



### **BusinessMirror**





01-30-23

### DENR official: Creation of new posts will not cause duplication of functions

By JONATHAN L. MAYUGA **y** @jonlmayuga

HERE is no duplication of functionsamongcurrentofficesand officials of the Department of Environment and Natural Resources (DENR)—a senior official of the state environment agency clarified.

In a letter to the BUSINESSMIRROR, DENR Undersecretary for Policy, Planning and International Affairs Jonas R. Leones also said that, as the new chief steward of the environment and natural resources, Secretary Maria Antonia Yulo-Loyzagahasthemanagementprerogative to realignauthorities, as well as review and modify the agency's management structure in order to align it with the current administration's priority thrusts.

Leones was reacting to the broadsheet's exclusive report last Friday with the headline: "Loyzaga shuffles key officials, creates new posts."

The story was culled from a series of special orders from January 11, 23 and 25 that designated key officials to certain positions—some of which are newly created, with specific tasks and functions.

In effect, the reshuffle placed five officials in "floating status." They were assigned to offices with no specific task or functions.

Sources who spoke on condition of anonymity, meanwhile, said the relief of some of the officials' reassignments were justified, as some have actually been linked to recent controversies. and may actually face graft and corruption charges.

According to the undersecretary, the "multiple functions" of some officials mentioned in the report were merely rationalized to other officials in the Executive Committee "so that these are not concentrated in one office, and to allow faster and more efficient action and delivery of service."

The official added that the newly appointed officials are highly qualified for their designation, and have the track record in the field of expertise assigned to them. He cited the case of Undersecretary Carlos Primo David who has been part of the scientific community for many years, and has initiated and developed numerous successful projects and programs in the field: "Such expertise to infuse science is aligned with the policies of the department.'

Leones also explained that DENR's legal matters remain with its Legal Service, which is different from the Legislative Affairs.

"[Our Legal Service handles DENR's case resolutions], while the Legislative Affairs pertains to the legislative agenda, which is required of all national government agencies," he explained, as he cited that under Cabinet Resolution 16, series of 1988, all department secretaries are cirected to designate their respective department legislative liaison officer to Congress, who shall have at least the rank of assistant secretary.

In a telephone interview, Leones added that while indeed the DENR has the Ecosystems Research and Development Bureau (ERDB)—the principal research and development unit of the agency—the designation of a scientist in the newly created position of undersecretary for Environmental Science will focus on, as stated in the special order, the supervision of the Geospatial Database Office, and lead discussions in policy formulation, which is different from actual research and development work of the bureau.



# **Business Insight**

PAGE 1



01-30-23 DATE

AboitizPower breaks ground for new Tiwi, Albay 17MW binary geothermal plant



(L-R) Department of Environment and Natural Resources (DENR) Dir. Maria Socorro A. Abu, DOE Representative Ariel Fronda, Philippine Geothermal Production Company (PGPC) President Napoleon Saporsantos, Ormat Business Development Director Nissan Yamin, Tiwi Mayor Jaime Villanueva, AP Renewables Inc. (APRI) President and COO Jeffrey Estrella, Department of Energy (DOE) ASec Mario Marasigan, Aboitiz-Power COO for Renewable Energy Generation Alex Coo, Desco President Sherwin Mendiola, Power Sector Assets and Liabilities Management Corporation (PSALM) Legal Department Manager Atty. Frederick Tamayo, and National Grid Corporation of the Philippines (NGCP) Sr. Mgr. South Luzon District 3 Peter Borja.

tion (AboitizPower), through its subsidiary AP Renewables Inc., hosted the groundbreaking ceremony for the new Tiwi Binary Geothermal Power Plant Project last January 17 in Tiwi, Albay. The soon-torise 17 megawatt (MW) binary plant is within the 1.5-hectare of land where the Tiwi Geothermal Power Plant, the first and oldest geothermal power plant in the Philippines, The project will be built

ABOITIZ Power Corpora-

from the ground up with an entirely new binary plant system, pipes, and transmission line. Geothermal energy, a form of renewable energy, comes from the earth's heat and is produced by drilling production wells into the ground to tap high temperature fluids from geothermal reservoirs. Residual heat from the hot brine side of the geothermal production process, otherwise unutilized before reinjecting back to the earth, is harvested to produce electricity through the binary geothermal power plant.

The concept of recovering heat from the geothermal brine and converting it into electricity is a novel solution that improves its overall thermal efficiency. In addition, the binary plant has no emission to the environment as its binary fluid operates in a closed-loop system.

Construction on the binary plant is targeted for completion by the end of 2023.

APRI President and COO Jeffrey Estrella explained, "The Tiwi Binary Power Plant is a facility designed to extract the recoverable heat from the geothermal brine that is processed in a closed-loop system where no harmful gas or liquid is being emitted nor any waste products are discharged to the atmosphere. The design will produce an additional 17MW gross generated electricity - an additional source of clean energy to the Luzon Grid.'

The APRI Tiwi Binary Project is one of the testaments to AboitizPower's ambition to grow its Cleanergy attributable capacity by the end of the decade. Cleanergy is AboitizPower's renewable

energy (RE) solutions brand. Through Cleanergy facilities across the country, power derived from run-of-river, large hydro, solar, geothermal, and soon, wind, are harnessed to provide clean, zero-emissions energy to business and com-

By the end of 2030, AboitizPower will significantly expand its Cleanergy portfolio, in support of the government's efforts to promote renewable energy in the country. AboitizPower will build an additional 3,700 MW of RE, growing its capacities to 4,600 MW or three times the company's current renewables portfolio by 2030. The company has around 1,000 MW of disclosed RE projects and is on its way toward achieving its

AboitizPower Chief Renewables Officer Jimmy A. Villaroman delivered his sincerest thanks to its partners. He said, "This is as much of an achievement for Aboitiz-Power as it is for our partners, especially the good folks from Ormat Technologies, Desco, and our friends from the Philippine Geothermal Production Company (PGPC). As our country embarks on an energy transition, we recognize we must work with others both within and outside our industry to contribute to the nation's energy goals. The scale of the transformation of the country's energy system requires collaboration and innovation. This project is a testament to that.

APRI's stakeholders like the Department of Energy (DOE), Department of Environment and Natural Resources (DENR) Power Sector Assets and Liabilities Management Corporation (PSALM), Provincial Capitol of Albay, Municipality and Local Government Units of Tiwi, Department of Labor and Employment (DOLE), Philippine Geothermal Production Company (PGPC), and National Grid Corporation of the Philippines (NGCP), National Power Corporation (NPC), and contractors also graced the event.

-aboitizpower.com



# INQUIRER





PAGE I STORY R EDITORIAL CARTO

TITLE

PAGE

01=30-23



IINK THE FISH HAVE LEFT. Fishermen from Bataan province encounter one of the massive vessels anchored on Manila Bay as it extracts sand from the seabed. Local Fisher's have lately increase in quarrying activities that reduce their patch and destroy increase in quarrying activities that reduce their patch and destroy increase have lately

MASSIVE DREDGERS LITERALLY DISLODGING NETS

### SEABED QUARRYING 'CROWDING US OUT,' SAY MANILA BAY FISHERFOLK

By Krixia Subingsubing and Mariejo S. Ramos @Team\_Inquirer.

(First of two parts)

Before daybreak, Edwin Rosales, 33, would set out for Manila Bay to find the best spots to cast his net for "alubaybay," a variety of sardines and a najor income-earner in his coastal village in Limay, Bataan province, a supplier of "tuyo" (dried fish) for markets in Metro Manija.

Having learned the ways of the sea from his father and grandfather, Rosales remembered a time when he didn't have to go far in his motorboat for a good catch within Limay's local waters. But in recent years he had been forced to venture farther out to Bulacan or Cavite provinces, with the haul getting smaller and paying little for the extra effort.

He and other longtime fishermen in the village agreed that the dwindling yield may be due to overfishing. But recently another, more disturbing factor had emerged.

In Cavite, a number of large vessels had entered the old fishing grounds, dredging the seafloor and filling their bellies with wet sand, before sailing off and leaving a wrecked marine ecosystem in their wake.

On at least two occasions, Rosales said, the dredgers 'ran over my net because I couldn't get out of their way fast enough."

#### 'Evil twins'

"Before they arrived, we were free to fish there. The sadder part was that they chose the spots that were known to be hatching grounds," he added. "Now that they have mined

those areas, we think the fish have left."

Fisherfolk and environmental advocates blamed Rosales' plight on what they considered the "evil twins" now doing damage on Manila Bay away from public gaze: quarrying and reclamations.

They noted an increase in seabed mining activities—or the extraction of mud, silt and sand from the seafloor—since April 2021 after then President Rodrigo Duterte lifted the nine-year moratorium on mineral agreements, undoing Executive Order No. 79 that was issued during the Benigno Aquino III presidency.

According to the Environmental Management Bureau (EMB), dredging operations in various areas of the bay currently cover about 13,530 hectares.

The EMB confirmed two ongoing operations in the bay, both in the coastal waters of Cavite: the San Nicolas Shoal Seabed Quarry Project of VIL Mines Inc. (active since 2022 and covering some 8,530 ha), and the Seabed Quarry Project of the Philippine Reclamation Authority (beginning in 2021 and covering 5,000 ha).

#### Crowded out

In Limay, Bataan, Cargon Mining Corp. applied for a permit in 2020 to extract some 77 million tons of sand, according to the bureau.

The following year, however, the Bureau of Fisheries and Aquatic Resources (BFAR) denied Cargon's application for area clearance, as well as that of 12 other companies. In rejecting them, the bureau said it "cannot simply dismiss the potential adverse impacts of seabed quarrying on fisheries."



'SO MANY BUSINESSES HERE' Bataan fishermen begin another work day at Manila Bay hoping to bring home a good catch, despite their already limited space in the 58-kilometer-wide bay.—KATHLEEN LEI LIMAYO/CONTRIBUTOR

"Further degradation [of] fisheries habitats in Manila Bay and the rest of our fishing grounds will surely result in depletion in fisheries biodiversity," the BFAR explained.

Aware of the BFAR rejections, Rosales and his colleagues were thus puzzled by the continued presence of dredgers in the bay.

They were not being "territorial," he said. "We share our area and we don't bar others from coming here; as long as you are a fisherman you can partake of what the sea can offer."

"But because of the quarrying, the reclamations, it's getting crowded here... So many businesses are crowding us out of the bay," said Rosales, who heads the local chapter of the fisherfolk group Pangisda.

#### Minimizing impact

In an email interview last week, then EMB Director William Cunado said the agency allowed the quarrying operations of VIL Mines and the PRA since they had complied with the requirement to introduce "mitigating measures," like the installation of silt curtains and oil spill arresters to control pollution, and the establishment of buffer zones along the coastline and nearshore seabeds.

According to the environmental impact statements (EIS) submitted by the VIL and PRA to the EMB, the filling materials extracted by both operations were intended for government reclamation projects, including the 265-ha Pasay Reclamation Project near the SM Mall of Asia complex and the new international airport planned in Taliptip, Bulacan.

In its EIS, a copy of which was obtained by the Inquirer, VII. Mines also promised to keep off valuable fishing grounds and implement "social development and management plans" to provide alternative sources of livelihood for any displaced fishermen.

The company also said it would set aside P115 million to

fund livelihood, educational and health programs for the affected coastal communities.

#### No replacement

But for the fisherfolk of Limay, those promised programs offered little assurance and could not supplant their way of life.

Angelo Dula, 39, said he could no longer go to some of his usual fishing areas near Malabon City, Cavite and Bulacan since the quarrying started. Many of those areas, he said, were known hatching grounds for sardines and threadfin bream ("bisugo").

Like Rosales, Dula said he had encountered the dredging vessels up close when they dislodged his nets and laid his day's work to waste. (Most Limay fishermen use gillnets, locally known as "panyo," which cost around P6.000 per set.)

"They would just run over our nets like they own the sea; they don't care at all," he said. "They don't even try to avoid them."

Elpidio dela Cruz, another local fisherman, said the disturbed sediment could cling to their nets "like snot and it's not easy to remove."

#### Risk of red tide

Quarrying basically leaves the seafloor too muddy for fish to stay, said Fernando Siringan, a marine scientist from the University of the Philippines-Marine Science Institute (UPMSI).

Scooping out the sand could also release "dormant cysts of red tide species" that were already embedded harmlessly in the seabed, he said. In the right conditions, the cysts could reproduce and repopulate the water surface, causing algal blooms that are toxic to marine life.

"These are the kinds of considerations that should have been measured and weighed against the benefits of scraping the seabed," Siringan said. "Because the consequences would not just affect the communities in offshore Bataan but every-body using Manila Bay."

body using Manila Bay."

Gloria Estenzo-Ramos, vice president of the marine conservationist group Oceana Philippines, added: "We know that if, you do seabed quarrying, you'redestroying what's there. There'should be transparency but we're not seeing any of that."

#### Since the 1970s

But the worst effects of seabed mining may be too subtle or incremental to be immediately seen and felt.

Siringan said the coastal erosion currently taking place in Cavite may be traceable to seabed mining in San Nicolas dating back to the 1970s. UPMSI study touching on this correlation is in progress.

Materials obtained from quarrying activities during the period were used for reclamation projects covering wide swathes of Manila Bay, including areas that now host the Manila Film Center, the Folk Arts Theater and the Rizal Park, among others, he said.

Communities near reclaimed or quarried areas should be aware that as the water becomes deeper because of the extractions, waves can penetrate coastlines with their "full energy," making the local population more vulnerable to the impact of typhoons, which are then amplified by climate change, he added. INQ

(This story was produced with the support of Internews' Earth Journalism Network.)





UPPER

PAGE 1

BANNER



01-30-23

TITLE

PAGE

DATE

## MGA TAGA-SIBUYAN DINAGS

Nagsama-sama ang mga residente ng Sibu-yan Island, Romblon sa ginanap na grand rally nitong Linggo, Enero 29, laban sa diumano'y ilegal na operasyon ng Altai Philippines Mining Corporation sa bayan ng San Fernando.

Hinihiling nila sa pamahalaan na agad na ipatigil ang operasyon ng mining firm na anila ay nakakasira sa ecosys-

tem ng isla. "Hinihiling namin ang mabilis na aksyon mula sa provincial government, at municipal government, at sa mga kaukulang ahensa mga kaukulang ahen-sya ng gobyerno tulad ng DENR at BFAR na itigil ang operasyon ng pagmimina ng kompa-nya at panagutin sila sa kanilang mga ilegal na aktibidad," sinabi ni Eliza-beth Ibañez, coordinator

ng Sibuyanons Against Mining (SAM). Habang nagaganap ang grand rally, patuloy na binarikadahan ng mga residente ng San Ternando ang paytala Fernando ang pantalan na ginagawa ng Altai sa Sitio Bato, España, San Fernando para pigilan

ang operasyon ng mi-ning firm.

Ayon kay Ibañez, Ayon kay Ibañez, hinihingi ng mga nag-protesta na ipakita ng Altai ang mga sumusunod na dokumento: barangay clearance, municipal business permit, DENR foreshore lease contract, at PPA permit to construct a private port

construct a private port. Sinabi naman ni Jaybee Garganera, national coordinator ng Alyansa Tigil Mina, na dapat pakinggan ng mga awto-ridad ang hiling ng mga residente ng Sibuyan Island at dapat umano

itong bigyang prayoridad sa halip na ang interes ng mining firm.
Una nang naglabas ng joint resolution ang Sangguniang Bayan ng San Fernando, Cajidioran at Magdiwang sa ocan at Magdiwang sa Rombion noong Huryo 2022 laban sa metal-lic large-scale mining sa isla.

Hinihiling nila kay Pangulong Ferdinand Marcos Jr. at sa Kongreso na ideklarang free from large-scale metallic mining ang Sibuyan Island.

Sibuyan Island.
Tinatawagan rin nila ang atensyon ni Department of Environment and Natural Resources (DENR) Secretary Ma. Antonia Yulo-Loyzaga na repasuhin, ihinto, bawiin at tanggihan ang lahat ng mining agreement sa kanila. (Paul Jaysent Fos) Jaysent Fos)







PAGE



STORY

BANNER



01-30-23

TITLE :

### DoE, Kongreso isinusulong green, indigenous ene

#### NI CHRISTIAN D SUPNAD

UPANG maiwasan ang air pollution, isinusulong na ngayon ng Department of Energy at Kongreso ang green, indigenous at sustainable energy para sa mga

susunod na buwan.

Ito ang inihayag ni Bataan congressman Abet S. Garcia (2nd district) na nagsabing "ang inyo pong lingkod ay dumalo sa isang pulong sa Department of Energy, kung saan tinalakay ang Energy Legislative Reforms, na naglalayong makalipat sa green, indigenous, at sustainable energy mix, at makapagbigay ng matatag ngunit abot kayang pinagkukunan ng enerhiya para sa mga Pilipino."

"Inilahad po natin sa nasabing pulong ang ating mga mungkahi kung paano makatutulong sa atin ang mga microgrid sa pagbibigay ng mga abot kayang mapagkukunan ng enerhiya kasabay ng pagsusulong natin ng green and sustainable energy, at kung paano natin maipatutupad ang mga mungkahing para sa kabutihan ng ating mga kababayan," ani Garcia.

Ibinahagi rin ng Bataan solon kung paano naipatut-

Ibinahagi rin ng Bataan solon kung paano naipatut-



Si Bataan congressman Abet S Ganila (kanan, nakaupo) at mga taga DOE at Kongreso sa kanilang pagpupulong sa clean energy. Kuha nin CHRISTIAN D. SUPNAD sa clean energy.

upad ang konseptong ito sa Freeport Area of Bataan, at ang mga positibong epekto sa pagpapalago ng ekonomiya sa Lalawigan ng Bataan.

"Patuloy po ang ating mga pigsisikap sa pagtataguyod ng mga sustainable na pamamaraan para lalo pang tumaas ang kalidad ng panumuhay ng bawat pamilyang Bataeno," dagdag pa ni Garcia.

### The Manila Times

PAGE

PAGE 1

01-30-23

DATE

## **Ex-UN** chief ca for climate action

DUBAI: Climate talks in the United Arab Emirates this year should focus on action rather than visions, former United Nations chief Ban Ki-moon said during a visit to the oil- lost?" he said. rich Gulf country.

"Many countries and many people have already presented the visions. so we may not need any more," he told Agence France-Presse in Dubai on Saturday (Sunday in Manila).

"We need a COP of solutions and a COP of action."

The South Korean diplomat, who co-chairs the Ban Ki-moon Centre for Global Citizens, was in the UAE this weekend to launch a partnership with Dubai Cares, a civil society organization focused on training youth on "green skills."

The last UN climate talks held in Egypt in November concluded with a landmark deal to create a "loss and damage" fund to cover the costs that developing countries face from climate-linked natural disasters and slower impacts like sea level rise.

**But observers were** left disappointed that little progress had been made on reducing planetheating emissions from fossil fuels.

Ban urged the COP28 presidency to consider "harmonization" between adaptation and loss and damage.

"We have to help developing countries to adapt to changing situations... [but] what about the situations already damaged and

"We have to help A and them so that they can recover from this loss and damage."

The UAE, a leading crude producer and exporter, named the head of its national oil company as president of this year's COP28 climate talks, prompting fierce criticism from environmental activists.

The wealthy nation argues that oil remains indispensable to the global economy, while pushing the merits of carbon capture removing carbon dioxide, the main greenhouse gas, as fuel is burned or from the air.

During his visit, Ban signed a memorandum of understanding with Dubai Cares to launch an environmental training program targeting youth.

Tariq Al Gurg, chief executive and vice chairman of Dubai Cares, told AFP during the signing ceremony that the partnership is focused on training 10,000 young people.

"Climate without education [equals] no solution. Education without climate (means) we will suffer. That's why those two have to marry, said Al Gurg.









PAGE I STORY BANNER

TORIAL CARTOC

01-30-23

TITLE :

PAGE

DATE



SUNDAY AT DOLOMITE BEACH - People flock to the Manila Baywalk Dolomite Beach to relax on Sunday, Jan. 29, 2023. (Arnold Quizol)





3 PAGE UPPER

PAGE 1 STORY BANNER

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0 1 - 30 - 23

DATE

TITLE

PAGE

# Maynilad service enhancement program to mitigate climate change impact; promote sustainability

West Zone concessionaire Maynilad Water Services, Inc. (Maynilad) has laid out a five-year service enhancement program that will promote water sustainability by addressing climate change impacts on water sources.

Climate change is both a local and global concern, and the water sector is particularly vulnerable to its impact as it limits the availability of raw water supply. Given the growing demand for water, Maynilad is focusing on the development of alternate and climate-independent raw water sources, as well as the protection of existing sources to improve service reliability.

Among the new water sources currently being developed is the Poblacion treatment facility, which will draw from Laguna Lake to produce 150 million liters per day (MLD) of potable water for the southern part of Maynilad's concession area. The company is also constructing two more modular treatment plants in Cavite, getting raw water from nearby rivers to produce a combined 24 MLD of additional supply.

Meanwhile, Maynilad's initial foray into the utilization of climate-independent water sources via potable water reuse will likewise yield more water for distribution. It constructed a NEW WATER Treatment Plant, which puts the treated effluent of its Parañaque Water Reclamation Facility through a rigorous purification process to make it potable. The company now produces 10 MLD of NEW WATER supply, and is looking to expand output by tapping its other sewage treatment plants as raw water

Maynilad's NEW WATER is the first potable water reuse application in the Philippines, and the first "direct potable reuse" initiative in Asia. Potable water reuse closes the loop between water supply and wastewater disposal, promoting a transition to a circular economy that ensures better use of finite resources.

Besides developing these additional sources of water, Maynilad is also pursuing environmental management activities to protect existing raw water



This NEW WATER Treatment Plant in Parañaque is Maynilad's first facility that converts "used water" to water that meets the Philippine National Standards for Drinking Water. Equipped with treatment technology from Israel—a world leader in water innovation—this facility can produce 10 million liters of potable water per day. It is the first "direct potable water reuse" application in Asia.

sources. It partners with companies under the MVP Group, other private entities, civic organizations, local communities, and government agencies to increase the pace of reforesting denuded watersheds while pursuing interventions to ensure the high survival rate of tree saplings and mangrove propagules, which currently is at 84%.

Collected rainwater is also a resource that can stretch available supplies. Hence, Maynilad donates rainwater harvesting facilities to public schools that are located in areas of its concession where supply is still limited.

Tree planting not only protects raw water quality by preventing soil erosion in the watersheds, it also helps with carbon sequestration, which is essential to reducing the greenhouse gases that lead to global warming. Maynilad has been able to reduce its carbon emissions by around 25,000 tons per year

with its "Plant for Life" program. These reforestation activities—along with its shift to renewables through the use of solar power for running facilities, the transition to e-vehicles, and the sustained process improvements in Maynilad facilities—will allow the company to be Climate Neutral by year 2037.

In light of the intensified effects of climate change, there is a compelling need to step up efforts on watershed protection. Both the public and private sectors have crucial roles to play in pushing this agenda and producing tangible results.

Maynilad is implementing its climate resilience initiatives in support of the water security master plan of the Metropolitan Waterworks and Sewerage System. Through these efforts, Maynilad will be able to ensure the sustainability of water supply for its over 9.5 million customers.







UPPER

PAGE 1 STORY BANNER



TITLE

PAGE

DATE

01-30-23

1/2

### MPIF, TMO Partnership Strengthens

### Tubbataha

### **Marine Conservation**

Metro Manila, Philippines, 23rd January 2023 – Metro Pacific Investments Foundation. Inc.'s (MPIF) commitment to support the conservation of the Tubbataha Reefs Natural Park and World Heritage Site (TRNP) has reinforced its Biodiversity and Habitat Protection, Research, Monitoring, and Restoration program by provi ding the necessary funding to mobilize ecosystem research, monitoring, and enforcement

From January to September 2022, MPIF has funded two of three of the six annual relieving trips for marine park rangers, including their corresponding subsistence allowance. MPIF's financial support has also allowed for the Tubbataha Management Office (TMO) to pursue its water quality monitoring and beach forest reforestation initiatives, as well as its equipment and supplies procurement.

"MPIF's commitment to Tubbataha recognizes that strengthening its marine conservation includes supporting the stewards, who work in service of the environment," said MPIF President Melody del Rosario. "Safeguarding the Philippines' Crown Jewel should be a collective effort inclusive of all stakeholders and thus benefiting the common people."

This partnership between MPIF and TMO envisions to result in the improved conservation and protection of Tubbataha by determining ecosystem health, generating sound scientific information, serving as a basis for formulating proactive strategies, measuring biophysical indicators of management effectiveness, and ensuring the Park's integrity and safety.

#### On Enforcement and Ecosystem Research

TRNP was named a Ramsar site - a wetland site of international importance - by the Ramsar Convention or "The Convention on Wetlands", an intergovernmental environmental treaty established in 1971 by UNESCO. The Convention provides the framework for the conservation and wise use of wetlands and their resources.

Placing-more importance to this integral biodiversity location, enforcement is one of the key elements in protecting and conserving the TRNP. Beyond funding three relieving trips conducted last April 11, June 8, and December, MPIF financed the subsistence allowances for 51 marine park rangers who were assigned to the park from January to December.

Aside from law enforcement, they were tasked to monitor the population of giant clams, deploy and check the hydrophone, monitor the reefs for bleaching and crown-of-thorns starfish infestation, conduct monthly turtle surveys, check the status of the seabird nesting structures, conduct monthly distance and quarterly direct counts of seabirds, conduct



Wreckage of Tubbataha Ranger Station after December weather disturbance

surface and coastal cleanups, maintain equipment and lighthouse in South Islet, repair and maintain the ranger station, and, maintain

Water quality monitoring and beach reforestation initiatives were conducted to fulfill their ecosystem research and monitoring initiatives. With the assistance of the Palawan Council or Sustainable Development (PCSD) staff, water samples and situated water parameters were collected from the 20 monitoring sites on the reef, inside the lagoon, and in the buffer zone of the park.

The parameters collected included temperature, dissolved oxygen, pH, total dissolved solids, conductivity, and salinity. Water samples were taken to the PCSD Environmental Laboratory for analysis.

Since the saplings planted in Bird Islet in 2021 did not thrive due to the lack of fresh water, excessive pressure from seabirds, and disproportionate amount of sea spray due to rough seas. TMO partnered with residents of Cagayancillo to propagate beach forest trees for planting in Tubbataha during the season. MPIF defrayed the costs of propagation, transportation, and planting of the saplings.

"Our partnership with MPIF has ensured that we continuously value Tubbataha as an integral site for Philippine marine biodiversity. The initial stages of our collaboration have already resulted in beneficial initiatives and we look forward to pursuing equally important efforts for the coming years," said Tubbataha Reefs Natural Park Protected Area Superintendent Angelique Songco.

At Christmastime, monster waves and winds battered the 23-year





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BANNER

01-30-23

TITLE :

PAGE

DATE

er station so that marine park rangers had to be evacuated

afety by the cestern Command.
MPIF committed to provide an additional P1M this year for the repairs of the heavily-damaged Tubbataha Ranger Station.

The new ranger station complex will include the ranger quarters, a research station. and a helipad.



Tubbataha Marine Park Rangers

Shore It Up!'s commitment to Tubbataha Reefs Natural Park is aligned with Gabay Kalikasan, one of the MVP Group's Gabay Advocacies for a Sustainable Philippines. It is also in line with MPIC's efforts to contribute to the United Nations Sustainable Development Goals (SDG), particularly SDG 14 Life Below Water, 15 Life on Land, and 17 Representations for the Goals. Partnerships for the Goals.

This partnership bolsters MPIF's role alongside MPIC, as the largest catalyst for a Sustainable Philippines, aimed to improve the lives in the country through providing essential services and mobilizing advocacles that uplift the quality of life of all Filipinos.

About MPIC
MPIC is a leading investment company with holdings in Manila Electric Company,
Maynilad Water Services, Inc., MetroPac Water Investments Corporation, Metro
Pacific Tollways Corporation, Metro Pacific Hospital Holdings Inc., Light Rail Manila
Corporation and mWell PH, The Company seeks to create long-term value for all
its stakeholders through responsible and sustainable investments that contribute
to national progress and improve the quality of life in the communities it serves.

MPIC and its group of companies are making a difference in the lives of millions of Filipinos, powering commerce and households, connecting people and places delivering clean and safe water, and making world-class healthcare available to all.

About MPIF Metro Pacific Investments Foundation ("MPIF") is a constituent of the Corporate Social Responsibility Council of the Manuel V. Pangilinan ("MVP") group of companies, known as "Tulong Kapatid". It has a Board of Trustees and is collectively managed by MVP group representatives with the objective of complementing MPIC's investment and management strategy in physical infrastructure and public services by helping to alleviate poverty, provide high-quality educational opportunities for children and promote conservation of our natural environment.