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Davao-based startup to represent PH in the Hult Prize 2021 competition in the UK

A group composed of students from the University of Mindanao (UM) – Davao City Campus will be the sole startup group to represent the Philippines in the Hult Prize 2021 on 8 August 8 to 12 September 2021 at the Ashridge Castle, London, United Kingdom.

The Alipugpug Tech Solution is a Davao-based technology startup that aims to provide solutions on agricultural services. It is composed of seven students from UM, namely: Elpedio Corbeta Jr., John Kaiser Taylaran, Daniel Navarro, Jeremiah Malalis, Kim Aliya Tomaro, Steph Kier Ponteras, and Dale Viñalon. The team offers a healthy market ecosystem through digital platforms and solutions that will help small-scale farmers gain competitive advantage in the market.

The group qualified for the said international competition with their entry, "Malakas Vertical Farming System (VFS)," an automated vertical and horizontal farming system made of bamboos that plant, grow, and harvest crops. They also developed "Maganda Capsule," a water-soluble formula made from agricultural waste materials such as banana peel, eggshell, rambutan peelings, and guyabano that can stimulate plant growth and protect crops against diseases.

Moreover, the startup group created Dumangan e-commerce website, a digital marketplace that enables members of the agricultural value chain to effectively monitor transaction inputs by companies, farmers, and intermediaries.

Alipugpug Tech Solutions operates under the UMasenso HUB, a university-based Technology Business Incubator (TBI) funded by the Department of Science and Technology (DOST) under the Higher Education Institution Readiness for

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DOST bares P500M enviro R&D projects, new single-use plastics R&D announced

By Hanah Lee B. Tabios, DOST-PCIEERD

The Department of Science and Technology (DOST) has been championing the development of innovative technologies, implementing projects and programs, and providing services to address issues and concerns on the environment and particularly on solid waste management.

In a press conference, DOST Secretary Fortunato T. de la Peña pointed out that the Science Department has been supporting R&D programs and projects that help address environmental issues, particularly solid waste management.

"Over the past 11 years, DOST has provided P532 million to fund and support 146 projects that seek to address environmental challenges. These projects have been implemented in various parts of the country and the

technologies that have been generated by these projects have been adopted at various levels," de la Peña said.

De la Peña stressed that the agency maintains an equal consideration of all sectors in the implementation of its projects and believes in a whole-of-government approach in addressing environmental concerns, particularly solid waste management.

"We believe in having all hands on-deck in a science-based approach in our phase-out of non-environmentally acceptable products (NEAP) with utmost consideration to environmental protection, sustainable development, economic viability, and social acceptability," he added.

DOST Undersecretary for Research and Development Dr. Rowena Cristina L. Guevara said technologies and services on solid waste

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DOST top officials led by Secretary Fortunato T. de la Peña (leftmost) addressed concerns on non-environmentally acceptable products during a virtual presser. According to him, DOST has allotted more than P500 million of funds on various projects that address environmental challenges. Also in photo (clockwise from left) DOST Undersecretary for Research and Development Rowena Cristina L. Guevara, DOST-Industrial Technology Development Institute (DOST-ITDI) Director Annabelle V. Briones, DOST-Philippine Council for Industry, Energy, and Emerging Technology Research and Development (DOST-PCIEERD) Executive Director Enrico C. Paringit, DOST-ITDI Environmental and Biotechnology Division chief Reynaldo L. Esguerra, and DOST-PCIEERD Ivan Roblas (Screenshot from DOST-PCIEERD).

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management developed by Filipino researchers are already available and can be adopted by stakeholders.

“Through the local technologies we generate from research and development, we make change happen in our environment,” she said.

Guevara announced that DOST will also be conducting a new R&D initiative on the End of Life Cycle Analysis of Single Use Plastics which will look into the economic and life cycle assessment of specific single-use plastic vis-à-vis its alternatives to help in the crafting of responsive policies to manage environmental implications from the use of such materials.

DOST-Philippine Council for Industry, Energy, and Emerging Technology Research and Development Executive Director Dr. Enrico C. Paringit added that the Department supports a harmonized pursuit towards

protecting the environment through research, development, and innovations.

He said DOST has ten existing partnerships with the Department of Environment and Natural Resources which includes being part of the National Solid Waste Management Commission (NSWMC) and working closely with various multi-agency sub-groups on different programs and in technical working groups that address issues ranging from mining to climate change adaptation to conservation of natural resources.

“Our collaborations span government, industry, and the academe as we ensure that our key stakeholders are one with us in pursuing innovative ways to address environmental concerns, particularly NEAP,” he said.

On the other hand, DOST Industrial Technology Development Institute Director

Dr. Annabelle Briones said the agency ensures that economic viability, social acceptance, and environmental soundness are looked into the research projects that they conduct relative to solid waste management.

“For research projects on solid waste management, we shall address not only environmental protection but also economic growth and social well-being of the current and future generations,” she said.

The NEAP list is one of the key provisions of the two-decade-old law Republic Act (RA) No.9003 or the Ecological Solid Waste Management Act of 2000, where the NSWMC is mandated to prepare a list of non-environmentally accepted products within a year after the law’s effectivity and to update the list annually. The DOST is one of the agency members of the NSWMC.

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Members of the Alipugpug Tech Solution will represent the country in the Hult Prize 2021 in London, United Kingdom. (Photo courtesy of Alipugpug Facebook page)

Innovation and Technopreneurship (HeIRIT) Program. It supports aspiring technopreneurs through training, mentorship, and innovation programs.

“UMasenso HUB congratulates the founders of Alipugpug Tech Solutions for making it this far with their startup and qualifying for the Hult Prize 2021. We witnessed their startup journey and believed

in their talents, skills, and purpose in helping the agriculture community. We encourage other dreamers and innovators to pursue and engage in startup building, with the help of DOST-assisted TBIs to make an impact on our community” said UMasenso HUB Manager Efrhain Louis Pajota.

Currently, the founders are preparing to fly to London for the one-month in-person

mentoring with global startup experts to compete against 60 Global Accelerators from different countries for the US\$1 million seed capital grant. The Hult Prize is an annual, year-long global competition for college students with innovative solutions and viable business ideas to address pressing social issues on food security, water access, energy, and education. **(DOST XI S&T Promotion)**

Batangas State U leads in the use of S&T in rehab plans for families affected by Taal volcano

By Joy M. Lazcano, DOST-STII



Bangon Batangas is a science-based project that aims to create positive intervention and effective rehabilitation plans to internally displaced population within the communities affected by the Taal volcano eruption. (Photo courtesy of Bangon Batangas project team)

A premier state university in Batangas led a science-based initiative to help families living in the surrounding localities of Taal volcano return to productivity in spite of renewed unrest and activity.

The Batangas State University (BatStateU) recently launched the Bangon Batangas project dubbed S&T-based intervention to Taal volcano Internally Displaced Population that aims to assess the damages brought about by the Taal eruption in January 2020. This was funded by the Department of Science and Technology-Philippine Council for Agriculture, Aquatic, and Natural Resources Research and Development.

The project hopes to create positive intervention and effective rehabilitation plans focusing on the 151,386 families composed of 584,236 individuals across the provinces of Batangas, Quezon, Laguna, and Cavite. About 1,813 families consisting of 6,666 individuals were evacuated to temporary shelters during the January 2020 eruption.

The project implementer will assess the damages to their livelihood and the appropriate interventions in the municipalities of Talisay, Laurel, Agoncillo, San Nicolas, and Balete that are all in the province of Batangas and provide relief operations to affected families.

These municipalities were badly hit by the eruption and recently have been evacuated as Taal volcano had a “short-lived” phreatomagmatic eruption that occurred at the main crater of Taal Volcano last 7 July this year. The short eruption that lasted for a few minutes prompted DOST-Philippine Institute of Volcanology and Seismology (DOST-PHIVOLCS)

to raise the warning from Alert Level 2 to Alert Level 3.

According to DOST-PHIVOLCS, Alert Level 3 means there is a high level of volcanic unrest. There is sustained increase in the levels of volcanic earthquakes, some may be perceptible and occurrence of low-frequency earthquakes, volcanic tremor, rumbling sounds. Moreover, Alert Level 3 is characterized by forceful and voluminous steam/ash ejections; sustained increases in Sulfur dioxide (SO_2) emission rates; and ground deformation/swelling of the edifice. Activity at the summit may involve dome growth and/or lava flow, resultant rockfall.

The project has two main components. Primarily, it is tasked to conduct assessments and surveys of at least 39% or 2,600 families of the displaced population, who are mostly sustenance farmers relying on crops and livestock farming, fisherfolks, aquaculture farmers, and ecotour guides.

The project will be implemented by BatStateU in collaboration with Cavite State University which will conduct a study on the eruption's damage to high value crops primarily coffee, while the Laguna State Polytechnic University will assess the damage to the aquaculture and fisheries.

According to the project leader Dr. Romel U. Briones of BatStateU Lobo Campus, initial study suggested that the affected residents who are in the evacuation centers still want to pursue their livelihood prior to the eruption. “They still want to plant vegetables and other high-value crops,” explained Briones.

In a recent pronouncement, DOST Undersecretary and DOST-PHIVOLCS Officer-

in-Charge Dr. Renato U. Solidum Jr. expressed the need for a long-term development plan for surrounding locals as the active volcano showed renewed activity.

In an earlier news interview with the ABS-CBN News Channel, Solidum said that “There must be a long-term development plan that must consider the hazards and risks. Whatever investment, people in communities that are settled in the danger area must be considered and fully evaluated, so that if the volcano would frequently erupt from time to time, the economic development of an area would be less affected than presently what is happening.”

Briones on the other hand suggested that the “development must be holistic and multisectoral. Hence the project targets to develop a recovery plan for agriculture and fishery for the IDPs of the Taal volcano eruption.”

He added that in the group's initial studies conducted, the local government would need sustainable aquaculture and fisheries livelihood interventions, provide application of science-based soil amelioration to treat farmlands that were heavily affected by the ashfall, and ensure accessibility to market and other trading posts.

Aside from these, he underscored the need for “rehabilitation and recovery programs that are based on the building up of existing skills and resources which will ensure immediate social acceptance and sustainability, building back more resilient livelihood, and capacitating of residents to new skills.

Lastly, in a separate information, the Asian Development Bank pointed out the need for greater planning and resilience measures to counter natural disasters.

Ilocos Norte adopts DOST's OneStore.ph, makes Ilocos products available online

By Kent J. Ramil, DOST-Ilocos Norte

More and more people can now enjoy authentic Ilocano food delicacies and buy unique local products as the Provincial Government of Ilocos Norte (PGIN) adopts the OneStore.ph Hub of the Department of Science and Technology (DOST).

This initiative was made possible through the efforts of DOST-I, the Provincial Science and Technology Center-Ilocos Norte, and the Provincial Government of Ilocos Norte, through its Small Medium Enterprises Office (SMEO). This online marketing portal showcases the diverse products of micro, small and medium enterprises (MSMEs) from Ilocos Norte.

The launch of the OneStore.ph Hub took place at the Paseo De Paoay, #14 Paoay, Ilocos Norte, right across the iconic Paoay Church. Over 50 MSMEs and more than 100 Ilocos Norte-produced products were launched as part of the PGIN OneStore.ph. This will definitely help the MSMEs in Ilocos Norte boost their sales and make their products within reach of a greater number of consumers.

Most of the display products were produced using DOST-developed local technologies, ranging from agricultural items to processed local food products like ground coffee, chicacorn, bagnet, banana chips, camote chips, dried noodles, shell and bamboo crafts, woodworks and artisan furniture, heritage fabrics like the Abel Iloco and binakol, and other traditional and souvenir items.

Elma O. Gabriel, head of the PGIN-SMEO shared that with the good turnout during the launch and the number of orders from the OneStore.ph, they remain bullish and expect an increase in sales by at least 20%.



Gov. Matthew J. Marcos Manotoc (left) hands over to Sec. Fortunato T. de la Peña a bag full of Ilocos products during the launch of the OneStore.ph online marketing portal in Ilocos Norte.

DOST Sec. Fortunato T. de la Peña who attended the launching and opening of the Hub, expressed his confidence that the partnership with the local government and MSMEs on the OneStore.ph will be successful in promoting the many products of the region to a bigger market as online selling knows no boundaries.

Incidentally, the launching of the OneStore.ph coincided with the awarding of a vending machine to be placed at the Provincial Capitol and the turnover of five RxBox Telemedicine to five LGUs in the province.

Gov. Matthew J. Marcos Manotoc extended his gratitude to the DOST and is looking forward

to more engagements with the Department with the support of the Science Secretary that could lead to possible projects implemented in the province.

ABOUT US

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A variety of Ilocos-made products can now be bought using the OneStore.ph online selling portal, an innovation from the Department of Science and Technology that helps MSMEs sell their products to more consumers.