts are usually associated with El Niño or the warm phase of the Enso (El Niño-Southern Oscillation). Enso refers to conditions of above average sea surface temperatures in the Pacific that cause major shifts in weather patterns globally. It should be noted that Enso is a naturally occurring phenomenon that happens approximately every two to seven years. El Niño often results in drought in the Philippines, while the cold phase, La Niña, is associated with heavy rains and flooding in the country.

The question, then, is how this weather phenomenon will be affected by a warming planet, if at all.

After assessing the most recent scientific literature, the Intergovernmental Panel on Climate Change (IPCC) Special Report on "Managing the Risks of Extreme Events" concluded that "model projections of changes in Enso variability and the frequency of El Niño episodes as a consequence of increased greenhouse gas concentrations are not consistent, and so there is low confidence in [the] projections." At the same time, the IPCC Fifth Assessment Report indicated that "natural variations of the... pattern of Enso are so large that confidence in any projected change for the 21st century remains low."

Simply put, we are not sure how global

warming influences the occurrence of Enso events.

The state of science on Enso and climate change has a few implications. First, we must not be too forward in blaming climate change for specific Enso events. Some politicians and observers are quick to attribute El Niño events to global warming. Such statements lack scientific basis and may backfire in the form of greater skepticism about future scientific findings. We must emphasize that climate has a natural variability and extreme events may happen occasionally, even without climate change.

This is not to say that climate change is not happening. Ninety-nine percent of scientists around the world agree that the planet is warming, and this is no longer a debate.

Second, we must recognize the limits of science. It should be obvious that scientists do not have all the answers. By its very nature, science demands rigor before drawing conclusions. As such, science may appear slow since its systematic methods take time to unfold. Policymakers and ordinary citizens may become impatient and jump to premature conclusions to support their preconceived notions.

Compared to other sciences, the study

of climate is fairly recent, and this is especially true for global warming. There is little precedent, and scientists cannot exactly experiment with Planet Earth. Thus, our knowledge on future planet warming is mainly from the results of computer modeling with its inherent uncertainty.

Third, if we want to have greater certainty on how climate change can affect the country, we must make significant investments in climate science. The Philippines is one of the most vulnerable countries in the world, so this should be a no-brainer. It is a matter of national security that we become a leading scientific power on the science of climate and small islands.

Much of the research on global climate do not necessarily apply to an archipelagic country like ours. We therefore cannot rely on other (developed) countries to supply us with the information we need.

Finally, we need to translate whatever knowledge we have and will have to action on the ground. Climate resilience is a community endeavor that requires the participation of all sectors. Without such action, no amount of scientific rigor can prepare our people for what is about to come.

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Hydrogen next big thing for low-carbon future, ADB climate expert says

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DEVELOPING countries like the Philippines could emerge as the “big winners” if they move toward a hydrogen economy, according to the Asian Development Bank (ADB).

In an Asian Development Blog, ADB Sustainable Development and Climate Change Department Chief of Energy Sector Group Yongping Zhai said hydrogen energy is “the next big thing” in the bid to reach a low carbon future.

Zhai said the combustion of hydrogen with oxygen is a cleaner form of energy since the only by-product is water. This is better than fossil fuels, which produce carbon dioxide and other pollutants.

“Developing countries would be the big winners from the move toward a hydrogen economy. First, on the supply side, developing countries could tap their renewable-energy resources to produce hydrogen and export it to other countries, as is already done with liquefied natural gas,” Zhai said.

“Second, on the demand side, developing countries could start using hydrogen technologies in specific areas. For example, fuel-cell vehicles can be charged fully with hydrogen within five minutes for a driving range of 500 kilometers and more, with zero carbon-dioxide, sulfur-dioxide or nitrogen-oxide emissions,” he added.

Hydrogen, Zhai said, can be used directly as fuel in power generation and other heat applications. It can also be blended with natural gas in pipeline networks.

He also said hydrogen used with fuel

cells—a device that converts chemical potential energy into electrical energy—is promising for trucks, rail and ships, as well as industrial applications which require both electricity and heat.

In order to develop a hydrogen economy, Zhai said pioneers are needed. In Japan, the government aims to be a hydrogen economy by 2050. This was the aim of the world’s first hydrogen strategy, which Japan formulated in December 2017.

“The hydrogen economy is premised on the use of hydrogen as a fuel, particularly for electricity production and hydrogen vehicles; and using hydrogen for long-term energy storage and for the long-distance transportation of low-carbon energy,” Zhai said.

“The key to achieving such a hydrogen economy is to bring the cost of hydrogen down from more than \$10 per kilogram to about \$2 per kilogram, which would then be competitive with natural gas,” he added.

In order to help countries move toward a hydrogen economy, Zhai said multilateral institutions such as the ADB can do more in terms of financing hydrogen energy projects, including production, transportation and distribution infrastructure, as well as market applications.

Zhai added that ADB can also share information about the latest trends and technologies and help governments develop strategies and road maps for hydrogen energy development.

He added that ADB can also help enhance the carbon trading platforms and pilot hydrogen technologies and business models for scaling up.