



RA 11363: Philippine Space Act

Approved on August 8, 2019, this law mandates the creation of a Philippine Space Development and Utilization Policy (or Philippine Space Policy) to serve as the country's primary strategic roadmap for space development. The policy embodies the country's central goal of becoming a "space-capable" and "space-faring" nation within the next decade. It focuses on 6 key development areas: (1) national security and development, (2) hazard management and climate studies, (3) space research and development, (4) space industry capacity building, (5) space education and awareness, and (6) international cooperation.

This law creates the Philippine Space Agency (PhilSA) to oversee implementation, as well as the Philippine Space Council (PSC), chaired by the President, to serve as the principal advisory body. It also establishes the Philippine Space Development Fund consisting of (1) PhP 10 billion from the national government (through the Philippine Amusement and Gaming Corporation and the Bases Conversion and Development Authority), (2) income derived from the specialized products, services, and royalties produced by PhilSA, and (3) loans, contributions, grants and gifts from local and foreign sources. Moreover, this law appropriates PhP 1 billion as initial operating fund of PhilSA. Subsequent funding will come from the General Appropriations Act.

As of October 9, 2020, the IRR of this law is still pending the approval of the PSC and other concerned agencies. The draft was initially circulated in March 2020.

Meanwhile, PhilSA Director General Joel Joseph S. Marciano provided the Senate with the following updates on the implementation of this law.

Policy, planning and coordination

Work on revising and updating the Philippine Space Policy is ongoing.

Dr. Marciano also highlighted the following activities:

- Providing inputs on the Space Technology Applications Research and Development (R&D) Roadmap being prepared by SGV and commissioned by the Department of Science and Technology (DOST)-Philippine Council for Industry, Energy and Emerging Technology Research and Development (PCIEERD);
- Submission of a position paper on the proposed House Substitute Bill on Public Schools of the Future in Technology (PSOFT) and House Bill 7801; and
- Coordination between PhilSA and the Department of Foreign Affairs (DFA) on the status of the ratification of United Nations international space treaties as



PhilSA Director General Joel Joseph S. Marciano Jr. of the Electrical and Electronics Engineering Institute at University of the Philippines (UP) Diliman is the first to be appointed to the post. Prior to his appointment, he was head of the PHL-MICROSAT program that developed and launched two 50-kg class microsatellites called Diwata-1 and Diwata-2 into space. PHL-MICROSAT was implemented by DOST through UP Diliman in partnership with Tohoku University (Japan), and Hokkaido University (Japan) (UP Diliman photo)

part of their legislative agenda recommendation for Congress. These treaties include: (1) The Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies (The Outer Space Treaty); (2) The Agreement on the Rescue of Astronauts, the Return of Astronauts and the Return of Objects Launched into Outer Space (The Rescue Agreement); (3) The Convention on International Liability for Damage Caused by Space Objects (The Liability Convention); and (4) The Convention on Registration of Objects Launched into Outer Space (The Registration Convention). PhilSA and DFA plan to organize a webinar this October to discuss these treaties and related matters.

Access and resource sharing

PhilSA continues to hold discussions with government agencies and private sector groups, including satellite manufacturers and integrators, to create better awareness of space science and technology applications while soliciting updated end user requirements as inputs to the Philippine Space Policy.

Key meetings included the following:

- Meeting with the Department of Education to discuss modes of collaboration and partnership on the use of satellites for school mapping and connectivity;
- Meeting with the Naval Research and Technology Development Center of the Philippine Navy to demonstrate electronic communications, surveillance, and monitoring technologies;
- Meeting with the Financial Inclusion Group of the Bangko Sentral ng Pilipinas to discuss satellite technologies that support financial transactions especially in the countryside; and

• Meeting with the Department of Social Welfare and Development to discuss a proposed Memorandum of Agreement covering access to and the use of satellite images for detection of damage to infrastructure.

Space R&D

PhilSA is working closely with units/offices of DOST and the University of the Philippines (UP), including the Philippine Earth Data Resources Observation (PEDRO) Center, Remote Sensing and Data Science (DATOS) Help Desk, and the Space Technology and Applications Mastery, Innovation and Advancement (STAMINA4Space) Program for developing R&D programs.

Moreover, the FY 2020 and FY 2021 budget of PhilSA support R&D initiatives that are aligned with the national government's priorities such as developing a "digital government and economy," and in addressing challenges in health, food security, and rural development. Major components include the following: (1) developing and using satellites and relevant space technologies to enhance the "information infrastructure fabric" of the country through the Build, Build, Build in Space (B3iS) initiative, and (2) mobilizing space-enabled data for addressing immediate and long term concerns in disaster risk reduction and management, national security, maritime domain awareness, infrastructure monitoring, environmental protection, and food security for use by both the public and private sectors.

Education and capacity building

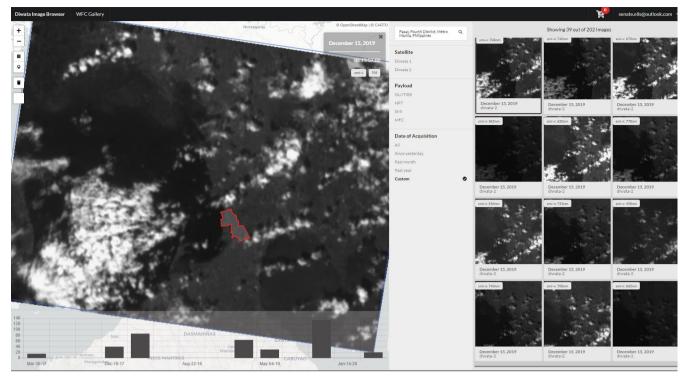
PhilSA, along with the DOST-Advanced Science and Technology Institute and the University of the Philippines, is implementing public outreach activities to support the agency's thrust on space education and capacity building. These include participating in public webinars on space technology and satellites, and meetings with proponents of university-based technology facilities on opportunities for cooperation in developing structures for nanosatellites and other satellite components.

Dr. Marciano has accepted an invitation to be a resource person and interim member of the Program Advisory Committee for new academic programs such as Aerospace Engineering of the Batangas State University. He has also agreed in principle to be part of the Advisory Board for the Center for Integrated Science, Technology, Engineering and Math Education (CISTEM), which aims to support the Department of Education and other government agencies in delivering quality education.

Industry development

PhilSA held meetings with satellite manufacturers, integrators, and providers, as well as local electronics companies to discuss updated technology and business options for earth observation and telecommunications satellites. Topics included the following:

- Commercial launch and deployment opportunities using the International Space Station (ISS);
- Technology transfer in small satellite development;
- Options for leasing vis-a-vis owning a sovereign telecommunications satellite; and
- Alignment of government and academe programs with industry for electronics design and manufacturing.



Diwata Image Browser interface showing satellite image of Pasay City (screenshot by Senate EARD)

© PHL-Microsat Program Distributed by PHL-Microsat Data Processing, Archiving, and Distribution (DPAD) Analysis result by DIWATA-1/DIWATA-2 Original Data provided by the PHL-Microsat Program

Moving forward, PhilSA will work to localize subsystems considered essential to sustain local satellitebuilding capabilities. Dr. Marciano has also reached out to the academic community in social sciences and economics for building PhilSA's core competencies on socio-economic impact assessment and planning. PhilSA intends to partner with them in the areas of project conceptualization, planning and implementation, to closeout and outcome evaluation.

International cooperation

The PhilSA has been coordinating with DFA and DOST on various matters relating to space diplomacy, policy and international cooperation. Highlights included the following:

- Attending the 2020 Scientific and Technical Subcommittee (STSC) of the Committee on the Peaceful Uses of Outer Space (COPUOS);
- Meeting with Director of the United Nations Office of Outer Space Affairs (UNOOSA), Ms.
 Simonetta de Pippo, to discuss joint activities between UNOOSA and the Philippines proposed to be covered by a Memorandum of Understanding;
- Participation in webinars hosted by UNOOSA and other organizations such as the United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP) on the role of space technology in mitigating the COVID-19 health crisis;
- Representation of the country in the 24th session of the Intergovernmental Consultative Committee (ICC) on Regional Space Applications Programme for Sustainable Development (RESAP) in August 2020;
- Exchanges with the Japan Aerospace Exploration Agency (JAXA), through its President, Dr. Hiroshi Yamakawa, and the Director for International Cooperation on a proposed Memorandum of

Understanding (MOU) between JAXA and PhilSA on space development and applications cooperation;

- Participation in the National Space Legislation Initiative (NSLI) of JAXA;
- Discussions with DOST-International Technology Cooperation Unit and the Russian Space Agency ROSCOSMOS on the draft of an Inter-Governmental Agreement (IGA) between the Philippines and the Russian Federation; and
- Correspondence with the Geo-Informatics and Space Technology Development Agency (GISTDA) of Thailand on the appointment of its new Executive Director, Dr. Pakorn Apaphant.

Organizational updates

Appointment of PhilSA Director General. Dr. Joel Joseph S. Marciano Jr. was appointed as PhilSA Director General by President Rodrigo R. Duterte on January 8, 2020. He formally assumed office on March 5, 2020 after being administered the Oath of Office by Executive Secretary Salvador Medialdea. A professor at the Electrical and Electronics Engineering Institute (EEEI) of UP Diliman, his secondment to PhilSA required the concurrence of the university's Board of Regents.

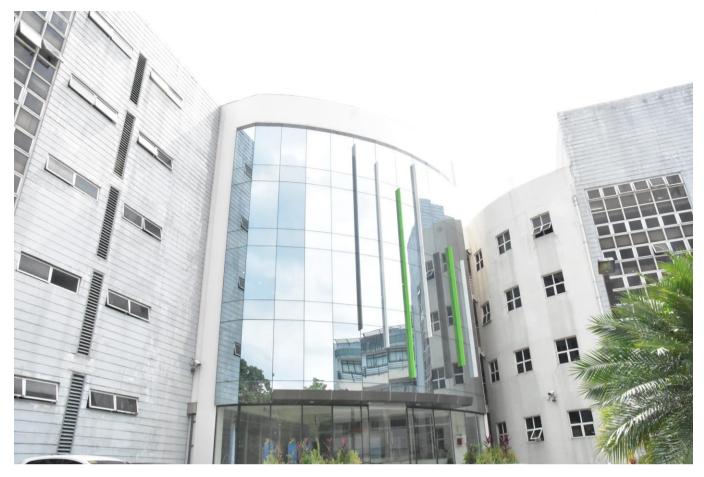
Upon his assumption, Dr. Marciano pursued the following priorities:

- Formation of an Interim Team and nomination of the Deputy Directors General to assist in the administrative setup and technical activities of PhilSA;
- Coordination with the Office of the President, Department of Budget and Management (DBM) and other pertinent agencies to secure the personnel, budget resources, and offices of PhilSA;
- Drafting of the IRR of RA 11363; and
- Coordination with DOST and other relevant groups in undertaking space science, technology, and applications activities.

As per Section 10 of this law, the PhilSA Director General shall have the rank and compensation of a Cabinet Secretary and shall be appointed by the President subject to confirmation by the Commission on Appointments (CA). Dr. Marciano submitted complete documents to the CA, which led to the scheduling of a confirmation hearing at the Senate in March 2020. During the hearing, some members of the CA said that the position of PhilSA Director General is not one of the appointments required to be confirmed under the Constitution. In response, the Office of the Senate President withdrew the Office of the President's referral to the CA. Thus, the CA did not deliberate on the appointment further, and Dr. Marciano was advised to carry on at PhilSA. Subsequently, PhilSA sought an official statement from the CA regarding the matter. In light of the CA opinion, PhilSA is requesting Congress to consider amending Section 10 of RA 11363 on the confirmation requirement for the Director General position.

Philippine Space Council. PhilSA is proposing to hold the first PSC meeting in Q3 2020. An invitation to the Office of the President was subsequently referred to DOST for their appropriate action.

Transfer of astronomical and space-related functions. Dr. Marciano and the interim team developed a plan to address the transition into PhilSA of various related ongoing programs or projects. Before the approval of this law and the creation of PhilSA, DOST and its implementation partners such as UP has



The University Laboratory for Small Satellites and Space Engineering Systems (ULyS³ES) at UP Diliman is the country's premier facility for R&D and instruction in space technology. It is a facility listed under the STAMINA4Space Program. PhilSA has partnered with STAMINA4Space for its R&D initiatives (UP Diliman photo)

initiated some space science and technology activities, notably on the development and utilization of small satellite technology and by-products through DOST's Grants-in-Aid (GIA) program. Moreover, Dr. Marciano has been coordinating with the Director of DOST's Science Education Institute to facilitate the institutionalization of capabilities developed through the agency's space science and technology activities, as well as on the implementation and transition of space-related scholarships.

The PhilSA Director General noted that the title of Section 14 of the law reads "Transfer of Astronomical and Space-related Functions". However, succeeding provisions under this section "do not refer to nor include any astronomical activities, facilities or functions relating to the transfer to PhilSA".

Structure and staffing pattern. PhilSA has obtained the Notice of Organization, Staffing and Compensation Action (NOSCA) for 28 positions under its executive offices. These include the position of Director General, 3 Deputy Directors General (DDG), 9 personnel under the DG, and 5 under each of the DDGs. PhilSA is in the process of filling up these positions. However, the agency's proposed Organization Structure and Staffing Pattern (OSSP) is pending the approval of the DBM Position Classification and Compensation Bureau (OPCCB). PhilSA anticipates the approval of its OSSP by yearend.

Primary location of PhilSA offices and research facilities. The Bases Conversion and Development Authority (BCDA) informed PhilSA that it shall reserve a portion of the land in New Clark City (NCC) for

lease or usufruct to PhilSA. The two sides are working to finalize the agreement. The NCC's Master Development Plan allocates an area for a Clark Science Corridor and National Government Administration Center (NGAC), which were both identified to be viable locations for PhilSA's offices and research facilities.

Philippine Space Development Fund (PSDF). Dr. Marciano reported that PhilSA has conducted extensive consultations with DBM and the Bureau of the Treasury (BTr) on the treatment of the PSDF. PhilSA likewise communicated with the Philippine Amusement and Gaming Corporation and BCDA on the allocation of the PSDF from their income. However, the two agencies voiced their concerns regarding the availability of funds and their capacity to produce it. BCDA noted that RA 7917 already apportions in full BCDA's equity contribution from sales and disposition of Metro Manila camps. BCDA opined that PhilSA's required funding should instead be taken from the national government share in the dividends that BCDA annually remits to BTr. However, these dividends are based on "net taxable income" and not "gross income", which is the term used in Sec. 22 of RA 11363. At the same time, the BCDA advised that the said dividends are not guaranteed and will largely depend on the net income that BCDA will generate for a given year.

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