ISF 2025

ORGANIZERS:

HOST:

Agenzia Spaziale Italiana

Philippine Space Agency

7TH INTERNATIONAL SPACE FORUM AT MINISTERIAL LEVEL – THE SOUTHEAST ASIAN CHAPTER

FINAL REPORT

4 December 2025
Manila,
The Philippines

Fostering Regional Synergy in Space for Shared Challenges and Sustainable Development

7th International Space Forum at Ministerial Level
– The Southeast Asian Chapter
4 December 2025 | Manila, The Philippines

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Philippine Space Agency

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1 MESSAGE FROM H.E. FERDINAND R. MARCOS JR., PRESIDENT OF THE REPUBLIC OF THE PHILIPPINES

MALACAÑAN PALACE
MANILA

MESSAGE

The **7th International Space Forum at Ministerial Level 2025–The Southeast Asian Chapter (ISF 2025)** gathers the world's scientific and policy leaders to explore and witness how the frontiers of space can be harnessed for the advancement of human society. As the first Southeast Asian nation to host this forum, the Philippines affirms its role in the global dialogue on space exploration, cooperation, and governance. Through the continued efforts of the **Philippine Space Agency**, our country recognizes that space technology has become indispensable to sustainable development, disaster resilience, connectivity, and the stewardship of our natural environment—critical tools for an archipelagic nation like ours determined to secure a stronger and more prosperous future for its people.

I trust that your deliberations will deepen the ties among space agencies and states to generate practical frameworks for collaborative research and sustained capacity-building. May this gathering also inspire new missions, policies, and joint ventures that ensure the equitable sharing of the benefits of space. It is my hope that your work strengthens the resolve of all contributing nations to pursue space discovery and guarantee that it creates more opportunities and deepens our long-term aspirations for the planet we share.

As we expand our role in the evolving landscape of space science and technology, let us uphold our dedication to build a *Bagong Pilipinas* that participates meaningfully in global undertakings while anchoring its progress in the dignity and security of the public. I urge you to forge partnerships that transcend borders and build pathways that allow every Filipino to benefit from the boundless possibilities of science. In reaching towards the skies, may we better serve the common good here on Earth, unified in both vision and purpose.

Mabuhay, and may you have a meaningful and fruitful occasion.

FERDINAND R. MARCOS JR.

MANILA
4 December 2025

THE PRESIDENT OF THE PHILIPPINES

2 MESSAGE FROM THE CO-ORGANIZERS – IAF AND ASI

On behalf of the Co-Organizers of ISF 2025 – the International Astronautical Federation (IAF) and the Italian Space Agency (ASI), and the Host of this year's forum edition - the Philippine Space Agency (PhilSA), it is our great honour to present the Final Report of the **IAF International Space Forum 2025 at Ministerial Level – Southeast Asian Chapter**, held on 4 December 2025 in Manila, Philippines.

Launched in 2015 under the auspices of the IAF Vice President for Science and Academic Relations, the International Space Forum (ISF) has become a premier annual ministerial gathering dedicated to advancing global dialogue on the importance of enabling stronger participation of local communities in space activities and programmes. Its overarching goal is to identify and promote space-based solutions to global challenges; solutions that are informed by local needs, capacities, and perspectives.

Since the inaugural Forum in Trento (Italy), successive regional chapters including African (Nairobi, Kenya, 2017), Latin America (Buenos Aires, Argentina, 2018), the Mediterranean (Reggio Calabria, Italy, 2019), Central America and the Caribbean (Panama City, Panama, 2023), and the Gulf (Manama, Bahrain, 2024) have consistently underscored a shared aspiration: to further involve all potential stakeholders, Ministries, Space Agencies as well as international organizations and academia, universities, and emerging space actors, in shaping and contributing to space efforts that support their regions' development.

This year's Forum, held under the theme **"Fostering Regional Synergy in Space for Shared Challenges and Sustainable Development"** underscored the region's collective commitment to harnessing the full potential of space science, technology, and innovation as engines of sustainable and inclusive growth. The theme reflects a shared understanding that Southeast Asia's most pressing challenges, ranging from climate change and natural disasters to food security, connectivity, and economic resilience require coordinated solutions that transcend national borders.

Space capabilities, when developed and leveraged collaboratively, offer a powerful means of addressing these challenges through enhanced data access, stronger regional partnerships, and the cultivation of local expertise and innovation. To guide these discussions, the Forum focused on three strategic pillars, each introduced by keynote speakers who brought global expertise and regional insight:

- ***Looking Up Together: Developing Space Capabilities and Infrastructures***

  This track emphasized the importance of building robust and interoperable space infrastructures such as satellite systems, ground stations, and launch capabilities, while strengthening the technical and institutional capacities of Southeast Asian nations. It highlighted the value of shared investments, open collaboration, and long-term planning to ensure that the region can collectively access and contribute to space-based resources.

- ***Looking Down Together: Mobilizing Space-enabled Services and Solutions***

  Focusing on practical applications, this discussion showcased how space-derived data and services - particularly in Earth observation, navigation, and communications, can directly support socio-economic development. Delegates explored how these tools can enhance disaster risk reduction, environmental monitoring, agriculture, maritime safety, urban planning, and climate resilience, ensuring that space benefits are felt at the community level.

- ***Looking Around: Enabling the Space Value Chain through Cooperation, Education, Policy, and R&D***

  The third pillar highlighted the need to cultivate a thriving regional space ecosystem by strengthening policy frameworks, promoting cross-border cooperation, fostering STEM education, and investing in research and development. It emphasized that sustainable growth in the space sector depends on nurturing talent, supporting innovation, strengthening academia-industry-government linkages, and establishing harmonized policies that facilitate partnerships across the full space value chain.

As emphasized during the sessions, Southeast Asia's rapidly growing economies face increasing climate-related and disaster risks. The demand for reliable, timely, and high-quality space data is soaring. Recent floods and other natural disasters have underscored the region's vulnerability and the critical need for resilient, adaptive, and responsive systems powered by space-based technologies.

Together, these three focus areas provided a comprehensive framework for discussing how Southeast Asia can advance a collaborative, resilient, and future-ready regional space agenda, one that maximizes shared opportunities while addressing shared vulnerabilities.

All of these themes were thoughtfully explored through the statements and interventions of the participating delegations. To continue nurturing reflection and dialogue on these essential topics, this report compiles all contributions delivered during the Forum, along with the Final Declaration: **The Manila Page.** It is our hope that this document will help sustain the spirit of cooperation and innovation that defined ISF 2025, and that it will inspire new forms of partnership not only within Southeast Asia, but across the global space community.

The true measure of the Forum's success lies not only in its preparation but in the engagement and commitment of its participants. In this respect, ISF 2025 was particularly remarkable. We would like to extend our heartfelt gratitude to all participants for their invaluable contributions, which are helping to build a more resilient and sustainable future for the region.

Distinguished representatives from five ASEAN countries, as well as guest representatives from Tunisia and Türkiye, and seven space agencies and international organizations from around the world enriched the discussions with their insights and expertise, further strengthened by the important and meaningful participation of more than 30 observers from the ASEAN region. Their insights reflect a growing recognition of the essential role that space science and education, cooperation and innovation must play in driving the sustainable development of the Southeast Asian region.

We invite you to enjoy the reading, and to join us in carrying forward the momentum of the Forum toward a more connected, resilient and space-enabled future.

Gabriella ARRIGO
President
International Astronautical Federation (IAF)

Christian FEICHTINGER
Executive Director,
International Astronautical Federation (IAF)

Teodoro VALENTE
President
Italian Space Agency (ASI)

3 MESSAGE FROM THE HOST – PHILSA

Your Excellencies Ambassadors;

Honorable Ministries;

Department of Foreign Affairs Undersecretary Leo Herrera-Lim,;

International Astronautical Federation President Gabriella Arrigo and Executive Director Dr. Christian Feichtinger;

Italian Space Agency International Cooperation and Space Diplomacy Office Heas Dr. Maria Chiara Noto;

Heads of space agencies and authorities;

Distinguished Representatives of our Philippine Space Council;

Senior officials;

Esteemed partners from the International Astronautical Federation and Italian Space Agency;

Colleagues from the Philippine Space Agency and fellow workers in government; Ladies and gentlemen;

Good morning and welcome to the 7th International Space Forum at Ministerial Level – Southeast Asian Chapter.

It is a distinct honor for the Philippines to welcome you to this gathering of leaders, visionaries, and innovators. The Philippine Space Agency (PhilSA) is privileged to organize this Forum in partnership with the International Astronautical Federation and the Italian Space Agency, and we are deeply grateful for their collaboration in bringing this initiative to Southeast Asia and for choosing the Philippines as host.

We gather at a time when our region faces formidable challenges. Devastating floods and disasters in recent months have underscored the urgency for more resilient, adaptive, and responsive systems. Lives have been lost. Communities displaced. Families disrupted. Infrastructure damaged. The scale of human and economic impact is a solemn reminder that vulnerability does not respect borders. That collective action is essential.

Yet, in adversity, we find opportunity: the chance to rethink how we protect, empower, and uplift our people. As President Marcos Jr. recently said, “space technology is no longer a concept that only scientists and engineers appreciate – it is now woven into our everyday life.”

With satellite data that feeds into early-warning systems and maps that aids in timely disaster response and recovery, space-enabled solutions is becoming indispensable to building climate resilience and sustainable development.

This Forum presents a unique opportunity for ministers, policymakers, members of the academe, and stakeholders to imagine – and build – a regional space ecosystem where space-based insights inform our planning, protect communities, safeguard livelihoods, and preserve our shared environment.

The "Manila Page" we will produce at the conclusion of this Forum will reflect our shared aspirations and commitments, adding a new chapter to the growing collection of regional reports from previous ISF editions.

Looking ahead, under the upcoming ASEAN chairship by the Philippines, we propose an ASEAN Declaration on Space Cooperation. This declaration is more than a formal statement – it is a vision for a connected, resilient, forward-looking Southeast Asia, working together to harness space technology for disaster resilience, environmental sustainability, economic opportunity, and inclusive development.

Together we can build and deliver space-enabled solutions that reach the communities that need them most. Solutions that make a difference. Solutions that serve our people.

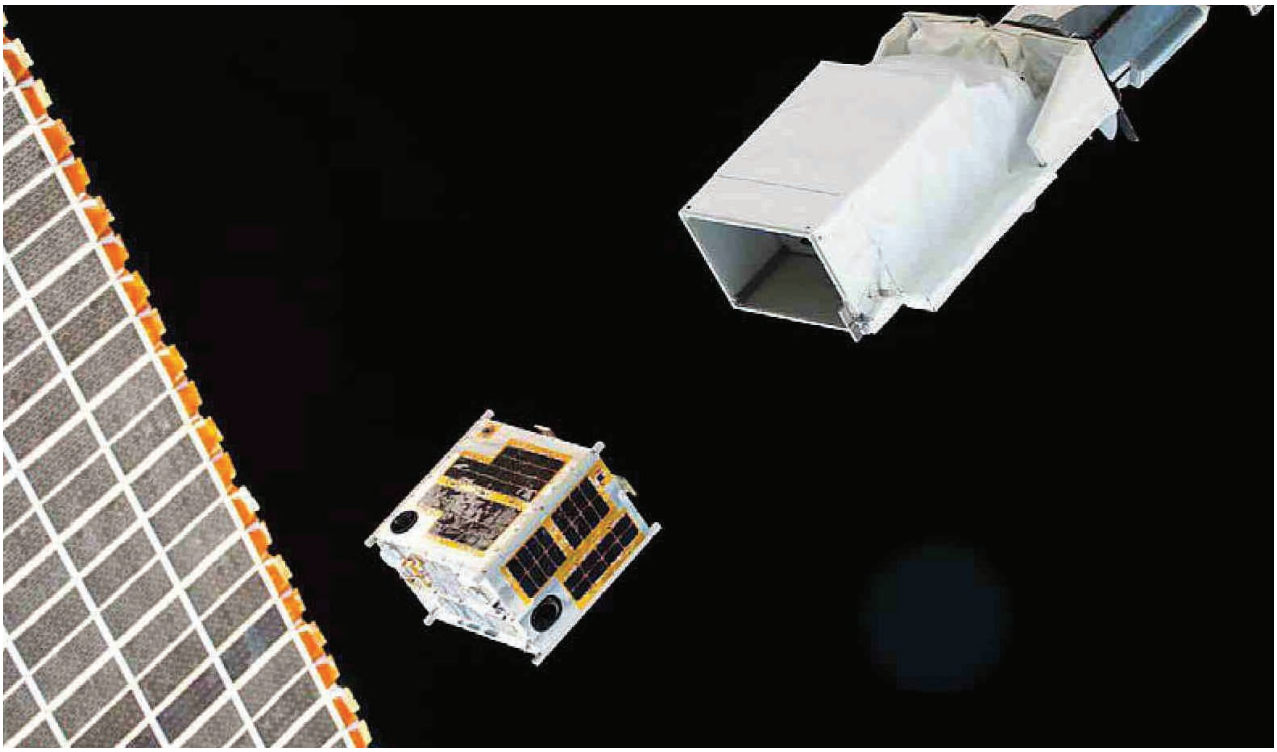
Let us remember: the value of space lies not in the stars we reach, but by the lives we touch and uplift here on Earth.

Thank you very much and a pleasant morning to all.

Gay Jane P. PEREZ

Director General,
Philippine Space Agency (PhilSA)

Philippine Space Agency



Diwata-1 microsatellite deployment from JEM/Kibo of the ISS (Image credit: JAXA, NASA)

4 PARTICIPATING COUNTRIES, INTERNATIONAL ORGANIZATIONS, AND LOCAL INSTITUTIONS

COUNTRIES

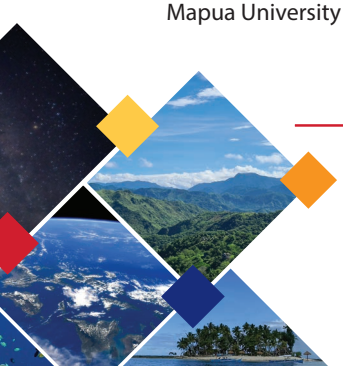
- BRUNEI DARUSSALAM
- CAMBODIA
- INDONESIA
- LAO PEOPLE'S DEMOCRATIC REPUBLIC
- MALAYSIA
- MYANMAR
- PHILIPPINES
- SINGAPORE
- THAILAND
- TIMOR-LESTE
- TUNISIA
- TÜRKIYE
- VIETNAM

INTERNATIONAL ORGANIZATIONS & SPACE AGENCIES

- ASEAN Academy of Engineering and Technology (AAET)
- National Research and Innovation Agency (BRIN)
- Geo-Informatics and Space Technology Development Agency (GISTDA)
- International Astronautical Federation (IAF)
- International Institute for the Unification of Private Law (UNIDROIT)
- Italian Space Agency (ASI)
- Maldives Space Research Organisation (MSRO)
- Malaysian Space Agency (MYSA)
- Office for Space Technology and Industry (OSTIn)
- Philippine Space Agency (PhilSA)
- UN Sustainable Development Solutions Network (SDSN)
- United Nations Office for Outer Space Affairs (UNOOSA)

OBSERVERS

- Adamson University
- Ateneo de Davao University
- Bangko Sentral ng Pilipinas
- Cebu Technological University
- De La Salle University
- Department of Human Settlements and Urban Development (DHSUD)
- Department of Science and Technology (DOST) - Advanced Science and Technology Institute
- Embassy of Argentina in Manila
- Embassy of Brazil in Manila
- Embassy of Hungary in Manila
- Embassy of India in Manila
- Embassy of Ukraine in Manila
- FEATI University
- Indiana Aerospace University
- LEONARDO SpA
- Mapua University
- Mariano Marcos State University
- National Mapping and Resource Information Authority (NAMRIA)
- National Maritime Center
- National Intelligence Coordinating Agency of the Philippines (NICA)
- Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA)
- Philippine Coast Guard
- Philippine Institute of Volcanology and Seismology (PHIVOLCS)
- Philippine Technological Council
- Rizal Technological University
- Semiconductor and Electronics Industries in the Philippines Foundation Inc.
- The Italian Export Credit Agency (SACE)
- University of Perpetual Help System Dalta - Las Piñas
- University of San Carlos
- University of Southern Mindanao
- University of the Philippines Diliman



5 STATEMENTS OF PARTICIPATING COUNTRIES

Statement of Cambodia

By H.E. Ros Sorakha,

Secretary of State, Ministry of Post and Telecommunications of Cambodia

His Excellency Gay Jane Perez, Officer-in-Charge of the Philippine Space Agency (PhilSA),
His Excellency Gabriella Arrigo, President of the International Astronautical Federation (IAF),
His Excellency Teodoro Valente, President of the Italian Space Agency (ASI) Excellencies,
Distinguished Guests, Ladies and Gentlemen,

First, I would like to express my sincere gratitude to the organizers of the 7th International Space Forum for their continued support and valuable contributions to promote regional space cooperation, as well as for their efforts in advancing the use of space science and technology for sustainable development in our region. I also thank the PhilSA, IAF, and ASI for hosting this important event and welcoming us warmly to Manila.

On behalf of the Ministry of Post and Telecommunications of Cambodia (MPTC), I have a great honor and pleasure to join this international space forum with theme ***"Fostering Regional Synergy in Space for shared challenges and Sustainable Development"*** and to share our progress and vision for space development. Cambodia understand that space science and technology is a powerful tool for economic growth, digital transformation, and sustainable development.

Under the Cambodia Digital Government Policy 2022-2035, the government aims to develop a satellite ecosystem to promote digital transformation and advance the use of emerging technologies. Therefore, The Ministry of Post and Telecommunications has established the Satellite Policy Department, as well as the Satellite Technology and System Research Team to conduct research, develop space policy and regulations, and respond on planning to the promotion of activities related to satellite and space.

Cambodia commits to develop on space sector. Although Cambodia does not have own satellite, we recognize the growing importance of downstream space services. Currently, Cambodia uses space downstream service primarily on remote sensing data. It focuses on leveraging space applications and services to support national monitoring and address environmental challenges across various ministries. For instance: Disaster Risk Management, Agriculture Monitoring, Environmental Protection, Urban Planning and Infrastructure, etc.

Simultaneously, Cambodia constructs a GNSS Continuously Operating Reference Station (CORS) network, providing accurate position for construction and surveying. These efforts show our commitment to using space data for practical benefits.

However, Cambodia acknowledges that as a developing space nation, challenges remain, including limited skilled personnel, technical capacity, and infrastructure.

We believe that building a strong space ecosystem requires regional cooperation, education, and policy development. In this regard, Cambodia is a member of the ASEAN Sub-Committee on Space Technology and Applications (SCOSA) under the ASEAN Framework for Science, Technology, and Innovation (COSTI). This role enables Cambodia to contribute to regional space strategy planning, share experiences, and strengthen human capacity across ASEAN countries.

Furthermore, MPTC serves as State Focal Points for the Registration of Space Objects to UNOOSA. Cambodia is receiving legal advisory services under the Global Space Law project of the United Nations Office for Outer Space Affairs (UNOOSA). We will organize the Space Law Technical Advisory

Mission, which will take place in Siem Reap, Cambodia, in March 2026. This initiative represents an important step toward drafting the Cambodian National Space Policy.

Recently, Cambodia has become a new member of the Kibo-ABC initiative under the Asia-Pacific Regional Space Agency Forum (APRSAF). This provides us new opportunities to cooperate on space experiments and educational activities. Cambodia is taking significant step toward participation in space technology through collaborating with international organizations, with an emphasis on peaceful use, capacity building, and international partnerships.

With regional cooperation, international support, and government policy, Cambodia is laying the foundation for space policy development.

Excellencies, Ladies and Gentlemen,

As we gather here in Manila, Cambodia is looking to cooperate with other countries to promote peaceful and inclusive use of space and to fostering regional synergy that turns shared challenges into shared opportunities.

In conclusion, I would like to extend my sincere thanks to the Philippine Space Agency (PhilSA), the International Astronautical Federation (IAF), the Italian Space Agency (ASI), the United Nations Office for Outer Space Affairs (UNOOSA), and other development partners for their strong cooperation and contributions in supporting Cambodia's efforts to enhance digital transformation and sustainable development. Once again, I would like to thank our guest speakers, experts, and all participants for your active involvement and dedication.

Together, we can build a future where space serves humanity, empowering people, protecting our environment, and advancing sustainable development for all nations in the region.

Thank you very much.

Statement of Indonesia

By Erna Sri Adiningsih,
Executive Director, National Research and Innovation Agency

Excellencies, distinguished delegates, ladies and gentlemen,

On behalf of the National Research and Innovation Agency (BRIN) of Indonesia, please allow me to firstly sincere gratitude to the Government of the Philippines, the Philippine Space Agency, and International Astronautical Federation, for inviting us to the International Space Forum 2025, Southeast Asian Chapter today in Manila. In this opportunity, please allow me to express our perspectives from three directions of outer space activities in Indonesia which are looking down, looking up, and looking around.

Secondly, in alignment with Indonesia national space policy mandated by Indonesia Space Act No. 21 of 2013, we put priorities our space programs on five pillars including space science, space technology, satellite remote sensing, launching activities, and commercial space activities. The vision of our space policy is to create Mastery, Advanced and Sustainable in Indonesian Space Activities. The missions of our space policy are: (1) to strengthen research and development in space science and applications; (2) to strengthen remote sensing activities and services; (3) to strengthen research, development, and engineering in aeronautics and space technologies and applications towards enhanced national capacity; (4) to create mastery in space launching through development of space port in Indonesia; and (5) to promote commercial space activities by involving industries. Above all, our concerns are leveraging space economy, ensuring space security, and emphasizing space sustainability.

In the milestones of Indonesia space programs until 2045, step by step long term programs are set up. The history and achievement in research and development began with establishing remote sensing product services for ministries, universities, and local governments. Beginning with the operation of satellite ground stations to receive satellite imageries, we have developed methods for data analysis of satellite imageries for various applications including disaster risk reduction and sustainable development goals.

The current severe floods and landslides disaster in Indonesia since the end of November 2025, again emphasize the importance of satellite products to help the local authorities, particularly in Sumatra, to take appropriate actions in disaster quick response as well as rehabilitation of impacted areas. Another essential sector related to space technology is telecommunication. Since 1976 with success of our first geostationary communication satellite operated by private company, Indonesia continues to operate the GSO telecom satellites for internet of things and connectivity services.

So, in looking down together, Indonesia is of the view that we need to leverage the value chains of space activities for better regional services and solutions related to disaster risk reduction and achieving sustainable development goals.

Thirdly, along with our national needs in space-based services and solutions, we are in the view that those are enable through development of space capabilities and infrastructures. Beginning with establishment of the ground stations for satellite data receiving system to provide imageries provisions to the end users, Indonesia has also established ground station for TT&C, with international cooperation.

In this regard, Indonesia has also established program to continue the operation of our facilities for satellite development and launching technology. In the future, we also try to step-by-step develop the spaceport to enhance the capacity of upstream part of space activities.

Along with space technology development and harnessing its capabilities, Indonesia has also conduct space science research by establishing a new national observatory facility in Kupang East Nusa Tenggara, to complement the existing network in the southern Hemisphere.

Fourthly, looking up and down perspectives require robust space value chain which enables sustainable space ecosystem. In this

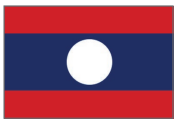
regard, Indonesia views that open infrastructure and facilities utilization will be beneficial to encourage non-state actors in space activities. Meanwhile, human resources development is essential. Therefore, we also prioritize space education and capacity building to leverage the roles of young generation in space research and development, operations, and industry.

Along with our endeavours in accelerating the space capacity and utilization, we also realize that there are challenges such as space situational awareness and sustainable long-term sustainability of outer space activities. Such challenges need solutions, not only through a robust space policy, but also international cooperation.

Finally, through the ISF 2025, Indonesia strongly recommends the concrete actions to further follow up the results of this forum through strengthening the regional cooperation in all areas of space activities.

Thank you so much for your attention.

Statement of Lao People's Democratic Republic



By Vithaya Sayvisith,

Deputy Director General, Ministry of Post and Telecommunication

His Excellency the chairman

Honorable Ministers

Distinguished Delegates

Ladies and Gentlemen

I am very pleased and honored to be here at the 7th International Space Forum at Ministerial Level – The Southeast Asian Chapter, in very beautiful Manila of Philippines. On be haft of the Lao Government, the Ministry of Technology and Communications, I would like to share some thoughts and views on Satellite Applications in Laos and our region.

Reference to the vision towards 2030, the 10-year strategic plan and 05-year development plan of our Ministry. We aim to provide telecommunications infrastructure throughout the country, especially in remote areas, to be able to use voice communication and high-speed internet access to the information quickly.

In the Lao PDR, the LAOSAT-1 satellite is 10 years old this year, using C-band and Ku-band frequencies to expand the telecommunication and communication infrastructure to reach rural areas that can provide voice and high-speed internet communication systems. Currently, we have some regulations for satellite service in Lao PDR, as Pri-Minister's decree and some Minister's decrees and next year we have plan to approve The 10 years strategic plan on satellite using in Lao PDR. The LAOSAT-1 satellite has a coverage area nationwide. In addition, the coverage area in service is more than 30 countries: including here in Philippines.

The Satellite Applications used in Lao PDR have an emergency satellite communication system, Direct-to-home, Very Small Aperture Terminal-VSAT, and Gateway International Station which is provided in public and private sectors efficiently and effectively.

Therefore, to support the needs of social and economic development 4.0, our ministry has focused on expanding telecommunication infrastructure, and domestic services, and using new generations of communication technologies such as Fiber to the Home and satellite communication to respond to the transformation of Lao PDR into a good telecommunication link with ASEAN member countries.

At present, the Lao PDR is rolling out 5G technology in many bands including some part of C-band to help transfer the Lao PDR's digital economy development plan and also planning for LAOSAT-2.

So we are looking further to enhance cooperation and exchange of experiences from member countries in the use of technology to accelerate the development of remote communities; Knowledge exchange in the development of personnel and development of Satellite Applications such as e-Governance, e-Education, e-Health, and natural disaster alert systems with ASEAN countries.

Thank you.

Statement of the Philippines

By Gay Jane P. Perez,
Director General, Philippine Space Agency (PhilSA)

Following the successful conclusion of the 31st Asia-Pacific Regional Space Agency Forum (APRSAF-31) in Cebu and the ASEAN Regional Forum, the Philippines continues to sustain the momentum of fostering a regional dialogue for cooperation on space activities through the International Space Forum here in Manila.

Embedded in the Philippine space policy is the country's central goal of becoming a space-capable and spacefaring nation within the next decade.

To become spacefaring, we must develop sovereign capabilities in space and to become space-capable, we must have industrial space capabilities. In developing these space capabilities and infrastructures, the Philippine Space Agency is supporting the establishment of a robust and well-integrated space ecosystem guided by the space-data value chain framework. This enables a comprehensive assessment of the various components necessary to harness space technology for societal benefits. It facilitates the identification of existing capabilities, reveals gaps, and guides strategic interventions to ensure that each stage of the value chain contributes to delivering value.

In the Philippines, our ongoing efforts towards establishing space capabilities and infrastructure are guided by our core principle for regional collaboration – that this should serve not only national goals but also regional and global connectivity. PhilSA envisions a future where nations form a network of interoperable facilities - each contributing to a larger vision of inclusive access and shared prosperity.

To support this, PhilSA proposed the ASEAN space data infrastructure project to be included in the pipeline of infrastructure projects under the updated master plan on ASEAN connectivity. The Philippines proposes to establish critical space infrastructure systems in the region to address climate challenges in agricultural monitoring, urban planning, national security and resource inventory.

With the support of ASEAN member states, we will build a constellation of Earth observation satellites and geostationary telecommunication satellites enhancing the capacity of ASEAN member states to generate, exchange, and utilize vital space data. Spearheaded by the Philippines, this initiative positions ASEAN as an emerging force in the global space ecosystem capable of harnessing the full potential of space science and technology applications. Ultimately, the initiative fosters regional competitiveness, inclusiveness, and a stronger sense of community.

We find this edition of the International Space Forum to be an opportunity to collectively discuss the future of outer space activities in the Southeast Asian region. With space agencies and technology becoming more relevant in our daily lives and critical for economic development, we underscore that it is essential that we continue our cooperation even after this event. Through our partnerships, the Philippines is confident that this moment would be remembered as a collective action by all in creating an inclusive, peaceful, and sustainable future in outer space.

Thank you very much.

Statement of Singapore

By Jonathan Hung,
Executive Director, Office For Space Technology and Industry

Good morning distinguished guests,

When we talk about "looking up together," we mean more than simply launching satellites to space. We mean cultivating the local infrastructure, talent, and institutions that undergird a robust space ecosystem. Central to our efforts is the Space Technology Development Programme (STDP).

Since its launch, STDP has provided dedicated support to R&D in key areas, such as satellite communications and remote sensing. We are also exploring new opportunities emerging in the space economy, such as on-orbit servicing, in-space manufacturing, and space life sciences.

We have invested S$210 million into the STDP since 2022, demonstrating our resolve to build institutional capacity across industry, research and tertiary institutions. This will help accelerate innovation and scale up local capabilities from labs to commercial space ventures, and cultivate a vibrant space ecosystem in Singapore.

The STDP has also been instrumental in research collaborations with international partners, enabling cross-continental partnerships for innovative solutions. We warmly welcome more partnerships to develop mutually beneficial capabilities and technologies.

Beyond individual programmes, Singapore also published our next bound strategy earlier this year, outlining Singapore's commitment to strengthening national space capabilities and creating pathways for active participation in and contribution to the rapidly expanding global space economy. Our strategy is centred around 3 thrusts – firstly, growing Singapore's space sector through R&D investment, industry partnerships, and fostering an enabling regulatory environment; secondly, building international partnerships; and thirdly, space programmes in focus areas.

Together, by investing cooperatively in people, policy, education, and research, we can strengthen the entire value chain. Singapore is committed to being a node in a regional and global network, helping to turn satellite capability into meaningful, equitable solutions for Southeast Asia and beyond. And we warmly welcome all to the inaugural Singapore Space Summit to be held in Singapore on 2-3 February, to participate in this constructive dialogue.

Thank you.

6 STATEMENTS OF PARTICIPATING INTERNATIONAL ORGANIZATIONS, SPACE AGENCIES AND OBSERVERS

Statement of the ASEAN Academy of Engineering & Technology (AAET)

By Romulo Agatep,
Vice President, ASEAN Academy of Engineering & Technology (AAET)

Good morning to our esteemed ministers, agency heads, colleagues in academia, industry partners, and friends from across Southeast Asia and beyond.

I am honored to speak today on behalf of the **Philippine Technological Council**, the national federation of 13 Engineering organizations in the Philippines and a partner in strengthening our country's technical and professional capacity.

"Looking Around," Enabling the Value Chain through Cooperation, Education, Policy and R and D. I would like to interpret it from the perspective of engineering — because behind every satellite, every ground station, every data platform, is an engineer whose work makes space meaningful to society.

1. "Looking Around" Through an Engineer's Eyes

To engineers, "looking around" is not a passive act.
It is analysis — observation, assessment, understanding context.

For PTC, looking around means asking:

- **Do we have the right competencies to support the space value chain?**
- **Are our systems aligned with regional and global standards?**
- **Are we giving our young professionals the opportunities they deserve?**
- **Are we collaborating enough across borders?**

This broader view is essential because while the space sector advances rapidly, engineering capacity — the people and the systems — must advance with equal speed.

2. Capacity Building: The Heart of PTC's Mandate

PTC is deeply involved in professional mobility frameworks such as:

- **APEC Engineer**
- **International Professional Engineer Agreement (IPEA)**
- **ASEAN Engineer Register**

These systems ensure that engineers meet internationally benchmarked competencies, allowing them to work across borders with confidence.

In the context of space:

A satellite cannot be launched if engineers are not globally competent.
A ground station cannot operate without highly skilled professionals.
Space data has no impact unless trained engineers interpret it for society.

PTC's work is not in the hardware — it is in the *humanware*.
And human capability is what "Looking Around" ultimately depends on.

3. Cooperation: A Regional Ecosystem of Competence

When we look around Southeast Asia, we see nations at different stages of space development — but we all share similar needs:

- Engineers trained in systems engineering
- Specialists in remote sensing
- Experts in cybersecurity for space assets
- Professionals capable of designing, operating, and maintaining space infrastructure

PTC strongly supports cooperation that does not stop at government-to-government partnerships.
We believe in **engineer-to-engineer cooperation**, because practitioners learn best from their peers.

Imagine:

- Joint certification programs
- Shared CPD courses across ASEAN
- Regional engineering internships focused on aerospace and satellite technologies
- Mobility of engineering educators
- Multinational teams for downstream applications like agriculture, disaster response, and maritime surveillance

These are realistic and achievable steps — and PTC stands ready to be a bridge among our engineering institutions.

4. Education: Preparing the Workforce for the Space Value Chain

Space technology is often seen as a specialized domain, but its value chain is wide.
It includes:

- Electronics and communications
- Mechanical and aerospace
- Computer and software engineering
- Civil engineering
- Environmental and agricultural applications

PTC works closely with Philippine engineering education bodies to ensure alignment with international standards.
For Southeast Asia, "Looking Around" means ensuring our students and young engineers can participate in — not merely observe — the space economy.

5. Policy and Governance: Engineering Standards as Space Infrastructure

Space policy often focuses on satellites, spectrum, and missions.
But if we look more closely, we realize something fundamental:

Standards are also policy.
Accreditation is policy.
Competency frameworks are policy.

A region cannot have a strong space sector if engineering practice is weak, inconsistent, or fragmented.

PTC advocates for harmonized engineering standards across ASEAN — because if our engineers are aligned, our space initiatives will naturally align. This is a quiet but powerful way of strengthening the entire space ecosystem.

6. Research and Development: Where Engineers Turn Questions Into Answers

Finally, R&D is where engineering creativity meets national needs.
PTC encourages stronger collaboration between universities, industry, and government agencies to build capabilities in:

- Remote sensing applications
- AI and data analytics for climate and agriculture
- Sensor technology for environmental monitoring
- Materials and structural engineering for aerospace components
- Space-enabled infrastructure management

We may not all build rockets, but every nation can contribute indispensable expertise to the space value chain.

7. A PTC Commitment to Southeast Asia

Let me end with a simple message:

Space is not only for space agencies.
Space is for engineers, educators, students, and communities.
Space is for Southeast Asia.

As we "look around" today, PTC reaffirms its commitment to:

- Strengthen engineering competencies
- Support cross-border mobility
- Promote standards that uphold safety, ethics, and excellence
- Foster collaboration among ASEAN professional organizations
- Build a workforce that can sustain our region's space aspirations

Excellencies, distinguished colleagues, By looking up, we expand our vision.
By looking down, we deepen our understanding. But by **looking around**, we reinforce our unity—and from unity emerges capability.

On behalf of the Philippine Technological Council, we look forward to working with all of you in building a strong, capable, and interconnected Southeast Asian space community.
Maraming salamat po.

Statement of the Italian Space Agency (ASI)

By Maria Chiara Noto,

Head of the International Cooperation and Space Diplomacy Office, Italian Space Agency (ASI)

Distinguished Space Authorities, Colleagues, Ladies and Gentlemen,

It is a great pleasure to be here in Manila for this edition of the International Space Forum 2025, a platform meeting that year after year reaffirms the value of both space regional and international cooperation, and the access to space technology applications and services for local needs.

First, I would like to thank the government of Philippines and the Philippine Space Agency (PhilSA) for having host this special event jointly with the International Astronautical Federation and the Italian Space Agency. Your hospitality is very appreciated.
The Italian Space Agency, in collaboration with IAF, created this initiative in 2016 to promote the use of space technology and related applications to respond to regional and local needs. We are, in fact, convinced that science, research and education are the key to a real development also in space, where a responsible use of space resources is necessary and indispensable.

One of the topics today *"Looking Up Together: Developing Space Capabilities and Infrastructure"* invites us to reflect not only on the speed of technological progress, but even on greater space cooperation. We are all aware, how space technology impacts faster in our daily life. Southeast Asia region stands as one of the world's most dynamic economies with several and different new emerging space activities.

National space agencies have been established, and new ones are under development. The countries adopted new space policies, developed space capabilities, enhance their expertise and knowledge at an impressive space. The region is demonstrating that space is a global effort, open to all who invest in a vision, skills, and show determination.

Over the past years, the Italian Space Agency dedicated a great attention to the ASEAN countries fostering relations at both at bilateral and regional level.

The first agreement signed by ASI with a Southeast Asia country was in 2012 with the Thailand **Geo-Informatics and Space Technology Development Agency (GISTDA)**. ASI supported the development of the *Space Krenovation Park* closed to Bangkok with a ground segment connected to the Italian Earth observation COSMO-SkyMed satellites. Dedicated space applications were developed for land and maritime environmental monitoring, early data cartography for risk management and agriculture services, safety and security support. In 2023, the European VEGA launching vehicle under Italian leadership put into orbit the Thailand's THEOS 2 satellite.

In Vietnam, ASI cooperates with the **Vietnam National Space Center (VNSC)** through a Scientific and Technological inter-governmental agreement, in particular, in the areas of space sciences and earth observation applications. Currently, ASI and VSNC, in collaboration with the Polytechnic of Milan, is developing the "LCZ-UHI-GEO" project, an analysis study of the local climate zones and the Urban Heat Islands by geomatic technics. Research, education and training activities are associated with the project. Two workshops were organized on this topic, the first in 2024 in Hanoi, the second, last June, in Milan, on "Geospatial Information, Earth Observation and Urban Heat Islands". The project has been also presented in the ESA Living Planet Symposium 2025 with great interest from the participants.
The bilateral relations with Malaysia started in 2000 with the former national space agency. Today, ASI and **the Malaysian Space Agency (MYSA)** have very friendly relations focused on common interest in Space Science and exploration, Space technology including ground infrastructures and services, remote sensing, navigation and communication applications, Education and Training.

The "ASEAN-Italy Cooperation Initiative on Space and Smart Technologies", active since 2024, was the project led by ASI and **the Office for Space Technology and Industry of Singapore (OSTIn)**, that led to joint initiatives at regional level, while reinforcing

and paving the way for strongest bilateral relations with the country. Indeed, several topics are of common interest and future joint activities under development as in earth observation, advanced remote sensing, VLEO, maritime, aviation, connectivity and sustainability.

Finally, with the **Philippine Space Agency (PhilSA)** our relations are excellent. Last year, ASI successfully supported PhilSA candidacy to IAF membership and this year- through a series of exchanges we have reached an important goal: the organization of the 7th edition of the International Space Forum, here, in Manila. I am also pleased to say that, ASI and PhilSA are finalizing a bilateral space cooperation agreement to be signed soon.

At regional level, ASI is working with ASEAN countries under the **"Partnerships for ASEAN-Italy Development".** Last year, a pilot project titled *"ASEAN-Italy Cooperation Initiative on Space and Smart Technologies"* was developed and finalized with success. This year a new project *"ASEAN-Italy Cooperation on Space and Geo-Information"* is under way to facilitate the development of geospatial products and services useful to the region and, the support of local capabilities through education and training activities.

Nevertheless, the organization of this 7th International Space Forum would like to be occasion to expand the collaboration to **all countries of the Southeast Asia region**.

Distinguished Delegates,

let me mention the **connection between the multilateral and bilateral dimension** that the Italian Space Agency manages with great attention and dedication. The main example of this coherence are the works in the framework of the **UNCOPUOS**, where the Chairmanship for the 2026-2027 years will be Italian. Bilateral cooperation projects must be in line with the space international Treaties and guidelines such as that on long-term sustainability of outer space activities.

Another example is the work done in the framework of the thematic inter-agencies Committees such as in the Group of Earth Observation (GEO), in the Committee of Earth Observation (CEOS), in the International Space Exploration Coordination Group (ISECG) and in the Space Debris Coordination Committee (IADC), where common efforts in the implementation of long-term sustainability space activities established friendly collaborations for potential partnerships.

Space is a cooperative endeavour.

ASI looks at Southeast Asia countries as partners with which share the future and global priorities as resilience, inclusivity, innovation, and sustainability.

The Italian Space Agency stands ready to share its knowledge and experience and support the transfer of space technology for peaceful purposes.

Looking up together means exploring together the Universe, accessing together space technology without limits, contributing to the global space economy and establishing space cooperation as equal members of the international community for prosperity, progress, and security of our local communities and populations.

Thank you for your attention.

Statement of the International Astronautical Federation (IAF)

By Gabriella Arrigo,

President, International Astronautical Federation (IAF)

On behalf of the Co-Organizers of ISF 2025 – the International Astronautical Federation (IAF) and the Italian Space Agency (ASI), and the Host of this year's forum edition - the Philippine Space Agency (PhilSA), it is our great honour to present the Final Report of the **IAF International Space Forum 2025 at Ministerial Level – Southeast Asian Chapter**, held on 4 December 2025 in Manila, Philippines.

Launched in 2015 under the auspices of the IAF Vice President for Science and Academic Relations, the International Space Forum (ISF) has become a premier annual ministerial gathering dedicated to advancing global dialogue on the importance of enabling stronger participation of local communities in space activities and programmes. Its overarching goal is to identify and promote space-based solutions to global challenges; solutions that are informed by local needs, capacities, and perspectives.

Since the inaugural Forum in Trento (Italy), successive regional chapters including African (Nairobi, Kenya, 2017), Latin America (Buenos Aires, Argentina, 2018), the Mediterranean (Reggio Calabria, Italy, 2019), Central America and the Caribbean (Panama City, Panama, 2023), and the Gulf (Manama, Bahrain, 2024) have consistently underscored a shared aspiration: to further involve all potential stakeholders, Ministries, Space Agencies as well as international organizations and academia, universities, and emerging space actors, in shaping and contributing to space efforts that support their regions' development.

This year's Forum, held under the theme **"Fostering Regional Synergy in Space for Shared Challenges and Sustainable Development"** underscored the region's collective commitment to harnessing the full potential of space science, technology, and innovation as engines of sustainable and inclusive growth. The theme reflects a shared understanding that Southeast Asia's most pressing challenges, ranging from climate change and natural disasters to food security, connectivity, and economic resilience require coordinated solutions that transcend national borders.

Space capabilities, when developed and leveraged collaboratively, offer a powerful means of addressing these challenges through enhanced data access, stronger regional partnerships, and the cultivation of local expertise and innovation. To guide these discussions, the Forum focused on three strategic pillars, each introduced by keynote speakers who brought global expertise and regional insight:

- **Looking Up Together: Developing Space Capabilities and Infrastructures**

  This track emphasized the importance of building robust and interoperable space infrastructures such as satellite systems, ground stations, and launch capabilities, while strengthening the technical and institutional capacities of Southeast Asian nations. It highlighted the value of shared investments, open collaboration, and long-term planning to ensure that the region can collectively access and contribute to space-based resources.

- **Looking Down Together: Mobilizing Space-enabled Services and Solutions**

  Focusing on practical applications, this discussion showcased how space-derived data and services - particularly in Earth observation, navigation, and communications, can directly support socio-economic development. Delegates explored how these tools can enhance disaster risk reduction, environmental monitoring, agriculture, maritime safety, urban planning, and climate resilience, ensuring that space benefits are felt at the community level.

- **Looking Around: Enabling the Space Value Chain through Cooperation, Education, Policy, and R&D**

  The third pillar highlighted the need to cultivate a thriving regional space ecosystem by strengthening policy frameworks, promoting cross-border cooperation, fostering STEM education, and investing in research and development. It emphasized

that sustainable growth in the space sector depends on nurturing talent, supporting innovation, strengthening academia-industry-government linkages, and establishing harmonized policies that facilitate partnerships across the full space value chain.

As emphasized during the sessions, Southeast Asia's rapidly growing economies face increasing climate-related and disaster risks. The demand for reliable, timely, and high-quality space data is soaring. Recent floods and other natural disasters have underscored the region's vulnerability and the critical need for resilient, adaptive, and responsive systems powered by space-based technologies.

Together, these three focus areas provided a comprehensive framework for discussing how Southeast Asia can advance a collaborative, resilient, and future-ready regional space agenda, one that maximizes shared opportunities while addressing shared vulnerabilities.

All of these themes were thoughtfully explored through the statements and interventions of the participating delegations. To continue nurturing reflection and dialogue on these essential topics, this report compiles all contributions delivered during the Forum, along with the Final Declaration: **The Manila Page**. It is our hope that this document will help sustain the spirit of cooperation and innovation that defined ISF 2025, and that it will inspire new forms of partnership not only within Southeast Asia, but across the global space community.

The true measure of the Forum's success lies not only in its preparation but in the engagement and commitment of its participants. In this respect, ISF 2025 was particularly remarkable. We would like to extend our heartfelt gratitude to all participants for their invaluable contributions, which are helping to build a more resilient and sustainable future for the region.

Distinguished representatives from five ASEAN countries, as well guest representatives from Tunisia and Türkiye, and seven space agencies and international organizations from around the world enriched the discussions with their insights and expertise. Their participation reflects a growing recognition of the essential role that space science and education, cooperation and innovation must play in driving the sustainable development of the Southeast Asian region.

We invite you to enjoy the reading, and to join us in carrying forward the momentum of the Forum toward a more connected, resilient and space-enabled future.

Statement of the International Institute for the Unification of Private Law (UNIDROIT)

By Hamza Hameed,

Coordinator of the UNIDROIT Focus Group on the Implementation of the Space Protocol to the Cape Town Convention

Fostering Regional Synergy in Space for Shared Challenges and Sustainable Development: The Space Protocol of the Cape Town Convention

Excellencies, distinguished delegates, ladies and gentlemen,

It is a great honour to address the 7th International Space Forum on behalf of the International Institute for the Unification of Private Law, or UNIDROIT. UNIDROIT, established in 1926, is an almost 100-year-old independent intergovernmental organisation based in Rome, Italy. It works to harmonise and modernise private and commercial law across borders, with 65 Member States from all regions of the world, representing over 70% of the world population, and over 90% of the global GDP.

One of UNIDROIT's flagship instruments is the 2001 Convention on International Interests in Mobile Equipment, also known as the Cape Town Convention, which creates a uniform legal framework for asset-based financing and leasing of high-value, uniquely identifiable, mobile equipment. This Convention is complemented by four industry-specific Protocols, one for Aircraft Equipment adopted in 2001, one for Railway Rolling Stock adopted in 2007, the Protocol on Matters Specific to Space Assets (the Space Protocol) adopted in 2012 and a Protocol on Mining, Agriculture and Construction Equipment adopted in 2019. The Space Protocol extends the benefits of the Cape Town system to satellites, payloads, and other space assets, aiming to make the financing of space infrastructure more affordable, secure, and accessible.

I am Hamza Hameed, Coordinator of the recently established UNIDROIT Focus Group on the Implementation of the Space Protocol to the Cape Town Convention. UNIDROIT is committed to harmonising secured transactions law in the space sector across borders, and we see a clear role for international law in enabling the benefits of space to reach every region and every citizen. The theme of this Forum, fostering regional synergy in space, is close to UNIDROIT's mission, and to the purpose of the Space Protocol. By working together on the "Looking Up" (building space capabilities and infrastructure), "Looking Down" (leveraging space services for Earth) and "Looking Around" (cooperation, education, policy and R&D) pillars, we can ensure that space programmes truly serve shared challenges and sustainable development.

Distinguished delegates, let me first speak on Looking Up - developing space capabilities and infrastructures. Across Southeast Asia, nations are rapidly building space programmes. For example, Indonesia's LAPAN satellites monitor forests and marine traffic; Vietnam's VNREDSat satellites survey land and water resources; Singapore's TeLEOS satellites provide data for agriculture and security. These space assets are infrastructure for the future, and are already powering large amounts of economic development across the region. Yet they require financing. Space systems are capital-intensive: they often cost hundreds of millions of dollars.

Asset-based financing, which relates to lending with the satellite or space asset as collateral, is a proven model in aviation, and it can unlock investment for satellites and space-sector stakeholders. The Space Protocol extends precisely that model to space. Once in force, it will create an international registry for security interests in space equipment, ensuring that a lender anywhere can take a simple, enforceable international interest on a satellite or spacecraft. In effect, the Space Protocol will allow satellites and spacecraft to be used as collateral in security agreements, title reservation agreements, and leasing agreements under a uniform legal regime. This enhances predictability for lenders and reduces credit risk worldwide.

By encouraging private lenders to finance satellite procurement and infrastructure, the Space Protocol will attract capital to the region.

Ladies and gentlemen, the Cape Town Convention is a tried and tested instrument. Regarded by some commentators as the most successful commercial law instrument ever adopted, the treaty has 90 Contracting States at the moment, with its Aircraft Protocol with 87 Contracting States, and its Rail Protocol, having already entered into force. As has been seen in aviation, asset-based

finance promotes modernisation and cost efficiency. Under the Aircraft Protocol, export credit agencies in OECD economies offer a 10% discount financing when lending to operators based in Cape Town Countries. Economic impact studies have shown that adopting the Cape Town Convention would save over US$2.5 million on a new A380. This is because standardised rules lower legal uncertainty and borrowing costs. The international registry under the Aircraft Protocol has now recorded over 1.5 million transactions, with collateral worth over 1 trillion USD, and having potentially reducing financing costs by up to 30%.

A similar effect can apply to space: by extending these legal protections to satellites, the Space Protocol can reduce the cost of capital for new satellite networks and launch capabilities.

Moreover, asset-based frameworks can catalyse the development of a secondary market for space assets, and recent technological advances are accelerating this shift. Software defined satellites, which can be reprogrammed throughout their lifespan, retain higher residual value and therefore make stronger collateral. Ground stations as a service models reduce operational barriers for lenders or successor operators that may need to assume control of an asset. In orbit servicing capabilities, including refuelling, repairs and life extension, further preserve and even enhance the long-term value of satellites. Together, these innovations make asset-based financing in the space sector more viable than ever before.

A secure legal framework is essential to unlock private investment in these activities. The global satellite servicing market is already valued at several billion dollars per year and is projected to more than double by the early 2030s, driven by demand for extended mission life and debris mitigation. Investors and operators will only commit capital to such complex missions if they can rely on predictable rights and enforceable security interests. The Space Protocol provides precisely that foundation, enabling leasing and secured financing models that can unlock new capital and support the emergence of a sustainable market for space assets.

Now turning to Looking Down Together – mobilising space-enabled services and solutions. Satellite-based Earth observation (EO) and connectivity are vital for sustainable development on Earth. In ASEAN countries, satellites are already monitoring forests, agriculture, weather and disasters, and extending internet to remote islands. Improved satellite connectivity can transform public health (telemedicine for remote communities) and education (online learning for rural areas). A recent study highlights the enormous economic potential: wider adoption of satellite EO in Southeast Asia could cumulatively add about US$100 billion to the region's GDP by 2030. This increase would come from better crop yields through precision farming, more efficient resource management, and boosted productivity in sectors from mining to logistics. Globally, satellite data is driving a digital revolution: one estimate finds that AI-enabled analysis of satellite imagery could add US$3.8 trillion to the world economy by 2030 (through applications from agriculture to urban planning).

Despite this promise, many Southeast Asian space startups and services face funding hurdles. Access to credit for satellite operators and data providers is still limited in most countries. The Space Protocol will help here, too, by enabling downstream service providers – for example, a company selling weather data or maritime tracking – to raise capital using their space assets as collateral. This legal foundation improves the attractiveness of space ventures to banks and investors. It creates legal predictability that is crucial for insurance and investment decisions. In aviation, it is well known that certainty of creditor remedies can halve enforcement delays; in space, where technologies and business models are newer and less tested, legal certainty is equally valuable.

The statistics speak to rapid growth in our region's space activities. Asia is now the second-largest global space market after North America. Deals involving Asian space companies more than tripled from 2020 to 2023. Southeast Asia alone is capturing roughly 17% of global space investment. However, national budgets and traditional financing alone cannot bridge all gaps. Regional synergy means pooling resources and harmonising policies so that no country is left behind. By adopting international tools like the Cape Town legal system, ASEAN states can magnify each other's strengths. For example, one country's satellite can serve wider neighbourhood markets; insurers and banks in other countries would recognise those assets once all parties share the same rules.

Looking Around is our central theme: enabling the space value chain through cooperation, education, policy and R&D. The Space Protocol itself is the fruit of such cooperation. It was developed under UNIDROIT's auspices in 2012, and UNIDROIT continues to promote it in international for a. including as an Observer at COPUOS and at IAF events, such as this. The Protocol provides a uniform, predictable international legal regime for space assets. It adapts the Cape Town Convention's mechanisms – international interests, priority rules, and an electronic registry – to the specific complexities of outer space. Crucially, the Protocol does not force any particular financing model or taxation; it simply makes space lending easier and more certain, and provides an

additional option for securing finance based on a secured transactions model. Private enterprises remain free to innovate; what changes is that when they do take credit against a satellite, lenders everywhere know how to register and enforce the interest.

As of 2025 the Protocol is still not in force - it requires ten ratifications to enter into force. Currently. One State (Paraguay) has ratified the treaty. Five additional States have signed the treaty: Burkina Faso, Germany, Saudi Arabia and Zimbabwe. None of these are in Southeast Asia yet, so ASEAN leadership is now crucial. It is noteworthy that ASEAN members, including Malaysia, Indonesia, Singapore and Viet Nam are already Contracting States to the Cape Town Convention and its Aircraft Protocol. These States have seen first-hand how a stable legal framework can unlock cheaper finance. By extending that experience to the Space Protocol, they would help build a regional financing market for satellites and related equipment. Other regional partners, whether they have existing treaties or not. would see the benefit when banks can more easily arrange cross-border syndicated loans or international leases for space projects.

Furthermore, regional workshops and education will reinforce this policy synergy. UNIDROIT and our colleagues in the space law community stand ready to assist training space agencies, judges, ministries. and legislators on the Space Protocol, and secured transactions law in general. Already, UNIDROIT has engaged with ASEAN universities and legal institutes to raise awareness of asset-based financing in space. Harmonised registration practices mean that a lender in one country can reliably check whether, say, a Filipino satellite has any prior claims worldwide.

Distinguished delegates, the next practical steps are clear. I urge all Southeast Asian States to consider accession to the Space Protocol and to implement compatible domestic laws (such as amendments to secured transactions law) to recognise space asset security interests. For those of you already in the Cape Town aviation regime, the pathway is even smoother - you know the value of these treaties. For others, becoming part of this system would signal to investors that the region is open for business.

In closing, let me stress that fostering regional synergy means using both policy and law as tools. Space programmes can no longer be undertaken by isolated national efforts alone. We need cross-border finance, shared infrastructure, and a common legal foundation. The Space Protocol is one such foundation. By enabling asset-based financing, it will spur private investment in satellites, reusable launchers, on-orbit servicing, and the ground systems that support them. This in turn will expand connectivity, improve environmental monitoring, and create jobs, all supporting the Sustainable Development Goals.

Let us seize this moment at ISF 2025 to commit to collective action. UNIDROIT is proud to stand ready as a partner. Together, through education, cooperation and harmonised policy, we can make Southeast Asia a leading hub for inclusive, sustainable space development, truly looking up, down and around together.

Thank you.

Statement of the Maldives Space Research Organisation (MSRO)

By Madin Maseeh,
President & Founder, Maldives Space Research Organisation (MSRO)

Excellencies, distinguished delegates, colleagues and friends,

In the Maldives, looking in every direction is easy and unavoidable. When you are the flattest nation in the world, the horizon doesn't hide much. Sometimes, whether we like it or not, we see everything — the beauty, the fragility, and the urgency. And this is precisely why meetings like this matter. I thank IAF, especially Christian Feistinger, Italian Space Agency and Philsa for organizing and inviting the Maldives to the ISF.

More than ever, we must look down. Our islands shift, erode, expand, collapse, re-form — and sometimes even seem to teleport — within a season or a few decades. Weather patterns are intensifying. Currents have been growing unpredictable. The coastline keeps rewriting itself. To protect our people, we need satellites to understand and anticipate these changes. For us, remote sensing is not academic — it is an instrument of survival. Looking down gives us clarity. And this is an area we have been working toward for the last three years through initiatives such as the Digital Earth Maldives Initiative.

But we must also look around. We look around to understand the fishermen who depend on the sea each day, the families who rebuild after storms, the communities who live with both beauty and uncertainty woven into their identity. And when we look around, we see the opportunities space can unlock: safer and more efficient fisheries, better environmental monitoring, more resilient infrastructure, and a more open and secure future. Looking around gives us purpose.

And above all, we must keep looking up. Maldivians have always looked to the stars. Our ancestors crossed the Indian Ocean guided by them. Back then, looking up meant finding our way. Today, looking up still gives us direction but it also means finding hope.

We must also look forward, and to move forward, we must turn despair into hope and vulnerability into opportunity. The Maldives intends to do this in several ways, of which I will highlight three.

First, by positioning ourselves as a regional host for space infrastructure such as ground stations and space situational awareness sensors. Our geography on the equator gives us clear horizons, ideal orbital visibility, and a radio-quiet environment — allowing us to support the region's and the world's growing need for data reception, tracking, and debris monitoring. We may be small, but our skies and oceans are big.

Secondly, the same ocean that threatens us also offers immense opportunity. Our region of the Indian Ocean is a vast natural laboratory. We aim to make the Maldives a regional partner for experimentation and innovation at the space–ocean intersection: maritime surveillance technologies, blue economy innovation, climate model downscaling, autonomous marine systems, integrated search-and-rescue operations, microgravity research, and ocean–atmosphere missions. Let the Maldives be the testbed where challenges turn into engines of discovery. And as a founding member of the Space for Oceans Alliance, launched this year at the UN Ocean Conference, we are committed to shaping a future where space technology strengthens ocean preservation and supports the coastal and island nations that depend on it most.

And third, we are committed to working closely with satellite data providers, mission operators, and analytics companies to validate their solutions in real-world island conditions. Small island nations are often the first to feel environmental change, yet the last to benefit from data-driven tools. By serving as a validation partner, the Maldives will help ensure that space-based solutions are accurate, relevant, and usable for those who need them most. This is not only about improving products — it is about making sure no vulnerable nation is left behind in the space-enabled future.

We often think of the Maldives as a remote vacation destination. But we are only four hours away from Bangkok, Singapore, and Kuala Lumpur — sadly a little further from Manila. But in practical terms, we already share the same neighbourhood, the same ocean risks, the same climate pressures, and the same need for space-enabled solutions. This geographical closeness should be reflected in our cooperation. We are not distant partners — we are part of the same ecosystem.

Excellencies, if there is one message the Maldives brings to this Forum, it is this: no country in our region can face the future alone. Not the storms, not the shifting coastlines, not the pressures on our oceans, and certainly not the complexities of space. Looking down teaches us what is changing. Looking around shows us whom we must protect. Looking up reminds us where hope lives. But it is only when we look to each other that these insights become transformation.

The Maldives stands ready to cooperate as a true regional partner: to host shared infrastructure, to enable shared experiments, to validate satellite data for ocean nations, and to contribute to a shared vision of resilience and innovation.

When we combine our capabilities, perspectives, and determination, we do more than build satellites or sensors — we build a regional ecosystem ready for whatever the century brings. Let us choose that path. Let us look up, down, around — and forward — together.

Thank you.

Statement of Sustainable Development Solutions Network (SDSN) Philippines

By Edgar Vallar,

Professor of Physics, De La Salle University, on behalf of Francisco A. Magno, Professor, De La Salle University, National Leadership Council, Sustainable Development Solutions Network (SDSN) Philippines

Distinguished Ministers, Excellencies, Heads of Space Agencies, esteemed colleagues from academia and research institutions, and partners from across Southeast Asia and the global space community:

Good day to all of you.

On behalf of the National Leadership Council of SDSN Philippines, I am honored to join this historic convening of the 7th International Space Forum, hosted here in Manila under the theme "Fostering Regional Synergy in Space for Shared Challenges and Sustainable Development."

We thank the Italian Space Agency (ASI), the International Astronautical Federation (IAF), and the Philippine Space Agency (PhilSA) for bringing together leaders from government, science, technology, education, and policy to advance a shared regional vision.

As a knowledge network committed to advancing the Sustainable Development Goals (SDGs) through science-based solutions, SDSN Philippines recognizes the critical, indeed indispensable, role of space science, technology, and innovation in achieving sustainable development in our region. We therefore welcome the ISF's focus on the three pillars that will structure today's dialogue:

1. Looking Up Together: Developing Space Capabilities and Infrastructure

Building regional capabilities is foundational for Southeast Asia if we are to participate meaningfully in the global space ecosystem. For SDSN Philippines, this aligns with our work in strengthening research ecosystems, scientific collaboration, and the capacity of universities and local institutions to engage in emerging technologies.

We see space infrastructure not as an end in itself, but as a platform for inclusive development, from satellite constellations that expand connectivity, to Earth observation systems that equip countries with climate intelligence, disaster forecasting, and early warning capacities.

Southeast Asia is one of the most climate-vulnerable regions in the world; we cannot afford to underinvest in data, in science, and in shared technological capabilities.

2. Looking Down Together: Mobilizing Space-enabled Services and Solutions

Space technology already plays a direct role in many of the SDGs, from SDG 2 on food security through precision agriculture and crop monitoring, to SDG 11 and 13 through urban planning, disaster resilience, and climate adaptation.

In the Philippines, SDSN has worked closely with academic institutions, LGUs, and civil society to promote nature-based solutions, mangrove restoration, coastal resilience, and sustainable land-use planning.

These initiatives are significantly strengthened by satellite imagery, geospatial analytics, and real-time environmental monitoring, spaces where PhilSA and our regional partners play transformative roles.

Space-enabled services democratize information; they bring science to the ground, and to those who need it most: farmers, fisherfolk, local planners, and communities on the frontlines of climate change.

3. Looking Around: Enabling the Space Value Chain through Cooperation, Education, Policy, and R&D

Southeast Asia's space future depends on human capital, policy coherence, and scientific collaboration.

For SDSN Philippines, this means expanding programs that integrate the SDGs into higher education, technical training, innovation hubs, and multi-stakeholder research networks.

It also means supporting governments in crafting evidence-based policy frameworks that ensure ethical, sustainable, and peaceful uses of space.

Space is inherently collaborative. No country, large or small, can build a resilient, integrated space ecosystem alone. Regional cooperation in R&D, data sharing, talent development, and open science will be key to unlocking the full value chain of space for sustainable development.

SDSN Philippines and the Manila Page

As we prepare to endorse The Manila Page at the conclusion of this Forum, SDSN Philippines stands ready to contribute to its implementation by:

- Promoting research partnerships across ASEAN and with global space agencies;
- Supporting capacity-building in SDG-focused space applications for local governments, universities, and communities;
- Advancing evidence-based policy recommendations that integrate space technologies
- into climate resilience, environmental governance, and sustainable urban development;
- And amplifying youth leadership, recognizing that the next generation will carry forward the scientific and diplomatic foundations we build today.

The Manila Page will join the Trento Statement and the Pages of Nairobi, Buenos Aires, Reggio Calabria, Panama City, and Manama.

It will reflect our region's shared aspirations—and our shared responsibility—to use space science and innovation for peace, prosperity, and sustainability.

Closing

Allow me to close by reaffirming a core principle:

Space is not only about looking upward—it is about lifting our people forward.

The Sustainable Development Goals remind us that technological advancement must be anchored in human dignity, inclusion, and equity.

As Southeast Asia enters a new era of space collaboration, we must ensure that every innovation, every partnership, and every investment contributes to a more resilient, sustainable, and hopeful future for our region.

Maraming salamat po. Thank you very much. I look forward to the work we will build together.

Statement from Tunisia

By Kamel Besbes,
Advisor, Tunisian National Commission for Outer Space Affairs,
Ministry of Higher Education and Scientific Research

Space for emerging economies in changing world

The international landscape today is defined by a complex and contradictory shift, situated between the accelerating speed of technological innovation and the ongoing recomposition of geopolitics. This reality forces emerging economies to re-evaluate two fundamental dynamics: the balance between **cooperation and competition**, and the dilemma between trust and dependence.

Today, technology has become a battleground for world powers and a source of worry, sometimes inaccessible, for the rest of the world. AI, quantum technology, advanced semiconductors, space technologies, and 5G or future 6G networks are becoming essential strategic assets for building the future of nations. This competition is also expressed through aggressive commercial wars between major powers. In this context, emerging and developing countries often find themselves trapped in the middle, forced to navigate between rival technological ecosystems.

The second major movement we are observing is the search for **technological sovereignty**. The massive digitization of economies and societies has made us concerned about our vulnerability. When our infrastructures and data are no longer under control, we face a real threat to our autonomy. Sovereignty becomes the ability to choose and secure our digital and telecommunication system and tools.

This threat is mitigated when we build together within the framework of international organizations or regional and political groups to maintain trust and cooperation. Isolating oneself out of mistrust becomes another risk to the power of innovation and to access to technological means to meet local and global needs.

Currently, the geopolitical context is in full ferment. We are observing a recomposition of influence and menaced zones, driven by access to rare materials, energy sources, and new trade routes. Traditional alliances and trust are under revision, and new multipolar coalitions are emerging, signaling a clear trend toward deglobalization or, at least, new maps of value chains. Evidently, the space domain is not spared; at least three major issues are emerging:

Firstly, in Earth Observation. As an emerging country heavily affected by climate change, notably by water scarcity and agricultural vulnerability, access to satellite high quality data services is not a luxury, but a crucial pillar of our national resilience strategy. Satellite data provides essential, near real-time information for precision agriculture, yield forecasting, climate change adaptation, coastal erosion monitoring, and disease tracking. Our goal is to move from the status of a simple consumer of foreign data to one with access to data, along with the capacity to process and integrate this geospatial intelligence directly into our public policies.

Secondly, the security of navigation systems. GNSS, when reliable and accurate, ensures stability and efficiency of vital economic sectors, whether it be logistics, land, sea, or air transport, or even fishing. However, the current dependence on global GNSS signals exposes our countries to risks of jamming, spoofing, or signal degradation. This situation could severely disrupt our economic sectors and smart infrastructure projects. It is imperative for emerging countries to build national or regional augmentation systems to enhance precision and resilience, and to invest in robust multi-constellation receivers capable of resisting interference.

Thirdly, communications and space-based internet. The advent of Space Internet technology represents both an excellent opportunity and a major challenge. While access to these networks can bridge the digital divide, control over these global networks raises strong concerns regarding data security, legal jurisdiction, and continuous service availability. It will therefore be necessary to consider new regulatory frameworks and technological means to manage these new protocols in order to secure

sovereign communication channels and to develop new infrastructures to maintain authority over the data traffic transiting through our territory.

In conclusion, in this newly fragmented world, the techno-political reality demands, on the one hand, that every state invests in training, research, and technology transfer to exploit space technologies to improve its governance, increase its prosperity, and reduce its dependence in compliance with international rules, standards, and institutions. On the other hand, it is absolutely necessary to engage in technological collaboration, to promote equality, solidarity, and sustainability to enhance one's own capabilities, and to share recorded progress to better respond to global challenges such as the climate crisis, pandemics, or the regulation of new technologies.

The central task is therefore to dynamically and carefully manage this complex balance to ensure a future where the sovereignty of our nations is matching with prosperity and global and local trust.

Looking up, looking down, looking around but looking together.

Statement of the United Nations Office for Outer Space Affairs (UNOOSA)

By Hamid Mehmood,
Head, UN-SPIDER Beijing Office

UNITED NATIONS
Office for Outer Space Affairs

Excellencies, distinguished ministers, heads of agencies, colleagues and friends,

It is an honour to address you today on behalf of the United Nations Office for Outer Space Affairs, UNOOSA. Let me begin by thanking the Government of the Philippines, the Philippine Space Agency, the Italian Space Agency and the International Astronautical Federation for convening this International Space Forum under the inspiring theme of fostering regional synergy in space for shared challenges and sustainable development.

UNOOSA has a clear mandate: to ensure that the benefits of space science and technology are available to all countries, especially developing countries, in support of peace, security and sustainable development. Through our work with the Committee on the Peaceful Uses of Outer Space and programmes such as UN-SPIDER, we see every day how space has become indispensable infrastructure for societies facing climate change, disasters and rapid urbanization.

Today's focus on *"Looking Down Together"* and *"Looking Around"* captures the dual challenge very well: delivering concrete space-enabled services for people on the ground, and building the ecosystem of cooperation, education, policy and research that makes those services sustainable.

Looking Down Together: from satellites to services

For Southeast Asia, "looking down together" means turning Earth observation, satellite communications and navigation into reliable, everyday services that support resilience: before, during and after disasters; in agriculture, water management, coastal protection and urban planning.

From UNOOSA's perspective, three points are critical.

First, services – not just data.

The region does not lack imagery or model outputs. What decision-makers need are ready-to-use products and workflows: flood and landslide risk maps integrated into early warning systems; drought and crop condition information that feeds into social protection and food security decisions; maritime surveillance layers that support safety at sea and help address illegal activities. Through UN-SPIDER, our offices work with disaster management agencies and space agencies to embed these products into standard operating procedures and contingency plans, so that satellite information is truly operational.

Second, designing for archipelagic and coastal realities.

Archipelagic and coastal States in this region confront sea-level rise, coastal erosion, storm surges and threats to marine ecosystems. Space-based services can monitor coastlines, mangroves, coral reefs and critical infrastructure, but they must be designed with the "last mile" in mind: connectivity for remote islands, simple interfaces in local languages, and cooperation with municipalities and communities who are the first responders.

Third, harnessing innovation responsibly.

New small satellites, commercial constellations and AI-driven analytics allow us to detect floods in near real time, map informal settlements, track air quality, and anticipate crop failures with unprecedented resolution. The key questions now are affordability, interoperability and trust: how to ensure that services are accessible to all countries; that systems can work together; and that the use of big data and AI respects privacy, human rights and national priorities. UNOOSA is actively working on these issues through our efforts on the responsible use of AI in space and Earth observation, and through capacity-building activities where solutions are co-designed with national partners.

Looking Around: building the space value chain

"Looking around" reminds us that none of this happens in a vacuum. Effective downstream services depend on a healthy ecosystem of cooperation, education, policy and R&D.

Let me highlight four priorities where UNOOSA sees strong potential for partnership with Southeast Asia:

1. Regional cooperation frameworks.

This region benefits from a dynamic landscape of national space and line agencies, as well as regional mechanisms. Strengthening cooperation frameworks and aligning space policies can help countries pool capabilities, share data and lessons learned, and jointly develop services for disaster risk reduction, coastal resilience and climate adaptation. UNOOSA stands ready to support such regional initiatives and connect them with global processes under COPUOS and the Space2030 Agenda.

2. Education and human capacity.

Satellites and algorithms are only as effective as the people who design, maintain and use them. UNOOSA has long supported fellowships, training and e-learning on satellite communications, GNSS, remote sensing and now AI-enabled geospatial analytics. Together with universities, training centres and agencies in Southeast Asia, we can expand joint curricula, student exchanges and hands-on projects that open pathways for young people – with a strong emphasis on women and underrepresented groups.

3. Policy and regulatory readiness.

Many States in the region are developing national space policies, legislation and regulatory frameworks. This is a unique opportunity to embed principles of safety, sustainability and inclusivity from the outset: alignment with international space law, responsible behaviour in orbit, open and interoperable data policies, and safeguards for the use of AI and big data. As Secretariat of COPUOS, UNOOSA can support States in aligning national frameworks with existing treaties, principles and guidelines.

4. Research and development partnerships.

Finally, we need R&D partnerships that connect local challenges to global expertise. Whether testing AI models for rice monitoring, building regional data cubes, or piloting digital twins of river basins and coastal cities, these initiatives work best when they bring together universities, start-ups, public agencies and international partners. UNOOSA can help broker such collaborations and promote open, equitable sharing of results, so that countries at all income levels can benefit.

Colleagues,

As we *look down together*, let us commit to making space-enabled services a routine part of how Southeast Asia manages disasters, produces its food, protects its oceans and plans its cities. As we *look around*, let us invest in the cooperative frameworks, educational opportunities, policies and research partnerships that will sustain these services and keep them inclusive.

UNOOSA is honoured to accompany you on this journey – as a neutral convener, as a source of expertise, and as a partner committed to ensuring that the space value chain works, first and foremost, for the most vulnerable.

Thank you.

7 KEYNOTE SPEECHES

Keynote Speeches on Looking Up Together: Developing Space Capabilities and Infrastructures

Marc Caesar Talampas, *Director of Space Technology Missions and Systems Bureau, Philippine Space Agency (PhilSA), Philippines*

Southeast Asia faces interconnected pressures—from rising climate risks and complex maritime environments to increasing congestion in orbit—that require coordinated and interoperable space capabilities. The keynote highlights how the Philippines has advanced its upstream space capabilities through sustained national investment complemented by well-designed international cooperation. Early collaboration with Japanese academic institutions and JAXA provided the foundational experience that enabled Filipino engineers to build domestic satellite development and operations capabilities. More recent partnerships in the United Kingdom, across Europe, and throughout Asia have strengthened industrial satellite development skills, enhanced Earth observation data processing, and expanded environmental monitoring efforts.

These national experiences illustrate a broader regional trajectory, where shared challenges create strong incentives for cooperation. ASEAN mechanisms such as the Committee on Science, Technology and Innovation (COSTI) and the Subcommittee on Space, Meteorology, and Ocean Systems provide platforms for aligning national initiatives, including ongoing work on space situational awareness and space traffic management. Multi-partner regional efforts, such as SCOPE Digital, demonstrate how national programmes can scale into shared regional services.

With the Philippines preparing to assume the ASEAN Chairship in 2026, the keynote calls attention to the opportunity to link national capabilities more coherently across the region and to consider practical pathways toward a resilient, collaborative space infrastructure for Southeast Asia.

Bio

Dr. Marc Caesar R. Talampas is the Director of the Space Technology Missions and Systems Bureau (STMSB) of the Philippine Space Agency (PhilSA). The STMSB directs and undertakes the design, implementation, testing, and integration of technologies for satellites, spacecraft, and other space systems that cascade to and enable the implementation of successful space science missions and space-enabled operational services.

Dr. Talampas obtained his BS Electronics and Communications Engineering and MS Electrical Engineering (Instrumentation and Control) degrees from the University of the Philippines, and his Ph.D. degree in Electrical and Electronic Engineering from the Nanyang Technological University in Singapore. His research interests include localization and tracking in wireless networks, sensor network applications, and satellite and space technology.

Prior to joining PhilSA, he served as the project leader of "Project 1: Microsatellite Bus Development (BUS)" project of the "Development of Philippine Earth Observation Microsatellite (PHL-MICROSAT)" program funded by the Department of Science and Technology. He also led the "Building PHL-50: Localizing the Diwata-1 and Diwata-2 Bus System as the Country's Space Heritage 50kg Microsatellite" project under the STAMINA4Space program.

Emine Doğrukök, *Advisor to the Minister, Ministry of Industry and Technology, Director of IAC 2026, Republic of Türkiye*

This high-level keynote presents Türkiye's strategic vision for advancing the global space ecosystem through strengthened cooperation, investment in human capital, forward-looking policy frameworks, and accelerated research and technological development. As Türkiye's space sector rapidly expands, the country emphasizes a collaboration-centered approach, actively engaging in regional and international platforms to support joint missions, shared satellite infrastructures, and data-driven applications that enhance resilience and innovation across the space value chain.

Human capital development stands at the core of Türkiye's strategy. With the youngest population in Europe, Türkiye prioritizes empowering youth, fostering university–industry partnerships, and promoting women's leadership in space sciences. National initiatives such as TEKNOFEST have created a dynamic innovation environment, cultivating technical talent capable of contributing to global space endeavors.

Türkiye's policy direction, anchored in its National Space Program, focuses on space sustainability, traffic management, data governance, and enabling commercial space activities. These frameworks aim to harmonize regulations, support responsible operations, and ensure long-term sectoral growth. Recent national achievements - including the IMECE Earth observation satellite, the indigenous TÜRKSAT 6A communications satellite, the first Astronaut and Science Mission, progress on the AYAP lunar exploration program, and plans for a national spaceport - demonstrate Türkiye's increasing technological maturity and readiness for deeper international cooperation.

Türkiye sees significant potential for joint efforts in Earth observation, AI-based analytics, disaster management, climate monitoring, agriculture, and the development of next-generation satellite subsystems. Looking to the future, Türkiye will host the International Astronautical Congress (IAC 2026) in Antalya under the theme "The World Needs More Space," inviting the global community to collectively advance innovation, sustainability, diversity, and unity in space activities.

Through this keynote, Türkiye reaffirms its commitment to peaceful, inclusive, and sustainable space development, and calls for enhanced regional and global partnerships to strengthen the shared future of humanity in space.

Bio

Emine Doğrukök graduated from Boğaziçi University, Department of Political Science and International Relations, in 2013. Following her graduation, she began working as a specialist at Turkish Airlines Technic Inc., in the Strategy Planning and Projects Department, in 2013. In 2015, she started working as a specialist at the Ankara Development Agency. Between 2018 and 2020, she received language training in the United States and took courses in social development at Indiana University in 2019. Within the Agency, she worked in the Program Management Unit, Investment Support Office, and Social Development Unit, and in 2022, she was appointed Head of the Social Development Unit.

On August 16, 2023, she was appointed Secretary General of the Ankara Development Agency. In 2024, she began working as an Advisor to the Minister of Industry and Technology and is currently overseeing the Secretariat process for the IAC 2026. DOĞRUKÖK is married and the mother of two children.

Keynote Speeches on Looking Down Together: Mobilizing Space-enabled Services and Solutions

Jonathan Hung, *Executive Director, Office for Space Technology and Industry (OSTIn), Singapore*

As the applications of space technology become increasingly integral to economic development and climate resilience, Southeast Asia is at a pivotal moment in shaping how satellite-enabled solutions can address shared regional challenges. Building a strong and interconnected downstream value chain that links data providers, solution developers, end users, and policy makers is essential to ensuring that space-based capabilities translate into meaningful societal benefits. Singapore, as an emerging spacefaring nation, is contributing to this global effort by fostering cooperation and enabling greater access to space-derived services.

A flagship initiative in this endeavour is Singapore's Earth Observation Initiative (EOI), designed to strengthen the regional uptake of satellite data and analytics. The EOI aims to connect countries and communities facing urgent challenges from climate change, natural hazards, and environmental degradation, with solution partners from national space agencies, private sector, and researchers. By aggregating needs, improving discoverability of services, and facilitating collaboration, the EOI supports the wider development of a sustainable and commercially viable downstream ecosystem.

Singapore's approach reflects its broader commitment to leveraging space for public good, strengthening resilience, and ensuring that emerging technologies are accessible and beneficial across Southeast Asia. Through the EOI, Singapore seeks to catalyse partnerships, stimulate innovation, and support a thriving value chain that enhances sustainable development outcomes for all.

Bio

Mr. Hung is the Executive Director at the Office for Space Technology & Industry (OSTIn), Singapore's National Space Office.

OSTIn's mission is to lead and inspire Singapore in Space. It shapes space policies and international partnerships, grows a globally competitive space ecosystem and supports research and development of space capabilities.

Mr. Hung's international work experience includes senior management roles with CAE Inc., Rheinmetall, ST Engineering and Flex, where he's credited with establishing and leading their successful Advanced Innovation Centre.

Earlier in his career, Mr. Hung was in government service as Centre Director for Middle East & North Africa Operations at the Singapore Economic Development Board (EDB). While at HQ EDB, he handed portfolios in aerospace, marine, offshore and super yacht sectors. He was formerly the Founder and Executive Chairman of Singapore's space trade association.

Mr. Hung currently represents OSTIn and Singapore as Head of Delegation at various multilateral fora such as the United Nations Committee of Peaceful Uses of Outer Space and Committee on Space Research. He serves on the Board of the World Robot Olympiad Association, chairs the Asia Pacific Sub-Committee at the International Astronautical Federation, and is an Honorary Board Member at the Space Generation Advisory Council.

Prior to his appointment with the National Space Office, he had served board tenures on various successful Space Tech start-ups and provided expert advisory services to emerging space economies.

Rolando Toledo, *Acting Secretary, Department of Budget and Management, Philippines*

This keynote address explores the strategic necessity of developing integrated Earth Observation (EO) services and robust connectivity solutions to build resilience and foster inclusive governance across Southeast Asia. While the region is marked by immense diversity, it faces shared and existential vulnerabilities—from severe climate-induced disasters (such as typhoons and floods) and maritime insecurity to critical infrastructure gaps. Space-based solutions offer an unparalleled capacity to see the invisible, anticipate the unpredictable, and enable foresightful, precise action.

The presentation highlights how the Philippine Department of Budget and Management (DBM) has institutionalized this potential through its flagship Digital Information for Monitoring and Evaluation (DIME) Initiative. DIME is a key governance reform that systematically integrates geospatial data into public sector planning, budgeting, and performance monitoring. It is designed not merely as a digital transformation project but as a fundamental innovation in governance. This effort is further strengthened by a Memorandum of Understanding (MOU) signed in 2023 between the DBM and the Philippine Space Agency (PhilSA), creating a vital bridge between advanced space science and practical fiscal policy. This partnership ensures that space technologies are not only technically robust but also policy-relevant.

Through DIME and PhilSA's support, the DBM leverages complex satellite-derived data, high-resolution imagery, drone footage, and administrative data layers to monitor infrastructure, assess environmental conditions, and evaluate the impact of public investments. A standout feature is the integration of UP-NOAH flood hazard maps, which provide crucial 5-year, 25-year, and 100-year risk projections. This capability allows the DBM to visualize exposure across short-, medium-, and long-term horizons—enabling decisive climate action: prioritizing climate-resilient infrastructure in high-risk areas, pre-positioning resources for disaster response, and ensuring that every investment is aligned with both current realities and future climate risks. In this way, data becomes not merely informative but foundational for decisive action and adaptive strategy.

Crucially, the address underscores that the maximum value of EO is realized only through regional collaboration. The challenges facing Southeast Asia are borderless, necessitating the development of regional downstream value chains. The vision calls for interoperable, inclusive, and responsive systems that strengthen coordinated efforts, including regional infrastructure benchmarking—enabling governments to learn from each other, avoid duplications, and accelerate progress. The keynote concludes with a powerful call to government, academia, industry, and civil society to co-develop shared standards and platforms. It invites the region to commit to an era where Earth observation empowers governance, and governance empowers people to rise together—stronger, smarter, and more united.

Bio

Acting Secretary of the Department of Budget and Management, Secretary Rolando "Rolly" U. Toledo is one of the most respected pillars of the DBM. A true homegrown leader, he began his journey in government in 1987 as an Accounts Analyst and rose through the ranks over the next 38 years - earning every step through hard work, discipline, and character.

He has served under multiple administrations, contributing to major fiscal reforms with consistency, stability, and professionalism. His deep institutional knowledge, combined with his calm and principled leadership style, has made him a trusted steward of the country's public finances.

Acting Secretary Toledo has held key positions across the DBM: Director of the Fiscal Planning and Reforms Bureau, Assistant Secretary and later Undersecretary of the Budget Policy and Strategy Group, and most recently, Undersecretary for the Budget Preparation and Execution Group—the central office in charge of crafting and implementing the national budget. His appointment as OIC-Secretary reflects not only his technical expertise but also his humility and lifelong commitment to service.

He is a Certified Public Accountant with studies in Development Economics at the UP School of Economics, and he completed his Master in National Security Administration at the National Defense College of the Philippines. Beyond his credentials, he is known across government as a champion of Open Government, advocating transparency, citizen participation, and accountability.

With his strong institutional memory and formidable experience, Acting Secretary Toledo continues to guide the DBM toward reforms that ensure responsible, transparent, and efficient use of public funds for the Filipino people.

Keynote Speeches on Looking Around: Enabling the Space Value Chain through Cooperation, Education, Policy, and R&D

Joel Joseph Marciano Jr., *Vice President for Research and Innovation, University of the Philippines System*
PhilSA Founding Director General

In a rapidly evolving space sector, collaboration plays a pivotal role in advancing space activities. Linkages across government, academe, industry and the public enable an inclusive and sustainable space ecosystem. Crucially, regional and international cooperation contribute to strengthening the space value chain—spanning upstream space science and technology development activities to the delivery of downstream satellite services and space-enabled solutions that ultimately lead to societal benefit.

The Philippine Space Agency (PhilSA) embraces collaboration as essential to growing a national space ecosystem that creates socio-economic value from space capabilities. Working with other government agencies, local government units, civil society organizations, academe, industry, and counterparts abroad, PhilSA is able to bridge space data and information into action, chart future space missions, and build a domestic space industrial base. Likewise, the Italian Space Agency (ASI) has long championed this approach, particularly through its expanding partnerships with countries in the Asia-Pacific region, including ASEAN. Initiatives such as the ASEAN-Italy Cooperation on Space and Smart Technologies serve as models for fostering regional capacity, enhancing technological exchange, and ensuring that nations can fully participate in and benefit from the global space landscape.

With rapid technological advancements, ensuring capacity-building for an adaptive workforce is key to empowering nations, especially in developing regions, to manage and lead space activities. Additionally, the creation of transparent, inclusive governance frameworks is essential to ensure the sustainable and peaceful use of space. Research and development efforts also play a critical role in addressing global challenges, from climate monitoring to space exploration, and collaborations enable nations to share knowhow, reduce costs, and accelerate space innovations. By actively engaging in multilateral platforms on space governance and in international R&D and capacity-building efforts, space agencies demonstrate their commitment to advancing the sustainable and peaceful use of outer space for all of humanity.

In conclusion, realizing a robust and productive space value chain contributes to inclusive socio-economic development. In this shared endeavor, we must continue to build partnerships, promote education, and develop inclusive policies so that we can ensure space remains a domain for global progress, economic growth, and scientific advancement.

Bio

Dr. Joel Joseph S. Marciano, Jr. served as the founding Director General of the Philippine Space Agency (PhilSA) from 2020 to 2025, leading its establishment and development. He is a Full Professor at the University of the Philippines (UP) Diliman and previously held the Dado and Maria Banatao Professorial Chair in Engineering. He obtained his PhD in Electrical Engineering and Telecommunications from the University of New South Wales and has held visiting appointments in Japan and the United States. From 2014 to 2020, he led the development of the Philippines' Diwata microsatellites and Maya nanosatellites. He has over 30 years of experience in R&D, technical operations, and academe–government–industry collaboration in wireless communications and space technology. In 2023, he received an honorary doctorate from Hokkaido University. He is currently Vice President for Research and Innovation of the UP System.

Maria Chiara Noto, *Head of the International Cooperation and Space Diplomacy Office, Italian Space Agency (ASI)*

For a space agency, the biggest challenge today is not developing new technologies—it is ensuring that space innovation becomes usable, trusted, and truly impactful for society. Italy, through ASI, is working to close this gap by transforming advanced national systems such as COSMO-SkyMed and IRIDE into real operational services that support decision-making, environmental monitoring, security, and disaster management. Turning high-quality data into timely and actionable information is where the real value of space emerges.

To achieve this vision, ASI focuses on three key enablers: open and decision-ready data platforms; services co-developed with public authorities to ensure real operational uptake; and clear communication of results, so that the benefits of space are visible to citizens and policy-makers.

International cooperation is central to this approach. The SIASGE partnership with Argentina and the Luigi Broglio Space Centre in Malindi, co-managed with the Kenya Space Agency, show how shared infrastructure, interoperable systems and joint operations can transform simple access to data into genuine national capability. In Africa, initiatives developed in the framework of the Mattei Plan further combine training, technical support and operational tools to help partner countries build their own downstream services.

A supportive policy and institutional environment is equally essential. Italy's 2025 Space Economy Law provides a modern and transparent framework for the authorization and supervision of space activities, giving institutions and companies the confidence to invest and innovate. In parallel, the ASI–IILA high-level training programme for Latin America and the Caribbean—supporting, among others, the consolidation of ALCE and involving long-standing partners such as CONAE and the Mario Gulich Institute—strengthens regional expertise in space governance, space economy and Earth observation.

By connecting cooperation, education, policy and R&D, ASI aims to ensure that space becomes a driver of sustainable development and a shared resource that all nations can access, use and benefit from.

Bio

Dr. Maria Chiara Noto is the Deputy Director for International Affairs and Head of International Cooperation and Space Diplomacy at the Italian Space Agency (ASI), where she has worked since 2016. She holds a Ph.D. in International and European Law from the University of Milan, a Master's in International Law from the University of Nice, and a degree in Law from the University of Parma. She also completed a specialized Master's program in Space Policy at SIOI. With over 15 years of experience in international law, research, and academia, she has worked extensively in Italy and abroad, including teaching and participation in European projects on maritime safety and security. Her career also includes legal advisory roles with the Armed Forces and the Ministry of University and Research.

8 THE MANILA PAGE

(to be added to the Trento Space Statement)

7th International Space Forum at Ministerial Level – The Southeast Asian Chapter

"Fostering Regional Synergy in Space for Shared Challenges and Sustainable Development"

On December 4th, 2025, the Ministers of Science, Technology and Innovation, Space Authorities, and other governmental representatives from the Southeast Asian countries- as well as representatives and experts from national and international space agencies and organizations- gathered in Manila (Philippines) under the auspices of the International Astronautical Federation (IAF), the Italian Space Agency (ASI), and the Philippine Space Agency (PhilSA), for the **7th International Space Forum - The Southeast Asia Chapter (ISF 2025)**.

Following the first International Space Forum in Trento (Italy) in 2016 and the subsequent regional Chapters focusing on Africa (Nairobi, 2017), Latin America and the Caribbean (Buenos Aires, 2018), Mediterranean region (Reggio Calabria, 2019), Central America and the Caribbean (Panama City, 2023), and the Gulf region (Manama, 2024), the Southeast Asia Chapter offered a renewed platform for open and productive dialogue. Discussions focused on strengthening regional space cooperation to address shared challenges and promote sustainable development in one of the world's most dynamic and rapidly evolving regions. Ministers, delegates, and experts exchanged views, shared experiences and visions, and delivered statements that highlighted several key insights:

- **The Southeast Asian region**, positioned at the crossroads of major powers and global trade routes, faces unique strategic challenges that demand space-based solutions for economic diversification beyond traditional dependencies and for supply chain monitoring.
- **Space technologies and related applications** are essential tools for addressing the unique challenges faced by Southeast Asian countries, particularly natural disasters, climate change, maritime security, infrastructure shortages, and sustainable development in the region's distinctive coastal and archipelagic environments, where traditional solutions are constrained by geography.
- **Space activities** require advanced scientific and technical knowledge, as well as a multidisciplinary approach that leverages the diverse expertise across the region while addressing different levels of technological development and regulatory frameworks among participating nations.
- **Academia, Universities, and Research Centers** are invaluable sources of knowledge and human capital, widely distributed throughout Southeast Asia and characterized by strong traditions of regional cooperation, though requiring enhanced coordination to bridge development gaps and maximize collective capabilities.
- **Enhanced cooperation** among Southeast Asian countries and with international partners would multiply the benefits of space technology for sustainable development, regional stability, environmental concerns, and economic resilience in the face of global competition, also in the framework of existing cooperative platforms, such as the pivotal Association of Southeast Asian Nations (ASEAN).

Three keynote speeches, structured under the integrated vision of Looking Up, Looking Down, and Looking Around, guided the discussions:

- **Looking Up Together: Developing Space Capabilities and Infrastructure** - Building regional space infrastructure and capabilities through collaborative missions and coordinated space technology development is central to addressing critical infrastructure needs.
- **Looking Down Together: Value Chains for Regional Space Downstream Services and Solutions** - Developing integrated Earth observation services and connectivity solutions is vital to address common regional challenges, including disaster

management, agricultural monitoring, maritime security, environmental protection, and infrastructure development monitoring across the diverse Southeast Asian landscape, with special attention to archipelagic and coastal nation needs.

- **Looking Around: Enabling the Space Value Chain through Cooperation, Education, Policy, and R&D** - Strengthening regional cooperation frameworks, harmonizing space policies, enhancing educational exchange programs, and fostering research and development partnerships all contribute significantly to building a sustainable space ecosystem.

Delegates noted that:

- The region's geographical diversity and varying levels of infrastructure development offer both opportunities and challenges, necessitating tailored approaches to technology transfer, data access, and capacity building. Southeast Asia is highly vulnerable to natural disasters, significant climate variability, and environmental challenges, all of which are exacerbated by dense populations and rapid urbanization. Coordinated space-based monitoring and early warning systems are vital to protect vulnerable communities and critical infrastructures.
- The region hosts both emerging and established space actors, opening opportunities for knowledge transfer, capacity building, and joint initiatives that can leverage comparative advantages while reducing disparities.
- The strategic importance of the maritime domain across Southeast Asia underscores the need for space-based solutions in navigation, communications, surveillance, and dispute monitoring.
- ASEAN and related regional mechanisms provide a strong foundation for enhancing space cooperation and coordination, though they require further reinforcement to address evolving governance needs and ensure adequate transparency and accountability.

Authorities, Heads of space agencies, and delegates welcomed the 7th International Space Forum - The Southeast Asia Chapter - and identified the following points as the main objectives to be pursued in the short to medium term:

- **Promotion of shared space infrastructures**, including satellite projects, regional ground station networks, and data sharing platforms, to maximize coverage and cost-effectiveness across the region, with particular attention to bridging infrastructure gaps and providing resilient communication capabilities for the most vulnerable areas;
- **Development of regional space downstream services** focusing on disaster management, agricultural monitoring, maritime security, environmental protection, climate change adaptation, and critical infrastructure monitoring tailored to Southeast Asian needs, with emphasis on supporting economic diversification, entrepreneurship stimulus, and supply chain resilience;
- **Strengthening of space education and capacity building** programs through university partnerships, student exchange programs, and joint research initiatives to develop the next generation of space professionals in the region while addressing skill gaps and promoting scientific excellence across all participating nations;
- **Harmonization of space policies and regulations** to facilitate cross-border space activities, data sharing, and joint missions while respecting national sovereignty, with emphasis on promoting transparency, accountability, and good governance practices in space activities;
- **Enhanced regional space cooperation** among Southeast Asian countries within the ASEAN framework and with Pacific partners, to facilitate technology transfer, capacity building, and joint mission development while addressing varying levels of space development and regulatory frameworks across the region;
- **Promotion of peaceful, responsible, and sustainable use of outer space** for the benefit of current and future generations, contributing to the achievement of the UN Sustainable Development Goals and regional prosperity.

The Southeast Asian delegations, recognizing both the unique challenges and opportunities facing the region in an era of global competition and economic transformation, expressed their firm commitment to pursue the objectives set forth during this 7th edition of the International Space Forum 2025. They also committed to enhancing the participation of local institutions, universities, scientific communities, and private-sector actors, and to further expanding dialogue on space capabilities and technology for socio-economic development, regional resilience, and peaceful cooperation in outer space.


Ambasciata d'Italia
Manila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EXIT
THAILAND
VIET NAM


chapter. I would like to thank the Italian Space Agency for its
STATEMENT BY THE
INTERNATIONAL ASTRONAUTICAL FEDERATION
Gabriella Arrigo
President
INTERNATIONAL ASTRONAUTICAL FEDERATION (IAF)


International Astronautical
OPENING MESSAGE
Leo Herrera Lim


Regional Space Agency Forum, or APR SAF in Cebu and the ASIAN Reg
ATEMENT BY THE PHILIPPINES


ISF 2025
Looking Up Together
Emine DOGRUKOK
Advisor to the Minister of Industry and Technology
Director of IAC 2026


shared aspirations. At the Philippines Space Agency, our mission
Looking Up Together:
for Southeast Asia
Marc Caesar R. Talampas, Ph.D.
Director IV
Philippine Space Agency


WELCOME REMARKS


Excellencies, distinguished guests,
Keynote Speech: "Looking Down Together:
Jonathan Hung


Dr. Maria Chiara Noto
Ms. Gabriella Arrigo
Dr. Guy Jane P. Perez


ISF
2025
INTERNATIONAL
SPACE FORUM
AT MINISTERIAL LEVEL
Philippine
Space
Agency


VIET NAM

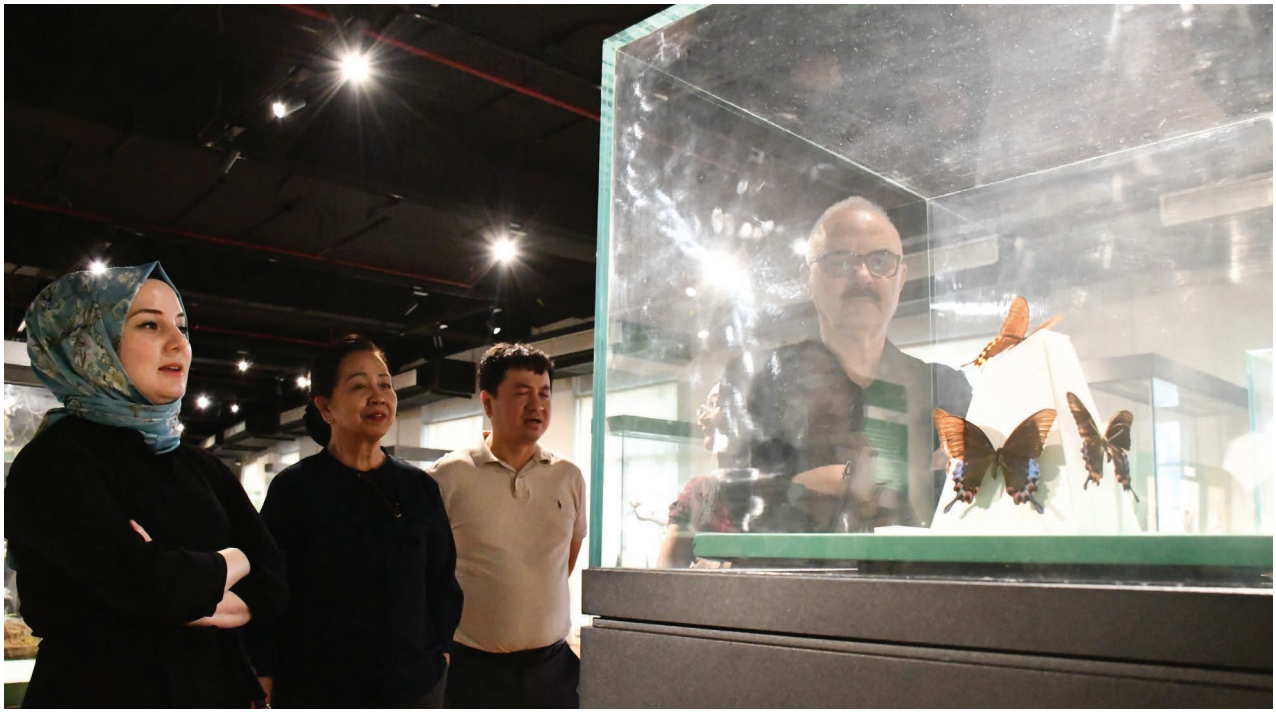

LAO PDR


Gala Dinner


EXIT
EXIT


EXIT

CULTURAL VISIT




MALIWANAG ANG PASKO
MERALCO


Tyrannosaurus rex


TIBI CORDI
TUO IMMACULATO
CONSECRAMUS NOS
AC CONSECRAMUS

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