Advancing Philippine Space Technology and Applications for Sustainable Socioeconomic Development

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Deputy Director General for Space Science and Technology
Seeing the Philippines “from a different angle”

Credits: ISS JAXA Astronaut Soichi Noguchi
Vulnerability to Hazards and other Challenges

Natural disasters and the health crisis threaten the economy and security of a nation.

Space technology provides timely data for proactive actions.

Every year A year and counting

https://www.ibtimes.com/after-typhoon-haiyan-philippines-economy-grows-slowest-pace-over-year-1489028

DIWATA-2 capture of Typhoon Surigae (21 April 2021)

https://www.rappler.com/nation/coronavirus-cases-philippines-april-17-2021
The Philippine Space Agency
Building an integrated and sustainable national space program

- National Security & Development
- Space Research & Development
- Hazard Management & Climate Studies
- Space Industry Capacity Building
- International Cooperation
- Space Education & Awareness

Key Development Areas

03 September 2019
Effectivity of Philippine Space Act
R.A. 11363

08 August 2019
Signed by the President
The Philippine Space Agency (PhilSA)

Building from the ground up, but not from scratch

Developing nano- and microsatellites

DIWATA-1 and DIWATA-2 launched into space in 2016 and 2018, respectively
Flagship Initiatives

Space Science & Technology and its Applications Program

Mobilizing Space Data

Advanced Satellite Development

For Digital Inclusion, Economy, and Government

 Philippine Satellites as Vital Component of National Information Infrastructure
Mobilizing Space Data
Addressing global pandemic health crisis

http://space.gov.ph/spacedata/project/covid19

COVID-19 Space Data Dashboard

How to Use
1. Click preferred project logo on the left.
2. Relevant research and development outputs will show depending on the selected project.
3. Turn on or off slider to show data for each theme.
4. Click marker or any pin.
5. Wait for the images and information to load.
6. Hide or unhide drawer using the arrow on the lower right.
7. To display map layers, click slider on the overlays.

For any question or further assistance, send us a message at info@philsa.gov.ph

Traffic monitoring
Changes in air quality
Mobilizing Space Data
Addressing food security

Ensuring steady supply of food through disaster-resilient farm technologies

Knowing the where the crops are:
Rice detection

Monitoring the crop stages:
- Planting
- Vegetative

Determining optimum planting window to mitigate risks from drought or flooding

Monitoring the environmental conditions affecting farms

Crop yield and farmer’s income

“The threat of hunger is as real as the threat of COVID-19.”

- AGRICULTURE SECRETARY WILLIAM DAR

Author: DA Communications Group | 28 July 2020
Advanced Satellite Development

Multispectral Unit for Land Applications (MULA) Satellite

- 9 Spectral Bands
- 120km Swath
- 5m Resolution

Multiple imaging bands for agricultural monitoring and assessment
Satellite Technology Roadmap

Consistent and reliable data quality and availability

Secure long-term sustainability of plans and programs on space data utilization

Mission partnerships

>300 kg

Operational

>100 - 300 kg

Experimental and technology demonstration

>50 - 100 kg

Education and capacity building

1 - 50 kg

Diwata-1
S&T Satellite
Apr’16 - Apr’20

Diwata-2
S&T Satellite
Oct’18 - Oct’23

Diwata-3
S&T Satellite
2023-2028

Maya-1
STEM Satellite
Aug’18

Maya-2
March 2021

MULA*
Multispectral
2023

NOVASAR-1
Radar Satellite
Sep’18 - Sep’25

Infrared Satellite
2025 - 2030

Video Satellite
2025 - 2030

Microwave Satellite
2027 - 2032

Telecommunications
2024


*ongoing
Strengthening capabilities and transferring knowledge

Know-how transfer and retention mechanism: Building a strong workforce

Space education and awareness: Engaging the future space scientists and engineers
The PhilSA’s engagements with the international space community

PhilSA is now representing the country in the following space-related bodies:

- Sub-Committee on Space Technology and Applications (SCOSA) under the ASEAN Committee on Science, Technology and Innovation.
- UN Committee on the Peaceful Uses of Outer Space (COPUOS).
- Regional Cooperation in Space Applications (RESAP) of the UN Economic and Social Commission for Asia and the Pacific.
Creating stronger ties

Courtesy call of Ambassador of India

Asia-Pacific Regional Space Agency Forum (APRSAF) Space Applications Working Group Restructuring Discussion Meeting
March 10, 2021 | Via Webex

PhilSA, UAE Embassy discuss possible space cooperation
Posted by: Philippine Space Agency
February 24, 2021
Creating stronger ties

Pan Asia Partnership for Geospatial Air Pollution Information (PAPGAPI) Project

Global Environmental Monitoring System (GEMS) payload onboard the GEO-KOMPSAT-2B satellite - launched on 18 February 2020 by the Republic of Korea.
Establishing an inclusive community
Moving forward: long-term sustainability goals and socioeconomic development

From the national scale

National agencies empowered in using satellite-based technologies in attaining their respective goals

To a global scale

Cooperation for the 2030 Sustainable Development Agenda

Space4SDGs: around 40% of the 169 targeted goals would benefit from space technologies

➔ Space2030 agenda: Space as a driver for peace
Our Vision

The PhilSA envisions a Filipino nation bridged, uplifted, and empowered through the peaceful uses of outer space.

Our Mission

We will promote and sustain a robust Philippine space ecosystem that adds and creates value in space for and from Filipinos and for the world.

Contact Us

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Thank you.
Maraming salamat po.