



12 years of bringing  
S&T good news

**Inside**

Senate OKs creation of PH space agency..... p2  
 Multi-sectoral forum calls for concerted effort to curb plastic waste problem..... p3  
 Innovations for sustainable development up at 2019 reg'l invention tilts ..... p4  
 InFocus ..... p4

# Japan mission highlights collaboration for sustainable development

By Alan C. Taule, *DOST-STII*  
 Photos from **DOST-CO**

**T**he Nikkei Conference on the Future of Asia annually gathers leaders of business and government to share their assessment of Asia's prospects and their positions on the trajectory that Asia should make and take for itself.

At the said conference, President Rodrigo R. Duterte topbills a roster of imminent speakers who will cover industry, the digital economy, commerce and trade, economic revitalization, and finance.

DOST Secretary Fortunato T. de la Peña, at the sidelines of the Nikkei, met with Tetsuiji Kawakami on 29 May to discuss opportunities for technical and management training either in Japan or onsite in a Japanese-affiliated company in a developing country particularly in ASEAN. Kawakami is the senior managing director of the Association for Technical Cooperation and Sustainable Partnerships, a Japanese-affiliated company.

Recognizing the opportunity to support the creation of the Philippine Space Agency, Secretary de la Peña while in Japan sought to firm up the Memorandum of Understanding (MOU) on Space Cooperation with Japan Aerospace Exploration Agency or JAXA. The MOU provides the Philippines access to satellites and their applications (remote sensing, navigation, communication, disaster risk reduction.); co-development of satellites; joint research and access to launch vehicles; and capacity building for policy and technology development, as well as human resources upgrading.

During this mission, DOST will also seek to open opportunities of sending more scholars to prestigious universities in Japan to pursue advanced degree programs in areas identified under the Harmonized National Research and Development Agenda but are not yet offered in local universities in the country.



DOST Sec. Fortunato T. de la Peña (right) discusses opportunities for technical and management training with Tetsuiji Kawakami (left) of the Association for Technical Cooperation and Sustainable Partnerships, a Japanese-affiliated company.



Sec. de la Peña (second from right) meets the members of the Filipino business delegation in the business forum held 29 May where President Rodrigo Duterte was the main speaker.

# Senate OKs creation of PH space agency

By Allan Mauro V. Marfal, DOST-STII

**T**he Philippine Senate has approved the bill on the establishment of the Philippine Space Agency in recognition of its impact in improving the services of various sectors in the country.

With an 18-0 vote, the Senate Bill 1983, also known as an Act Establishing the Philippine Space Development and Utilization Policy and Creating the Philippine Space Agency (PhilSA), passed the Senate's third and final reading on 22 May 2019.

The bill was crafted under the National Space Promotion, Awareness, and Capabilities Enhancement (SPACE) Development Program of the Department of Science and Technology-Philippine Council for Industry, Energy, and Emerging Technology Research and Development (DOST-PCIEERD).

in defense security, communications, disaster assessment, science, agriculture, environment, trade, and diplomacy, said Dr. Sese.

Under the bill, initial funding for the space program in the amount of PhP 1 billion will be charged to the current fiscal year's appropriation of the Office of the President.

Aside from that, the PhilSA may get additional funding of PhP 10 billion from the gross income of the Philippine Amusement and Gaming Corporation and the Bases Conversion and Development Authority for five years after the passage of the law, with PhP 2 billion to be released to PhilSA annually.

PhilSA may derive income from its specialized products, services, and royalties. The Agency may also accept funding from

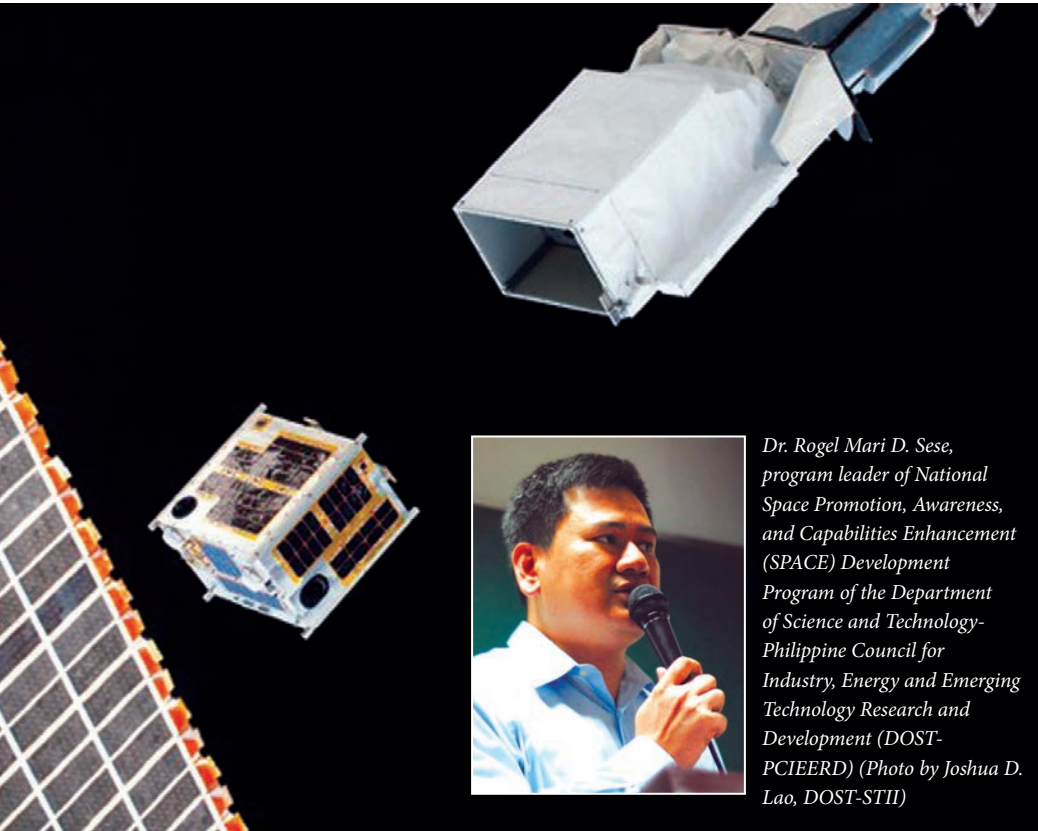
management and climate studies, space research and development, space industry capacity building, space education and awareness, and international cooperation.

In his statement, Senator Paolo Benigno "Bam" A. Aquino IV, principal author of the said bill, said that a solid space program can improve disaster management, enhance the lives of Filipino farmers, speed up our internet and telecommunications systems, and help us build more livable cities.

Dr. Sese said that having a space program is expensive, but not having a space program is more expensive in the long run because the absence of a space program will obstruct the technological progress of the Philippines.

DOST Secretary Fortunato T. de la Peña has been giving all-out support for the establishment of PhilSA, especially in enhancing the capabilities of different space technology applications. At the regional S&T celebration in Butuan City last year, he said that though space development programs cost a lot, these would bring long-term benefits.

He cited the images captured by the DIWATA-1 and DIWATA-2 microsattellites which provide relevant information in monitoring upcoming disasters, crop productivity, and national security.



*Dr. Rogel Mari D. Sese, program leader of National Space Promotion, Awareness, and Capabilities Enhancement (SPACE) Development Program of the Department of Science and Technology-Philippine Council for Industry, Energy and Emerging Technology Research and Development (DOST-PCIEERD) (Photo by Joshua D. Lao, DOST-STII)*

According to Dr. Rogel Mari D. Sese, program leader of National SPACE Development Program, the creation of PhilSA, including developing and utilizing space policy as mentioned in the bill, will serve as the country's primary strategic roadmap for space development and embody the country's goal of becoming a space-capable and space faring nation within the next decade.

The bill states that the PhilSA will be an attached agency of the Office of the President because of the cross-cutting applications of space

loans, contributions, grants, bequests, gifts, and donations provided that such will be approved by the President upon the recommendation of the PhilSA director general.

The bill also states that the PhilSA will be located in Clark Special Economic Zone in Pampanga and Tarlac.

The space policy under PhilSA will cover six key development areas, namely national security and development, hazard

## ABOUT US

The DOST Digest is published by the Department of Science and Technology-Science and Technology Information Institute.

For comments, suggestions or queries, contact: (02) 837-2071 to 82 loc. 2148/839-2193 local 107 or email: [dost.digest@gmail.com](mailto:dost.digest@gmail.com)

**Framelia V. Anonas**

Editor-In-Chief

**Sheila Marie Anne J. de Luna**

Managing Editor

**James B. Intia**

Layout Artist

**Jasmin Joyce P. Sevilla**

Proofreader

**Allan Mauro V. Marfal**

Circulation

Department of Science and Technology-  
Science and Technology Information Institute  
Bicutan, Taguig City 1631  
Metro Manila  
Philippines

[www.stii.dost.gov.ph](http://www.stii.dost.gov.ph)

Like us on Facebook/DOST-Science and  
Technology Information Institute





# Multi-sectoral forum calls for concerted effort to curb plastic waste problem

By Allyster A. Endozo, DOST-STII



Panelists during the midday open forum with participants (L-R): Dr. Antonio J. Alcantara, Engr. Nolan B. Francisco, Dr. Filemon A. Uriarte Jr., Anna R. Oposa, and Crispian Ng Lao. (Photo by Gerardo A. Palad, DOST-STII)

**R**epresentatives from national government agencies, local government units (LGUs), non-government organizations, the private sector, the academe, and research and development (R&D) institutions discussed the problems and opportunities posed by plastic waste at a forum held 24 May 2019 at the Philippine International Convention Center in Pasay City.

Dr. Allan N. Soriano, professor of Chemical Engineering at De La Salle University (DLSU) Manila, presided over the forum organized by the Department of Science and Technology-National Academy of Science and Technology (DOST-NAST).

In her opening speech, Dr. Rhodora V. Azanza, academician and president of DOST-NAST, said that a concerted effort from various sectors is necessary “to solve the gargantuan problem of plastic waste.”

This is in light of a United Nations report stating that the Philippines, as the third-largest producer of ocean-bound plastic waste, mismanages 81 percent of the six million kilograms of waste that it churns out into landfills per day.

Dr. Fabian Antonio M. Dayrit, academician and vice president of DOST-NAST, echoed the same sentiment and underscored the need for stronger regulatory policies, consumer engagement, and R&D industry and global partnerships.

As for Dr. Filemon A. Uriarte, Jr. of DOST-NAST’s Engineering Sciences and Technology

Division, the challenge lies mostly on the segregation, collection, and cleaning of plastics—not on its use. The solution, he said, is to prevent the consumption of plastics, paper, or glass containers in the first place. He added that after waste reduction, repurpose, and treatment, “disposal should be the last option.”

According to Engr. Nolan B. Francisco, acting chief of the Environmental Management Bureau’s Solid Waste Management Division, only 39.9 percent of LGUs nationwide have submitted their solid waste management plans to the National Solid Waste Management Commission (NSWMC) as of May 2019.

Moreover, only 32 percent of 42,045 barangays are being served by materials recovery facilities. The NSWMC, after falling short of its 50 percent waste diversion target in 2017, intends to move forward by strictly monitoring the implementation and updating of each LGU’s solid waste plan.

Dr. Antonio J. Alcantara, environment and natural resources officer of Los Baños, Laguna, shared the town’s success in curbing the commercial use of plastic containers under Mayor Caesar P. Perez. This involved creative initiatives such as the “bring your own bayong” scheme, as well as the recycling of plastics into useful products like hollow blocks, roofing materials, and table tops. “No amount of high technology and financial capacity can solve the plastic waste problem without disciplined people,” he said.

With regard to the issue of marine pollution, Anna R. Oposa, co-founder and executive director of the Save Philippine Seas (SPS) movement, embraced the creative approach through empowerment and “edu-action” of “seatizens” to combat marine plastic pollution. Four years into its existence, SPS has managed to partner with over 300 establishments and prevented the wanton disposal of over 10,000 straws and 300 bottles. Some of its more notable endeavors include “Philippine Reeflections” (a primer on reef restoration), “Waste Watchers” (campaign against single-use plastics), and “Project Seayasat” (a tool kit for assessing environmental compliance by businesses).

Meanwhile, Crispian Ng Lao, private sector representative of the NSWMC, showcased the ingenuity of small-scale plastic recycling technologies such as assembly of school furniture, manufacture of “eco-bricks,” and even energy recovery. He emphasized the importance of market development in sustaining such projects, as “the whole system would fail” if “you cannot sell or develop a business model.” Citing a lifecycle assessment for environmental impact, he advocates the shift from single-use disposables to single-use recyclables in lieu of a complete ban altogether.

The lectures were followed by an open forum on policy and governance on plastic waste and R&D priorities on plastic waste.

# Innovations for sustainable development up at 2019 reg'l invention tilts

By Jund Rian A. Doringo, DOST-TAPI

The Department of Science and Technology-Technology Application and Promotion Institute (DOST-TAPI) in collaboration with the DOST Regional Offices is set to conduct the 2019 Regional Invention Contest and Exhibits (RICE) all over the country.

This year's theme, "Science for the People: Inventions and Innovations for Sustainable Development," coincides with this year's

National Science and Technology Week theme which focuses on the attainment of the sustainable development goals.

RICE recognizes the indispensability of local inventors and innovators as contributors for national economic development by giving them various forms of incentives and recognitions.

Inventors may qualify in five categories, such as the Tuklas Award for the most outstanding invention, Outstanding Utility

Model, Outstanding Industrial Design, Likha Award for the most outstanding research and development of a technology, and Sibol Award for the most creative research in high school and college levels.

Winners from each category will qualify as finalists for the National Invention Contest and Exhibits in 2020.

Below is the complete schedule of the 2019 RICE:

Date	Region	Venue
12-14 June	VII	Waterfront Hotel & Casino, Cebu City
05-08 August	II	Cagayan State University, Tuguegarao City
09-11 August	VIII	Robinsons Place, Tacloban City
26-30 August	I	Candon City, Ilocos Sur
03-05 September	Caraga	Bayugan City, Agusan del Sur
05-06 September	XI	University of Southeastern Philippines, Davao City
10-12 September	IX	Zamboanga City
24-27 September	CALABARZON	Sta. Rosa City Convention Center, Laguna
07-11 October	V	Naga City
15-17 October	MIMAROPA	City Coliseum, Puerto Princesa, Palawan
21-24 October	VI	Iloilo Convention Center, Iloilo City
06-08 November	NCR	Technological Institute of the Philippines
11-13 November	X	Valencia City, Bukidnon
18-22 November	CAR	Bontoc, Mountain Province
TBA	III	TBA
TBA	XII	TBA

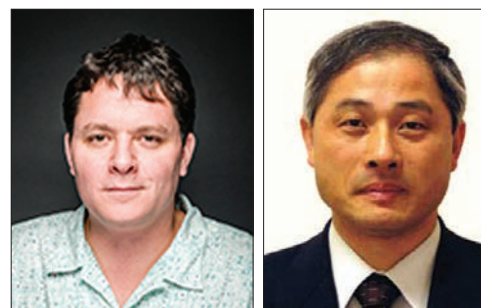


## New editors join PJS

By David Matthew C. Gopilan, DOST-STII

The Philippine Journal of Science (PJS) welcomes Professors Rafe Brown (left) and Sohichi Hirose (right) as new editorial board members. A professor in Kansas University, USA, Dr. Brown is recognized for his pioneering studies on unique distribution and diversity of amphibians and reptiles (collectively known as herps) in the Philippines and other Southeast Asian countries. His findings that were published in *Zootaxa*, *Molecular Phylogenetics and Evolution*, and *Herpetologica* reported about discovery and biogeographical descriptions of Philippine herps.

Meanwhile, Dr. Hirose is a professor from the Tokyo Institute of Technology, Japan. His research interests include concrete damage, computational, and continuum mechanics. He has published in the *Advances in Civil Engineering*, *Materials Evaluation*, and *Journal of Advanced Concrete Technology* among others.



The PJS editorial board provides advice on journal strategy, policy, and growth. Its members are chosen for their expertise in a particular field and excellent academic track record. Published by the Department of Science and Technology (DOST), PJS is a multidisciplinary journal that publishes peer-reviewed articles on natural sciences, engineering, mathematics, and social sciences. Its editorial office is housed at the DOST-Science and Technology Information Institute in Bicutan, Taguig City.

For more information, log on to the Journal's website, [www.philjournalsci.dost.gov.ph](http://www.philjournalsci.dost.gov.ph). (Photos from [www.biodiversity.ku.edu](http://www.biodiversity.ku.edu) and [www.titech.ac.jp](http://www.titech.ac.jp))