

DATE : 02 02 20

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# DENR

## IN THE NEWS

Strategic Communication and Initiative Service



## NICKEL ASIA SHINES IN NATIONAL MINE SAFETY, ENVIRONMENT AWARD

Nickel Asia Corporation subsidiaries took the spotlight in the recently-concluded 66th Annual National Mine Safety and Environment Conference (ANMSEC) here, with one affiliate taking the most coveted Presidential Mineral Industry Environmental Award (PMIEA).

Cagdianao Mining Corporation (CMC), based in Valencia, Dinagat Islands province, bagged the top Presidential award and the 2 highest safety performance awards - the Safest Surface Mines and the Overall Safest Mine Operations. These awards are given to operating mines that have shown exemplary performance in the area of environment enhancement and protection, safety, health, and social development and corporate social responsibility.

CMC's Archie Sierra also won the best surface safety inspector award during the November 19-22 ANMSEC, the largest annual gathering of the country's minerals sector that also feature safety competitions, mining equipment exhibits, and a symposium tackling industry issues.

Likewise, other NAC affiliated also harvested awards. Hinatuan Mining Corporation (HMC) based in Tagana-an town, Surigao del Norte, took home the Platinum Award in the surface mining category and as first runner up in the

Best Forest Award.

Two of HMC's miners, James Wilkins Asio and Angelo Cañada, were conferred the Best Mine

Supervisor Award and Best Miner Award, respectively.

Meanwhile, NAC subsidiary Rio Tuba Nickel Mining Corporation (RTNMC) captured the championship crown Mine Safety Field Demonstration and Field Competition on First Aid held during the last day of the conference.

It was the second time in a row for the Bataraza, Palawan-based RTNC to win the title, demonstrating the unrivaled competence of its emergency response team.

Receiving the major PMIEA award, CMC resident mine manager, Engr. Arnilo Milaor, said the recognition further strengthened their resolve to operate well beyond the regulatory standards.

"This Presidential award only solidifies our zeal, conviction, commitment, courage, and readiness to face future challenges and respond to the ever-evolving regulatory environment," Milaor said.

"More than that, the honor that has been bestowed to us this evening will only strengthen our determination to improve the lives of our community stakeholders, protect and preserve the environment, and make Cagdianao

Mining the healthiest and safest mine in the entire country," he added.

Milaor echoed the call of Environment Secretary Roy Cimatu at the start of the awarding ceremony for the institutionalization of the "culture of care" in all aspects of mining operations.

"Through various programs being implemented by mining companies, which include the social development and management program, support and services have consistently been provided to ensure sustained improvement in the living standards of host and neighboring communities," Cimatu said in a speech delivered by Environment Undersecretary Analiza Teh.

The annual mine safety and environment conference is organized by the Philippine Mine Safety and Environment Association (PMSEA) in coordination with the Department of Environment and Natural Resources-Mines and Geosciences Bureau, the Chamber of Mines of the Philippines, the Philippine Society of Mining Engineers (PSEM).

The PMIEA, meanwhile, is pursuant to Executive Order No. 399, series of 1997, which recognizes outstanding levels of dedication, initiative and innovation in various aspects of operations in the country's minerals sector.



# House leaders back disaster resilience department

By EDU PUNAY

More lawmakers are pushing for the creation of a Department of Disaster Resilience (DDR) to handle the government's response during calamities.

Albay Rep. Joey Salceda and Leyte Rep. Lucy Torres-Gomez both said the recent eruption of Taal Volcano showed the need to immediately establish the office.

Salceda, chairman of the House ways and means committee, said the proposed measure would enable the national government to better address calamities in the future. As one of its main proponents, he believed the effects of the latest calamity could have been mitigated or even avoided if the measure was passed earlier on.

"It could have been better (if there's DDR already). As you can see now, affected communities are evacuating but don't really know where they should go," he said. "Let's pass the DDR and put Phivolcs (Philippine Institute of Volcanology and Seis-

mology) and the Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA) under the DDR."

Gomez, for her part, said the DDR would address fragmentation in government's response, citing the lack of evacuation capacity and the low quality of temporary accommodations.

"We have to recognize that our current system carries with it structural silos that create natural limitations to the disaster risk reduction, response, relief, recovery and rehabilitation processes," she said in a privilege speech earlier this week.

"Our status quo is functionally fragmented, with various functions under the theme of disaster resilience housed under different departments. On top of this, the overall responsibility and management for disaster resilience does not fall under one single Cabinet secretary," she pointed out.

As chair of the committee on disaster management, Gomez explained that the DDR will converge with the Climate Change Commission and will have joint supervision over key units such as the PAGASA and Phivolcs of the Department of Science and Technology, Geo-Hazard Assessment and Engineering Geology Section of the Mines and Geosciences Bureau, Health Emergency Management Bureau of the health department and the interior's Bureau of Fire Protection.

"These integrations will hopefully be the preliminary phase to a holistic approach to one of the biggest threats to our safety and to our country's economic growth. With the DDR, we would be able to establish frameworks for disaster relief, response, recovery and rehabilitation. This means we don't have to reinvent the wheel all over again each time there is a disaster," she added.

The proposed DDR will integrate the Climate Change Commission, National Disaster Risk Reduction, People's Survival Fund, Yolanda Recovery and Rehabilitation Efforts, and Office of the Presidential Assistant for Rehabilitation and Recovery under the DDR.

The House plenary tackled the measure during its session in Batangas City last month, but failed to pass it on second reading.



## DPWH pushes P96-M anti-landslide project

The Department of Public Works and Highways (DPWH) Eastern Samar district engineering office has requested for P96 million in calamity funds to protect a major highway from landslides along the Wright-Taft Road in Binaloan village, Taft, Eastern Samar.

According to DPWH district engineer Manolo Rojas, correcting the slope of the mountain and building slope protection structures would be the quickest way to prevent landslides in the area, which were due to the steep slope and land composition that easily dissolves when saturated during rainfall.

The Visayas region was recently battered by strong typhoons, causing a series of landslides that occurred in Binaloan in January.

"We have already requested for engineering interventions from the central office, as endorsed by the regional office on the second week of January," Rojas said.

He added that detailed engineering work was already ongoing, and once approved, they would seek a permit from

the Department of Environment and Natural Resources and clearance from the Samar Island Natural Park as the slope along the road section is a protected area.

Due to ongoing road works, the DPWH said the road would be closed to all types of vehicles from 5 p.m. to 6 a.m. every day and during rainy days for safety reasons.

Motorists plying this route have been advised to take the alternative route passing through the Jct. Buenavista-Lawaan-Marabut Road.

The DPWH said the road advisory would remain unless the road slope is made into its ideal angle, as Rojas pointed out that with a proper slope protection structure, the 90-degree slope would be reduced to 45 degrees.

"This will be the temporary set up. So for now, we advised motorists to pass with caution and watch for falling rocks," Rojas said.

The Wright-Taft road is a major link between Samar and Eastern Samar and is the shortest route to get to the northern part of Eastern Samar from Tacloban City, the regional capital. **TIO @tribunephil\_3na**



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02 02 20

TIME:

PAGE 17

DATE

# ASEAN celebrates World Wetlands Day

The ASEAN region is rich with wetlands as it is home to 60 percent of the tropical peatlands and 42 percent of mangrove forests in the world

Wetlands all over the world are constantly under threat and need greater attention for conservation and sustainability efforts, and the public is being reminded of the importance to protect and manage these areas as World Wetlands Day is being celebrated today, 2 February 2020.

According to the 5th ASEAN State of the Environment Report in 2017, the ASEAN region is rich with wetlands as it is home to 60 percent of the tropical peatlands and 42 percent of mangrove forests in the world.



As the world grapples with climate change, ASEAN member regions and the ASEAN Center for Biodiversity (ACB) recognize wetlands as excellent nature-based solutions against climate change and its impacts.

These ecosystems act as buffers against strong winds from storms, and flooding from heavy rain and sea level rise. Mangroves in particular, protect coastlines and coastal towns, while peatlands are exceptional carbon sinks, storing 30 percent of the world's land-based carbon.

However, our protectors need further protecting. Wetlands and their biodiversity face threats such as illegal logging, pollution and land conversion for construction. Worldwide, over 35 percent of wetlands have been lost and 25 per cent of wetland species are globally threatened.

This World Wetlands Day, the ACB highlights the richness of biodiversity in wetlands and the importance of conserving and restoring these ecosystems.

Two out of five of the world's species either live or breed in these ecosystems, according to the Ramsar Convention or the Convention on Wetlands, an international treaty to which most ASEAN

member states are parties.

Species living in ASEAN wetlands include the endangered Sumatran tiger and Bornean orangutan, while fish, shellfish and seaweed that thrive in wetlands provide food sources to the people of ASEAN and the rest of the world.

These also serve as wintering grounds for 50 million waterbirds migrating through the East Asian-Australasian Flyway every year.

At the same time, healthy wetlands clean the soil of heavy metals and other pollutants, thus supplying clean drinking water to communities.

Wetlands and their rich biodiversity play an important role in the economy as over one billion people worldwide depend on wetlands for a living.

The ACB commends ASEAN member states for placing ecologically important wetlands under protection. The ASEAN list of Ramsar sites, or internationally important wetlands being conserved and sustainably used, is growing with 25 new designated sites over the past decade. At the moment, the ASEAN region has 56 Ramsar sites covering over 2.5 million hectares, and more sites for nomination.



# 5G in the era of climate change: Boon or bane?

**T**HE upcoming mobile communications standard, 5G, would make its big splash within the next five years, a period within the 10-year timeframe when humanity must undertake daring and radical transformations to avert the grave consequences of climate change.

The latest news in the 5G front is that China is winning the race to be the first 5G nation. The United States, burdened by regulatory restrictions and high cost of deployment, looks like about to slide to second place even if its apologists maintain it would eventually pole vault to the top in the quality and power of its 5G infrastructure.

But what does it say when the top two contending nations in the 5G sprint are also the same countries that contribute the most to climate change? In 2017, China was the world's largest carbon dioxide (CO2) emitter by volume, followed by the US.

Considered to be the most dangerous and prevalent greenhouse gas, CO2 is a critical driver of climate change. CO2 in the atmosphere traps heat emissions and absorbs solar energy leading to global warming which in turn contributes to erratic weather patterns and the resulting change in climatic conditions.

5G promises a higher speed of wireless communications and support for cutting-edge applications such as driverless vehicles, smart cities and distance telemedicine. Those benefits, however, come with a price.

In today's 4G world, Canadian researchers estimate that the information and communications technology (ICT) sector accounts for roughly 3.5 percent of total annual global carbon emissions at 36.2 gigatons. Meanwhile, the brave new world of 5G would entail a global network of a whole lot more connected wireless devices whose demand for energy has been described as of "perfect storm" proportions.



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Presently, data centers that handle websites, images and cloud computing already consume a huge amount of energy that's expected to hit 74 billion kilowatt per hour this year in the US alone. How much more in China which is pushing hard for the fourth Industrial Revolution fueled by energy intensive digital transformation? There are also the other heavy power consumers composed of India, Japan and

Russia in the Top 5.

A Huawei executive has expressed the view that the increased power consumption of 5G's enhanced processing power and bandwidth must be addressed by building efficient telecom infrastructures that are financially rewarding and environmentally sustainable as well. In a word, 5G itself must be transformative.

In this context, business executives and concerned scientists look toward how equally innovative technologies such as Artificial Intelligence, Machine Learning and data analytics could be tapped to optimize power consumption in the complex wirelessly connected 5G world. This upcoming technology would embed sensors at home, in industry, in the transportation grid and just about everywhere, enabling an all-seeing digital guardian that seeks optimization possibilities 24/7. By that reckoning, 5G has built-in potentials to reduce global warming and put at bay the imminent threat of climate change.

By the way, most discussions appear to place too much responsibility on technology and big business to take the lead in overcoming the seemingly insurmountable challenge of climate change. It makes perfect practical sense.

It should be interesting to note then that a study on population and CO2 emissions proposes that women's empowerment through family planning and educating girls has a bigger impact (more than 100 percent) on reducing carbon footprint than reduced food waste (70.53 percent) and plant-rich diet (66.11 percent). The study argues that since each person has the greatest contribution in CO2 emissions in his lifetime, having smaller families, especially among the richest nations, would have the greatest and most immediate impact on slowing down the onset of climate change-related catastrophes.

It's an option worth taking even more seriously now when the very survival of the human race or the species is at stake.





# Once barren mountains bloom with ylang-ylang

By Yolanda Sotelo  
@yzsoteloINQ

AGUILAR, PANGASINAN—It takes almost an entire community to bring the fragrance of droopy, delicately pleasant-scented yellow flowers to the mountains of this landlocked town and nearby areas.

With the support of the national government and the private sector, seedlings of ylang-ylang (*Cananga odorata*) were planted in 700 hectares of almost barren land accessible only by foot or motorcycles.

"We have planted hundreds of hectares in the mountains of the different sitios of Barangay Laoag," said Eleo Limos Ocal, 60.

But only a few of the trees have started to produce flower buds since these were planted in 2015, and it took around five years before these started to blossom.

It was businessman Fred Reyes, a chemist from Lingayen town, who encouraged the planting of ylang-ylang, "to bring back to the country the business of exporting the ylang-ylang oil to countries that manufacture perfumes."

The perfumes with ylang-ylang oil include Chanel No. 5, Coco Mademoiselle, Joy, L'Air du Temps, Angel and Youth Dew.

## Top exporter

Reyes, who owns Chem-World, said the Philippines used to be the world's top exporter of ylang-ylang oil until it was overtaken by Madagascar, a French colony. But when French perfume manufacturers decided to reduce their buying prices, Madagascar started cutting down the trees.

"Because of this, we could re-



**MOUNTAIN ROAD** This 15-kilometer road, called Daang Katutubo, provides access to Aguilar town's mountains, where a proposed ecotourism site, which also features the town's ylang-ylang plantations, is seen to attract visitors.

position again as the number one exporter of ylang-ylang oil," he said, adding that the country had ready buyers of the first-grade ylang-ylang oil from the world's top fragrance houses in France and Germany.

Reyes coordinated with his high school classmate, Lingayen Mayor Leopoldo Bataoil, to put up ylang-ylang plantations in the province's second congressional district in 2014, when Bataoil was its representative.

## People's organizations

Bataoil tapped several people's organizations (POs) to produce seedlings and plant them in the mountains of three Pangasinan towns. The project was registered under the national greening program (NGP) of the Department of Environment and Natural Resources (DENR).

There are three POs with plantations in Aguilar (Sitio Mapita in Barangay Laoag), Bugallon (Barangay Hacienda) and Mangatarem (Barangay Bueno),

all under the NGP.

Reyes said that in Hacienda, where he was directly involved, the total planted area was 180 ha while 120 ha more were being worked out with the DENR.

But it was trial-and-error for members of the groups. Though they had already been engaged in reforestation projects, they were also planting ylang-ylang for the first time.

Ocal, treasurer of Society of Aguilar Environmentalists of Pangasinan, said the project started with buying 20 kilograms of seeds from Anao town in Tarlac province, which had long established ylang-ylang miniforests. A kilogram, which costs P3,000, can produce about 15,000 seedlings.

A nursery was initially put up at Barangay Quetegan in Mangatarem, but it was transferred to Bueno where Bataoil acquired a property.

"When the seedlings had reached two feet, the plantation areas were not prepared yet, so the seedlings grew high and de-



TITLE:

P-2

PAGE 1/

Once barren mountains bloom with ylang ylang



**SWEET SCENT** The oil of ylang-ylang flowers is used as base for expensive perfumes. Farmers' groups in Aguilar, Pangasinan, are hoping that the propagation of ylang-ylang trees will create livelihood opportunities in their town.

veloped deep roots already," recalled Ocal, who was in charge of the nursery.

**Persevered**

The PO members still persevered and brought the seedlings to the mountains.

Since the bagged seedlings were heavy, they sometimes removed the soil from bags as they used motorbikes to transport these to the plantation area, about 3 kilometers from the barangay road.

By the time replanting was done, it was already summer, causing high mortality rate for the seedlings from humid weather and dry soil.

"Ylang-ylang trees need plenty of water to survive and only those planted along the river survived," Reyes said, not-

ing that only 5 percent of the seedlings grew healthy.

Undeterred, the groups started planting again. Bataoil worked for a budget for a reservoir that would be filled with water from a nearby creek. The members manually fetched water for irrigation.

Reyes established water impounding facilities and drip irrigation system in Hacienda, where more than 30,000 trees had been planted.

**Stony soil**

The POs also had to contend with stony soil, which they removed and replaced with garden soil.

They also used organic fertilizer on the trees and carried out "ring weeding," a process of removing the weeds around

the seedling and creating "fire lines" to prevent forest fires from burning the trees.

"All the work is physically taxing, but the seedlings are growing. When a seedling dies, we replant," Ocal said.

The last evaluation by the DENR showed that plantation has 87 percent survival rate, and there are trees (remnants of those planted in 2014) that have started to flower.

**Constant care**

Reyes said the plantations needed constant care as the POs wait for the time they could smell the sweet success of their labor.

It would not take long before the ylang-ylang trees could start producing 3 kilograms of flowers a week all year round, he said.

"We expect to start building the distillation facilities in 2020," he added.

ChemWorld will buy the flowers for distillation, at an average price of P60 per kg.

"The tree can be productive for 25 years. Each hectare of ylang-ylang plantation has 277 trees. Flowers are picked at dawn and should be processed within two hours for best yield," Reyes said.

There are three grades of ylang-ylang essential oil. "We can extract 0.5 percent first-grade oil, or 0.5 liter for every 100 kg of flowers. There can be a total of 1.5 L of second and third grades per 100 kg of flowers," Reyes said.

While the main purpose of the plantation is for ylang-ylang oil, the areas would eventually be turned into an ecotourism destination, which may mean more earnings for the POs, Reyes said. **INQ**



**PRIME MOVERS** Eleo Ocal (in cap and sunglasses, top photo) and Tito Cortez of Society of Aguilar Environmentalists of Pangasinan helped plant ylang-ylang trees in 700 hectares of almost barren land in Aguilar town, Pangasinan province, including upland tree farms at Sitio Mapita. —PHOTOS BY WILLIE LOMIBAO





## HYDRO COMPANY PLANTS 60K TREES IN BENGUET WATERSHEDS

**KAPANGAN, Benguet:** The Cordillera Hydroelectric Power Corp. (Coheco) has planted more than 60,000 assorted tree species in watersheds in Kapangan and Kibungan. This is part of its commitment to preserve and protect the environment in the area, where it will construct its 60-megawatt run-of-river hydro power plant. Jingboy Atonen, Coheco legal and government regulations officer, said the 60,000 trees were part of the 120,000 trees that the company would plant within the watershed areas of both towns within the next five years following conditions set by the Environment department under the environmental compliance certificate (ECC) that was issued for its hydro project. The trees planted included Benguet pine, coffee and other fruit-bearing trees. According to Atonen, the company has two years to plant the balance of 60,000 trees. Coheco is mandated to complete the construction of the 60-megawatt hydro power plant and commission the same by 2023. It is a fully owned Filipino company after it was acquired by a Filipino businessman from a South Korean counterpart. **DEXTER A. SEE**

# Editorial

## Program to plant trees can curb rural poverty

**A**T its last meeting in Davos, the World Economic Forum launched an initiative to grow, restore and conserve a trillion trees. This global program aims to restore biodiversity and combat climate change. Interestingly, even United States President Donald Trump, a skeptic on climate change, expressed support.

Individuals, too, can support the forum's program. One way is to join various local environmental groups, such as Haribon Foundation, which has tree-planting and conservation projects. People can also download the Plant-for-the-Planet app, where they can pledge small amounts for tree-planting programs around the world. The Plant-for-the-Planet Foundation was part of the United Nations Environmental Program's Trillion Tree Campaign launched in 2006.

The Philippine government should also start its own program. Besides the environmental dividends, which some may foolishly deny, a tree-planting program offers economic benefits, as well. It can bolster employment.

Last year, President Rodrigo Duterte told *The Manila Times* that he wanted to focus on eradicating rural poverty during his remaining years in office. In that regard, he should consider a "New Deal" that taps the unemployed and underemployed in the countryside and remote areas to plant trees and conserve forests.

The Philippines has a massive area that can be replanted, which means there are plenty of jobs that can be generated. The planting program may not be limited to trees. Some local groups have been advocating for the propagation of bamboo, which is technically a grass.

Whether it is trees or bamboo, they are needed. The country has lost more than 75 percent of its original forest cover since the 1900s, according to Haribon Foundation citing government statistics. In fact, the country continues to lose forest area. Another report says the current rate of deforestation is 2 percent per year. That may be a substantial drop from 20 percent per year recorded in the 1990s, but the deceleration may simply mean that there are fewer trees to cut now than before.

A tree-planting and conservation program makes sense as a job-creating initiative. The work does not end after planting a seedling. It has to be nurtured and protected for several years until maturity. Even then, some of the trees planted may not survive.

### Plant native trees

Planting indigenous or native species of trees and other plants makes sense because they have higher survival rates than foreign species. Haribon experts, who call that practice "rainforestation," explain that native trees are more adaptive to our forests that need restoration. Moreover, local trees support other plants and wildlife.

Over the past decades, groups have been planting foreign tree species in the country. Perhaps those well-meaning people were drawn to foreign species because of their fast-growing qualities, while others were simply attracted by their exotic appeal.

Haribon warns that foreign trees can be invasive, meaning they can crowd out native trees and plants by creating imbalances in the soil nutrients. Also, foreign trees may not offer food and other support to local wildlife. And finally, those trees can be prone to local diseases and pests that can wipe out reforested areas — a waste of labor and resources.

In a related matter, Congress should pass a land use act, which would protect forests from development and agriculture. Of course, housing and growing food are important, but they should be balanced with the need for forests, which are also vital to human survival. Without forests, watersheds are unsustainable. And watersheds are essential to both households and farms.

Also, forests act as so-called lungs of the earth. Besides supplying oxygen for breathing, they also capture harmful gases that have been blamed for global warming.

Forests, moreover, mitigate flooding and landslides. Note that the poor are often the most vulnerable to such natural disasters. And they would be the first beneficiaries of this kind of government program.

In previous editorials, we have argued that a better way to help the poor is to enable them to help themselves. Offering them jobs is more dignified than giving doleouts. We cannot deny the benefits of handouts, but the job-creation program suggested here can be a complementary initiative rather than a replacement.



## DIPOLOG NATIVE NAMED DAVAO PLANT MANAGER

CEMENT manufacturer Holcim Philippines Inc. appointed a new plant manager to lead its Davao facility which recently completed upgrades to support the strong construction activities in Southern Mindanao.

Holcim Davao is now led by Samuel Manlosa Jr. He took over on Jan. 6, 2019 from Xavier Arul Kennedy Savarimuthu, who has been reassigned by the LafargeHolcim Group to lead plant operations in Nigeria.

Prior to this, Manlosa led a project to improve systems and processes that yielded significant efficiency gains for Holcim Philippines' manufacturing operations.

He had worked as a process and automation expert for the LafargeHolcim's operations in Southeast Asia supporting plants in seven countries.

Manlosa had also been sent to Holcim Switzerland for trainings on advanced process engineering and cement manufacturing.

A native of Dipolog City, Zamboanga del Norte, Manlosa placed seventh in the 2004 chemical engineering board examinations and graduated cum laude from the Mindanao State University in Marawi City.

Holcim's Davao City operations recently received a boost with the completion of new facilities that added 700,000 metric tons to its annual cement production. The Davao upgrades were part of a series of projects in Holcim



Holcim Davao plant manager Sam Manlosa Jr.

plants nationwide that raised its annual cement production capacity to 10 million metric tons last year.

Aside from increased capacity, Holcim launched in Davao last year its new blended cement product Solido, designed as a better alternative to Ordinary Portland Cement for roads and light infrastructures. The product was debuted there due to government's heavy investments on road infrastructures in the region.

Holcim Philippines Inc., which is listed on the

Philippine Stock Exchange, is one of the leading building solution companies in the country.

The company has a deep portfolio of innovative solutions fostered by a full range of products from structuring to finishing applications that can help local builders execute with high performance and efficiency a wide range of projects from massive infrastructure to simple home repairs.

With cement manufacturing facilities in La Union, Bulacan, Batangas, Misamis Oriental and Davao, as well as aggregates and dry mix business and technical support facilities for building solutions, Holcim Philippines is a partner of builders in the country.

Holcim Philippines said it is committed to the highest standards of sustainable operations and manufacturing excellence with its plants certified under ISO 14001:2004 (Environmental Management System), ISO 9001:2008 (Quality Management System) and OHSAS 18001:2007 (Occupational Health and Safety Management System).

It is a member of the LafargeHolcim Group, the world leader in the building materials industry present in 80 countries with over 80,000 employees.

LafargeHolcim, however, signed an agreement with San Miguel Corp. for the divestment of its entire 85.7-percent shareholding in Holcim Philippines Inc. The process is still ongoing.



## How your clothes become microfiber pollution in the sea

PARIS (AFP) – From the polar ice cap to the Mariana Trench 10 kilometers below the waves, synthetic microfibers spat out by household washing machines are polluting oceans everywhere.

The world has woken up over the last year to the scourge of single-use plastics, from bottles and straws to ear swabs and throw-away bags, resulting in legislation to restrict or ban their use in dozens of countries.

A lot of this visible debris winds up in the sea, where it gathers in huge floating islands called gyres, entangles wildlife from turtles to terns, and hangs suspended in water like dead jellyfish.

But a major source of marine pollution – microscopic bits of polyester, nylon and acrylic – has up to now gone largely unnoticed, experts say.

Most people don't realize it, but "the majority of our clothes are made from plastic," said Imogen Napper, a researcher at the University of Plymouth.

"We wash our clothes regularly, and hundreds of thousands of fibers come off per wash," she told AFP, "This could be one of the main sources of the plastic pollution into the environment."

"How do we remove something that is so small?" she added.

A 2015 report from the Ellen McArthur foundation estimated that half-a-million tons of microfibers leached into waterways every year, with 53 million tons of new textiles produced annually.

The average family in the United States and Canada unleashes more than 500 million microfibers into the environment each year, according to the Ocean Wise organization.

### Buy less clothing

The vast majority of those minuscule bits of textile – whether synthetic or not – are intercepted during water treatment, but nearly 900 tons wind up in the ocean all the same.

In less developed countries, however, far more of those particles will not get intercepted, adding to the flood of plastic streaming into the sea.

Microplastics, say marine biologists, are almost certainly as harmful to microscopic ocean creatures as flimsy shopping sacs are to sea turtles.

But forensic clues are hard to come by, explains Peter Ross, co-author of the Ocean Wise report.

"The evidence disappears quickly, with weak or dead micro-organisms eaten by other species," he explained.

Recent research has focused on how to reduce the volume of micro-pollution shed when we wash clothes – besides the obvious step of simply washing them less often.

"When you do the laundry, you can reduce the impact by lowering the temperature – above 30 degrees Celsius textiles break down more easily," said Laura Diaz Sanchez, a campaigner for NGO Plastic Soup Foundation.

"Liquid detergent is better than powder, which has a scrubbing effect," she added. "Also, don't use a dryer."



# How clothes become microfiber pollution at sea

## Feature

PARIS, France (AFP) – From the polar ice cap to the Mariana Trench 10 kilometers below the waves, synthetic microfibers spat out by household washing machines are polluting oceans everywhere.

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"When you do the laundry, you can reduce the impact by lowering the temperature – above 30 degrees Celsius textiles break down more easily," said Laura Diaz Sanchez, a campaigner for NGO Plastic Soup Foundation.

"Liquid detergent is better than powder, which has a scrubbing effect," she added. "Also, don't use a dryer."

Buying less clothing is likewise important: studies have shown first-time washings release by far the most microfibers.

"This is something we can stop," insisted Mojca Zupan, founder



## THE SCRUTINIZER

Victor Avecilla

Victor Avecilla's column will resume soon.

of the Slovenian-based startup PlanetCare.

"Your car has filters, your washing machine should have them too," she said, explaining how the ones she makes – endorsed by the Plastic Soup Foundation – are self-installing. "Every machine made from now on should be neutral to the environment."

### 'Fast fashion' culture

There are other laundry gadgets that make environmental claims, some of them contested.

**"But a major source of marine pollution – microscopic bits of polyester, nylon and acrylic – has up to now gone largely unnoticed.**

Spiky laundry balls – themselves made of plastic – and mesh bags to contain a load are also promoted as eco-friendly accessories for use in dryers.

"It may be useful to stop big entanglements but it doesn't do anything for tiny fibers," said Francesca de Falco, a researcher at the Institute for Polymers, Composites and Biomaterials in Italy.

Bottom line? There are no miracle solutions. "The only one would be to not wear any clothes at all," said Sanchez.

The best approach to tackle the problem is with separate solutions tailored to each step of the process – clothing manufacture, washing, and treatment plants, said De Falco.

Each synthetic material has properties, such as the way in which it is woven, that may have an impact.

In an effort to do better, some brands work with scientists to test clothes particularly prone to shedding microplastics, such as down jackets and stretch T-shirts.

Are natural fibers the answer? Not so simple, experts say. Cotton, for example, requires huge quantities of water and pesticide when grown.





# Zubiri eyes Marshall Plan for Batangas recovery

SENATE Majority Leader Juan Miguel Zubiri has urged Congress and the executive department to support a Marshall Plan-like recovery program for Batangas.

On the housing needs, Zubiri proposed that the executive direct local government units (LGUs) to review and recast their Comprehensive Land Use Plans.

Marshall Plan was a brainchild of then-Secretary of State George Marshall to finance the recovery plan of the United States to help Europe after World War 2 with \$15-billion fund.

But the Zubiri proposal has no peso value so far.

The lawmaker said the national government agencies and LGUs should put into consideration the following actions:

- Allocating resources to the National Mapping and Resource Information Authority in coordination with Philippine Institute of Volcanology and Seismology for the survey and multi-hazard mapping of affected and contiguous areas within 180 days;

- Releasing land in Batangas owned by the national government and LGUs for agricultural, industrial and residential uses for programmatic land distribution to constituents displaced by the volcanic activities and consequently to be resettled at subsidized cost within 180 days;

- Directing the Department of Environment and Natural Resources, Land Registration Authority, Department of Justice and agencies concerned to issue appropriate titles and instruments to beneficiaries of the aforementioned

land distribution program, at no cost, as to survey and titling of land parcels within 12 months;

- Directing the Department of Social Welfare and Development, National Anti-Poverty Commission and the Department of Agriculture to determine and identify the beneficiaries of the land distribution program which will prioritize the most vulnerable sectors of affected towns and barangay within 60 days;

- Mandating the Bureau of Internal Revenue and the Department of Finance-Bureau of Local Government Finance to craft the appropriate Internal Revenue Regulations to provide tax exemptions, fee privileges and fiscal incentives to displaced families, within 60 days; and

- Creating new townships in co-

ordination with the Department of Health and the Department of Education to ensure health and educational infrastructure are built for the use of resettled families.

Zubiri said it was important that families were able to recover and rebuild lives with the least cost shouldered by them, as they would practically start from zero resources with the declaration of no build zones.

"For a long time, much of the affected areas will be no man's land. They will live the motto 'Leave no trash, Pick no flowers, Leave only footprints, Take only pictures.' In time, the tourism industry that is also greatly affected will be revived. For now, Batangas needs all the help it can get," he added.

**JAVIER JOE ISMAEL**



## Marshal plan sa Batangas, isinusulong

Hiniling ni Senate Majority Leader Juan Miguel Zubiri sa kongreso na agd magkaroo ng marshal-plan sa lalawigan ng Batangas matapos na masalanta ito sa pagputok ng bulakng Taal.

"On the housing needs, I propose that the Executive direct Local Government Units to review and recast their Comprehensive Land Use Plans," ani Zubiri,

Kabilang sa mga nais ni Zubiri ay ang alokasyon sa NAMRIA at pakikipag-ugnayan na rin sa PHIVOLCS upang ma-survey ang multi-hazard mapping ng mga apektadong lugar sa loob ng 180-araw.

Pagpalabas ng mga lupa na pag-aari ng pamahlaan upang magamit sa agrikultura, industriya at residensya, sa loob ng 18-araw, pag-utos sa DENR, LRA, at DOJ at mga ahensya na agad madaliinang ang paggawa ng mga titulo ng lupa nawalang bayad sa loob ng isang taon.

"It is important that families are able to recover and rebuild lives with the least cost shouldered by them. They practically start from zero resources with the declaration of no build zones." paliwanag pa nito.

**Leonel M. Abasola**



## DepEd, Taguig, Pateros launch waste management project

THE Department of Education, Taguig and Pateros (DepEd-TAPAT) launched yesterday the "Bantay-Magulang Waste Management Project aimed to task students to watch over their parents' compliance at home in disposing garbage properly at the Gat. Andres Bonifacio Elementary and High School in Taguig City.

Taguig City Mayor Lino Cayetano said the project was part of their Green Governance agenda which aims to decrease the amount of waste and proper recycling through the cooperation of the parents, schools and local government.

Aside from watching over their parents in proper waste disposal, the children will learn the importance of segregating biodegradable waste from non-biodegradable waste and achieve the project's goal of decreasing the collected garbage in the city by 50 percent.

Dr. George Tizon, chief Education Supervisor for School Operations and Governance Division of DepEd Taguig and Pateros said that under the project, students are required to report the volume of garbage at home then teach them proper segregation and reduction that their parents must do at

home.

Students who report that their parents fail to adhere to the program will be given a task of encouraging and guarding their parents until they are obliged to follow. This effort will have repercussions on the academic performance of the pupils.

Based on the program, each household will be encouraged to separate the garbage that can be sold at the junkshop to avoid adding to the waste volume, as well as those that are still recyclable to be made useful through the assistance of the Solid Waste Management Office (SWAMO) of the city or Barangay.

"We know that children sometimes obey their teachers more than their parents, so we want to take advantage of this situation for the parents to follow the Waste Management Program of the local government because of their children's involvement," said Dr. Margarito Materum, Schools Division Superintendent of DepEd Taguig and Pateros.

During yesterday's launching, parents and local officials of Brgy. The Fort, Taguig City signed a covenant to show their support to the good intentions of the program.



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PAGE 1/

DATE

## Waste management project, inilunsad

Bilang pakikiisa sa pagsusumikap ng pamahalaan na maresolba ang problema sa basura, inilunsad ng Department of Education (DepEd) sa Taguig at Pateros (TaPat) ang proyektong 'Bantay-Magulang' Waste Management Project, na ang layunin ay mahikayat ang mga estudyante na bantayan at pamarisan ang pagtalima ng kanilang mga magulang sa cleanliness measures kabilang na ang garbage disposal, segregation at reduction.

Ayon kay Dr. George Tizon, chief education supervisor ng DepEd TaPat, ang proyekto ay alinsunod sa kanilang Memorandum No. 13, series of 2020, o ang Waste Management Program, na isinama sa homeroom class bilang bahagi ng elective subject ng mga mag-aaral.

"The problem of garbage reduction is not confined within a particular city but Mayor Lino Cayetano is formulating policies that will benefit not only the city of Taguig but the rest of Metro Manila such as the Bantay-Magulang Waste management program, where students and parents at home plays a very vital role," ani Tizon.

Ang proyekto na inilunsad nitong Sabado sa Gat Andres Bonifacio Elementary School sa Barangay The Fort, ay nilahukan ng mga magulang,

mga guro at mga student-leaders.

Sa nasabing launching, lumagda rin ang mga magulang at mga local officials ng kasundunan bilang suporta sa magandang layunin ng programa.

"The goal of the project is to teach the children the importance of segregating biodegradable waste from non-biodegradable waste and achieve the project's goal of decreasing the collected garbage in the city by 50 percent," ani Tizon.

Sa ilalim ng programa, ang mga estudyante ay nire-require na turuan ang kanilang mga magulang ng tamang waste segregation at reduction efforts. Kinakailangan rin nilang iulat ang dami ng basura na kanilang nakolekta sa kanilang mga tahanan.

Ang mga estudyante na magreport na ang kanilang mga magulang ay nabigong tumalima sa programa ay aatasan naman na hikayatin at gabayan ang kanilang mga magulang hanggang sa maobliga na ang mga ito na tumalima sa programa.

Ang Bantay-Magulang Waste Management Project ay sisimulan sa Gat Andres Bonifacio Elementary School at Gat Andres Bonifacio High School bago tuluyang ipatupad sa lahat ng paaralan sa lungsod ng Taguig.

**Mary Ann Santiago**

