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**Committee on the Peaceful
Uses of Outer Space**
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**International cooperation in the peaceful uses of outer
space: activities of Member States**

Note by the Secretariat

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II. Replies received from Member States

Canada¹

[Original: English]
[20 October 2023]

Summary

In 2023, Canada continued to provide invaluable support to the International Space Station (ISS) through the use of the Canadarm2 and Dextre; continued the operation of Canada's Earth observation and scientific satellite fleet, including the RADARSAT Constellation Mission, SCISAT and NEOSat; and continued to actively support the International Charter "Space & Major Disasters". Canada will shortly receive samples from the asteroid Bennu following the success of the OSIRIS-Rex mission, which will enable scientists to begin analysis of this precious cargo. In collaboration with the Office for Outer Space Affairs, Canada hosted the 2023 Space4Women Expert Meeting from 30 October to 3 November. For the latest information, and more details on the programmes mentioned, we invite you to visit the Canadian Space Agency (CSA) website at: www.asc-csa.gc.ca.

The International Space Station (ISS)

Canada's contribution to the ISS, the Mobile Servicing System (Canadarm2, Dextre, and the Mobile Base System) continues to operate successfully. Human health science on the ISS and in deep space remains a priority for Canada with its development of new multipurpose medical and research platforms, as well as research in food and health for deep space and terrestrial uses. Canada continues to advance novel and breakthrough technology for biological sample preparation for the utilization on the ISS. In addition, Canada pursued eight scientific studies related to human health science on the ISS: CARDIOBREATH, Space Health, SANSORI, T-Bone2, Vascular Echo, Vascular Aging, Vascular Calcium, and Wayfinding.

Planetary Sciences

Canada's OSIRIS-REx Laser Altimeter (OLA) on the National Aeronautics and Space Administration's (NASA) asteroid-sampling mission OSIRIS-REx played a critical role in localizing the sampling site on asteroid Bennu. In exchange for providing the OLA instruments, Canada's scientific community will have direct access to a returned sample, which will be housed at CSA headquarters in a specially built laboratory. In September 2023, OSIRIS-REx returned its sample to Earth, which may refine our understanding of the solar system's history, how Earth formed, and possibly the origin of water and life on Earth.

Lunar Exploration

Canada will contribute Canadarm3, a smart robotic system, to the Lunar Gateway, and Canadian astronauts will participate in flights next year, including to the Moon. A CSA astronaut, Colonel Jeremy Hansen, will be part of NASA's Artemis II, the first crewed mission to the Moon since 1972, becoming the first Canadian to travel beyond low-Earth orbit (LEO).

Under the Lunar Exploration Accelerator Program (LEAP), there are several initiatives underway to deliver Canadian technologies to the Moon over the next five years. The NASA Commercial Lunar Payload Service Delivery flight will deliver a Canadian rover to the Moon carrying both United States and Canadian instruments.

Canada continued to advance the Lunar Surface Exploration Initiative (LSEI), which included concept studies for potential options for the next major Canadian

¹ A shorter version of the submission by Canada is available in all the official languages of the United Nations in document [A/AC.105/1308/Add.2](#).

infrastructure contribution to human spaceflight to the lunar surface. Seven concept studies were completed in the past year and five prototyping contracts were advanced by Canadian companies as part of a two-phase request for proposals. The concept studies and prototyping activities are meant to advance options for future infrastructure enabling a sustained human presence on the Moon. In the context of lunar exploration, Canada also secured funding to design, build and operate a utility vehicle capable of surviving the harsh lunar night. This will contribute to NASA's Artemis Program by providing assistance to the crew, transporting resources, performing logistics, and construction duties.

The CSA and Impact Canada continue to advance the Deep Space Healthcare Challenge to develop innovative health-care technologies for remote communities and for crews on long-duration space missions. This year, five companies developed a proof-of-concept to test in a lab environment. Finalists in the next stage will refine their designs, with the ultimate goal of testing prototypes in a simulated environment.

Space Atmospheric Sciences

Canada's SCISAT satellite remains the only satellite to measure hydrofluorocarbons (HFCs) concentrations from space, by measuring ozone layer and substances that contribute to its depletion and continues to operate nominally. SCISAT provides valuable data for multiple scientific activities that advance climate science. It is also the only satellite able to measure all major greenhouse gases, including high quality atmospheric profiles of carbon dioxide.

Canada is also contributing to the Atmosphere Observing System (AOS) mission, an international multi-satellite mission led by NASA, along with the Japan Aerospace Exploration Agency (JAXA), Centre National d'études Spatiales (CNES) and the German Aerospace Center (DLR). AOS is equipped with instruments that will measure aerosols and clouds, and how their interaction impacts Earth's weather and climate. Canada's contribution, the High-altitude Aerosols, Water vapour and Clouds (HAWC) mission, consists of two Canadian instruments on a Canadian satellite and a third instrument on a NASA satellite. The data collected by HAWC and AOS will improve the ability to predict near-term weather events, long-term climatic conditions and air quality. HAWC is planned to be launched in 2031.

Space-Based Astronomy

Canada is currently preparing its participation to the European Space Agency's (ESA) Atmospheric Remote-sensing Infrared Exoplanet Large-survey (ARIEL) mission through the provision of a cryo-harness. Canada continued to support the James Webb Telescope project, a partnership between NASA, ESA and the CSA. Canada provided two instruments: the Fine Guidance Sensor (FGS) and the Near-Infrared Imager and Slitless Spectrograph (NIRISS). Canada also continued to operate its own space telescope, the Near-Earth Object Surveillance Satellite, NEOSSat, and participated in international space observation campaigns under the International Asteroid Warning Network. NEOSSat astronomical imagery is published on CSA's Open Data portal and National Research Council of Canada – Canadian Astronomy Data Centre.

Space Weather

Canada continued to operate ground-based imagers and magnetometers across Canada, with the support from the University of Calgary and University of Alberta. This system contributes to the NASA THEMIS mission, which focuses on ground-based observations of the aurora borealis. Canada continues to collaborate with ESA's Swarm mission, which measures the magnetic fields generated by the Earth.

Space Situational Awareness (SSA)

Canada's space-based SSA continues to provide data on deep-space objects to the United States-led Space Surveillance Network (SSN), helping to maintain the safety

of space objects in Earth orbit. The NEOSSat space telescope supports advanced research and development (R&D) by tracking and characterizing space objects in orbits from LEO to deep-space. Canada's Conjunction Risk Assessment and Mitigation System (CRAMS) continues to provide invaluable analysis services to help satellite operators, in Canada and beyond, make informed decisions in response to on-orbit close approaches identified by the SSN. The service plays an important role in avoiding on-orbit collisions.

Canada continued its active participation in the Inter-Agency Debris Coordination Committee (IADC) and the Inter-Agency Operations Advisory Group (IOAG) to develop and promote best practices in collaboration with other space agencies, including emphasis on the sustainability of space operations.

Earth Observation

To deliver on its 2022 satellite Earth Observation strategy, Canada established a Satellite Earth Observation (SEO) Office, located within the CSA. The objective of the Office is to facilitate coordination and engagement across the Government as well as with public, private and academic actors involved the collection or the application of SEO data.

The RADARSAT Constellation Mission (RCM) continues to support the Government of Canada in its mandate to monitor the impacts of climate change. In addition, supporting efforts to protect our environment and foster sustainable development, manage natural resources, and support disaster relief.

NASA's Surface Water Ocean Topography (SWOT) satellite was launched in December 2022. Canada contributed three instruments (Extended Interaction Klystrons) at the heart of the Ka-band Radar Interferometer. In operation since July 2023, SWOT will survey 90 per cent of Earth's surface water and is expected to lead to improvements in many water-related services, including flood warning systems, sea levels and ocean currents monitoring.

Canada continues to develop the WildFireSat mission aimed at providing daily monitoring of all active wildfires in Canada from space. The mission will use infrared sensors to measure energy coming from wildfires, based on microbolometer technology. The primary goal of WildFireSat is to support wildfire management but will also provide Canadians with more precise information on smoke and air quality conditions. It will enable more accurate measures on carbon emitted by wildfires, an important requirement of international agreement on carbon reporting. WildFireSat is planned to be launched in 2028.

In addition, the CSA continues the preparation and delivery of eight Earth Observation (EO)-related sessions for the annual Indigenous Mapping Workshop (IMW) 2023, as part of a task under the Committee on Earth Observation Satellites (CEOS) Working Group on Capacity Building and Data Democracy. The IMW events are for Indigenous Nations, organizations and practitioners, supporting indigenous-led geospatial research and projects.

Science, technology, engineering and mathematics (STEM) Outreach

The CSA continues to engage with education and STEM outreach collaborators, to work on the "Objective: Moon", a series of STEM initiatives and resources for youth and educators on the return to the Moon. The CSA complemented its "digital first" commitment to making all its content and resources available via the Internet in English and French, with both virtual presentations and in-person opportunities to learn more about the upcoming missions and Canadian contributions to advancements in space STEM.

The CSA is taking further action to support equity-seeking groups underrepresented in space STEM fields. For example, applicants for funding opportunities are encouraged to demonstrate how their activities would meet the needs of girls, Indigenous youth, socioeconomically disadvantaged groups and visible minorities.

Space4Women Expert Meeting

From 30 October to 3 November 2023, the CSA co-hosted in collaboration with the Office for Outer Space Affairs, the 4th Space4Women Expert Meeting. Space4Women aims to promote women's empowerment in space in support of the Sustainable Development Goals and the 2030 Agenda. Space4Women encourages women and girls to pursue Science, Technology, Engineering, and Mathematics (STEM) education and raises awareness about career opportunities and the importance of gender equality and empowerment in the space sector. A key outcome of the Expert Meeting is the development of a gender mainstreaming toolkit for the space sector.

National Technical, Science and Human Capacity-building

In 2023, Canada continued the Canadian CubeSat Project (CCP), where 15 teams, one from each Canadian province and territory, composed of researchers, professors and over 800 post-secondary students, are taking part in real space missions, by designing, building, launching, and operating their own CubeSats. A second round of this initiative, named CUBICS, was launched in 2023 and nine projects were selected for funding. Each CubeSat developed by the students will gather data from space that will help increase scientific knowledge to better understand climate change.

More than 50 academic research projects supported by the CSA under the Flights and Fieldwork for the Advancement of Science and Technology (FAST) initiative progressed in 2023. These projects contribute to the development of new scientific knowledge and the application of space technologies, while making it possible for students and postdoctoral fellows to acquire valuable, hands-on experience in space-like missions.

The CSA continued its stratospheric balloon initiative, STRATOS, in collaboration with the CNES. In August 2023, four zero-pressure balloons carrying eighteen payloads from Canada and Europe were launched from the Timmins, Ontario, Canada stratospheric balloon base, to test new technologies, to conduct science experiments and to take measurements. In addition, stratospheric expandable balloons were launched with educational payloads onboard.

Support to Global Challenges

In 2023, Canada's scientific and operational satellite missions continued to contribute to the achievement of the Sustainable Development Goals in multiple ways. Earth Observation missions such as SCISAT, SWOT, RCM, OSIRIS on Odin and projects under smartEarth, the application development initiative, helped strengthen resiliency and adaptability to climate related hazards and natural disasters.

While supporting domestic disasters management and relief, Canada continues to actively support the International Charter on Space and Major Disasters, a collaboration founded by ESA, CNES and CSA, that currently has seventeen members.

Space Policy

Canada is actively working toward the sustainability and ongoing use of space for peaceful purposes through multilateral and international forums. The CSA continues its internal assessment of Canada's compliance to the 21 Guidelines for the Long-term Sustainability of Outer Space Activities in order to identify gaps and areas for review to further strengthen Canada's commitment to the safety and sustainability of outer space.

Since its 2022 annual report, Canada has registered 11 satellites with its national and United Nations registries.

India

[Original: English]
[6 December 2023]

India achieved one of the major milestones in its space journey on 23 August 2023 by soft landing on the lunar surface near lunar south pole in its third lunar mission Chandryaan-3. The Vikram lander and Pragyan rover also conducted several scientific experiments which will enhance our understanding of the Moon. India also launched its first solar observatory mission Aditya-L1 in September 2023, which is on its way to its final destination, 1.5 million km from the Earth, which will provide crucial information to enhance our understanding of solar activities and its effect on space weather. International cooperation with other spacefaring nations has been instrumental in achievement of these milestones.

India pursues bilateral and multilateral relations with other countries and space agencies in the peaceful uses of outer space. Over the years, India has signed more than 260 Space Cooperative documents with 61 countries and 5 multilateral organizations in the areas of earth observation, climate action, space exploration, space situation awareness, etc. These countries and multilateral organizations include Afghanistan, Algeria, Argentina, Armenia, Australia, Bahrain, Bangladesh, Bhutan, Bolivia (Plurinational State of), Brazil, Brunei Darussalam, Bulgaria, Canada, Chile, China, Colombia, European Commission (EC), European Centre for Medium Range Weather Forecasts (ECMWF), Egypt, European Space Agency (ESA), European Organisation for the Exploitation of Meteorological Satellites (EUMETSAT), Finland, France, Germany, Hungary, Indonesia, Israel, Italy, Japan, Kazakhstan, Kuwait, Luxembourg, Maldives, Mauritius, Mexico, Mongolia, Morocco, Myanmar, Nepal, Netherlands (Kingdom of the), Nigeria, Norway, Oman, Peru, Portugal, Republic of Korea, Russian Federation, Sao Tome and Principe, Saudi Arabia, Singapore, South Africa, South Asian Association for Regional Cooperation (SAARC), Spain, Sri Lanka, Sweden, Syrian Arab Republic, Tajikistan, Thailand, Tunisia, Ukraine, United Arab Emirates, United Kingdom of Great Britain and Northern Ireland, United States of America, Uzbekistan, Venezuela and Viet Nam. India also joined the Artemis Accords on June 21, 2023.

In the last one year, five cooperative documents with entities of three countries were signed. The activities identified in the above include collaboration in quantum communication, support for NavIC, joint satellite realization, and space situational awareness.

The unique capacity-building programme announced by India on the occasion of UNISPACE+50 concluded with its third batch organized from 17 October 2022 to 15 December 2022. The programme was named as UNNATI (UNISPACE Nanosatellite Assembly and Training by the Indian Space Research Organization (ISRO)) through which theoretical and hands-on training on the design, assembly, integration and testing on nano satellites was imparted to three batches of engineers and scientists across the globe. The first batch was organized January to March 2019, second batch October to December 2019 and the third batch October to December 2022. Through these three batches, a total of 90 officials from 49 countries were trained in the small satellite building area. The total expense of the training including the air travel, boarding and lodging were fully sponsored by ISRO.

As part of extending support to space aspiring countries, an India-Bhutan joint small satellite was realized and launched onboard PSLV on 26 November 2022. Bhutan engineers were involved in the realization of the satellite and one of the payloads has been developed by Bhutan with technical support from ISRO. As part of this project, theoretical and practical training on analysing and utilizing the data from the satellite was provided to around 20 Bhutan officials. A ground station to receive the data from the satellite was also established by ISRO in Thimphu. As a follow-up another 1-week training programme to officials from various ministries of Bhutan were provided in September 2023 on how to use satellite data for various applications. This was

followed by another Forum with the participation of high-level functionaries of Bhutan on “Applications of Geospatial Technology for Governance and Development”.

ISRO developed a web portal with satellite data and products pertaining to Pacific Island Countries named DWEPIC (Data Warehouse for Empowering Pacific Island Countries) and the same was announced by the Honourable Prime Minister during the 3rd Summit of Forum for India-Pacific Islands Cooperation (FIPIC) on 22 May 2023 at Port Moresby, Papua New Guinea. A similar India-Oman Space Portal has been developed for use by Oman.

Under India’s G20 Presidency, the 4th edition of the Space Economy Leaders Meeting was organized in Bengaluru from 6 to 7 July 2023. The precursor event of SELM was organized at Shillong, Meghalaya from 17 to 18 April 2023 where Ambassadors and senior officials from the embassies of 16 G20 and invited countries participated. The theme of the 4th SELM was “Towards a new space ERA (Economy, Responsibility, Alliance)”, in line with India’s G20 Summit’s theme of “One Earth, One Space, and One Future”. The SELM event at Bengaluru was marked with the participation of Space Agency Heads and senior representatives from space agencies of 18 G20 countries, 8 invited countries, and 1 international organization — ITU. Additionally, 32 foreign space companies and 53 Indian space companies actively participated.

In addition to the above, the other ongoing international cooperation activities are progressing well. The joint realization of the National Aeronautics and Space Administration (NASA)-ISRO Synthetic Aperture Radar (NISAR) satellite have completed major milestones and payload from NASA’s Jet Propulsion Laboratory is at ISRO for integration to the satellite bus and integrated level checks with ISRO payload. ISRO is also collaborating with the United States, the Russian Federation, France and Japan, on various aspects of the human spaceflight capabilities.

India continues to share its facilities, expertise in the application of space science and technology by conducting short-term and long-term courses through Indian Institute of Remote Sensing (IIRS) and the United Nations affiliated Centre for Space Science and Technology Education in Asia and the Pacific (CSSTEAP) at Dehradun. As of now, there are more than 4,500 beneficiaries from more than 110 countries in these programmes.

India continues to play an active role in the deliberation of the Committee on the Peaceful Uses of Outer Space. India is chairing the Working Group of the Whole and the working group under the agenda item on the long-term sustainability of outer space activities of the Scientific and Technical Subcommittee. The Working Groups had the formal meetings and informal consultations during the sixtieth session of the Scientific and Technical Subcommittee of the Committee on the Peaceful Uses of Outer Space.

India, through ISRO, also actively participates in the meetings of prominent multilateral forums including: International Astronautical Federation (IAF), International Academy of Astronautics (IAA), International Institute of Space Law (IISL), Committee on Earth Observation Satellites (CEOS), International Society for Photogrammetry and Remote Sensing (ISPRS), Coordination Group on Meteorological Satellites (CGMS), International Committee for Global Navigation Satellite Systems (ICG), Committee on Space Research (COSPAR), International Space Exploration Coordination Group (ISECG) and Inter-Agency Space Debris Coordination Committee (IADC) and Space for Climate Observatory (SCO). In addition, India is in discussion with partner countries under the frameworks of BRICS, QUAD and I2U2 for undertaking space enabled activities in the multilateral forums.

Jordan²

[Original: English]
[22 November 2023]

Implementing the five United Nations treaties related to outer space

- Jordan has signed three United Nations treaties: 1967 Outer Space Treaty (OST), 1968 Agreement on the Rescue of Astronauts, the Return of Astronauts and the Return of Objects Launched into Outer Space (ARRA) and 1992 International Telecommunication Constitution and Convention (ITU).
- Approval and ratification and accession to the following treaties: 1963 Nuclear Test-Ban Treaty (NBT), 1971 Agreement Relating to the International Telecommunications Satellite Organization (ITSO), 1976 Agreement of the Arab Corporation for Space Communications (ARB), 1976 Convention on the International Mobile Satellite Organization (IMSO) and 1992 International Telecommunication Constitution and Convention (ITU).

Capacity-building in the field of space law

- The Regional Centre for Teaching Space Science and technology for West Asia and The Royal Jordanian Geographical Centre have made efforts to build capacity in the field of space law, and networking with local universities where teaching of space law was encouraged as well as establishing academic programmes in space law.
- Lectures and seminars for students and the community on the subject of law space.
- Teaching international space law in the courses of space science and technology (11 courses during the past year), as these courses were distributed among private and public universities and colleges.

Work is underway to introduce the “Jordanian Space Law” and a preliminary draft has been issued in order to submit it for ratification and approval.

Adopted mechanisms related to non-legally binding United Nations tools, including the principles of judicial debris mitigation, the sustainability of space activities and space capacity-building, are found in the draft of the initial Jordanian space law and in its improvements.

The Regional Centre for Space Science and Technology Education for Western Asia, affiliated to the United Nations and the Royal Jordanian Geographical Centre have carried out dozens of activities, seminars, conferences and workshops, and training for students, in addition to academic programmes in the area of the United Nations Office for External Judicial Affairs, such as the Master’s in Geographic Information System and Master in Space Communications in Mutah University-Jordan.

Malaysia

[Original: English]
[23 November 2023]

Malaysia’s commitment in developing the national space sector was translated with the establishment of the National Space Policy 2030 (DAN2030) in 2017 by the Ministry of Science, Technology and Innovation (MOSTI). Malaysian Space Agency (MYSA), an entity under MOSTI were tasked to spearhead the implementation of DAN2030 with an objective on mastering the space sector to contribute to the country’s economic growth towards new space economy. An action plan, namely the

² A related submission by Jordan is available in all the official languages of the United Nations in document [A/AC.105/1308](#).

Malaysia Space Exploration 2030 (MSE2030) has been launched by the Prime Minister to drive the growth of the national space sector and create a sustainable and comprehensive national space ecosystem. MSE2030 outlines 15 strategies, 27 initiatives and 76 main activities planned until 2030. In line with the five thrusts of National Space Policy 2030, MSE2030 focuses on improving governance management, strengthening space technology infrastructure, building local expertise, developing competitive local space industry capabilities and strengthening international cooperation. Among the main initiatives accomplished in 2023 are as follows:

- (i) Strengthening Space Sector Governance
- (ii) Space Industry Strategic Plan 2030 (SISP2030)
- (iii) National Satellite Development Program
- (iv) Centre of Excellence in Space Policy and Space Law
- (v) Malaysian Space Industry Corporation (MASIC)
- (vi) International Space Forum
- (vii) Education and Awareness Program
- (viii) Feasibility Study Guideline for the Development of Launching Facilities
- (ix) International Space Cooperation

(i) Strengthening Space Sector Governance

To optimize the country's access to space capabilities, the National Space Committee (JANGKA) chaired by the Minister of MOSTI and participated by representatives from relevant ministries was reinforced for centralized coordination to ensure inclusive, synchronized and integrated development of the national space sector. The committee has convened twice this year with few impactful decisions made and significant documents endorsed such as the Space Industry Strategic Plan 2030 (SISP2030) and the Feasibility Study Guideline for the Development of Launching Facilities in Malaysia.

(ii) Space Industry Strategic Plan 2030 (SISP2030)

In line with Thrust Three of the National Space Policy 2030, MOSTI through MYSA has carried out a space industry study aimed at identifying the availability and ability of local industry involvement in the country's space sector activities. The result of this study has been utilized in the development of the SISP2030 which has been launched in May 2023. The plan acts as the main reference to drive the development of the country's space industry in a more planned manner so that it becomes more competitive as well as increase the confidence and interest of local and foreign industries to invest in the country's space sector to achieve the target of contributing 1 per cent to the country Gross Domestic Product (GDP) by 2030.

(iii) National Satellite Development Program

The implementation the National Satellite Development Program coincides with SISP2030 which has identified the satellite technology-based industry as a new engine of economic growth and job creation in Malaysia. SISP2030 has outlined the three-pronged strategy which are improving local industry's capability in satellite manufacturing, driving innovation through satellite data-based services and developing local talent in the field of satellite technology. The development of the new remote sensing satellite will be implemented through the Public-Private Partnership (PPP) approach. The Request for Proposal (RFP) is expected to be issued in the first quarter 2024.

In the second quarter 2023, the A-SEANSAT-PG1 (PG1) satellite was successfully launched on 27 June 2023. The PG1 satellite is a low-Earth orbit (LEO) nanosatellite

developed through collaboration between a local industry, ANGKASA-X and a public university, Universiti Sains Malaysia (USM). The main mission of the satellite is to monitor and track ships using the Automatic Identification System (AIS). It also carries a remote sensing camera with a resolution of up to 5 meters.

(iv) Centre of Excellence in Space Policy and Space Law

Since the gazettelement of the Malaysian Space Board Act in 2022, Malaysia has continued its effort by enacting the regulations in ensuring the Act to be fully enforced. A core programme under the ministry has been initiated to establish a research and development hub in space policy and space law with the objective to increase collaboration in research and development; provide expertise and consultation; offer shared infrastructure and facilities; as well as becoming the reference centre of related field. Realizing that consolidated effort is essential in promoting and supporting responsible space activities, Malaysia is extending the initiative to ASEAN to offer space law capacity-building and legal advisory services for regulatory authorities of new and emerging spacefaring nations in the region. On 25–26 October 2023, Malaysia successfully hosted an Expert Exchange Seminar on Space Policy: Empowering Association of Southeast Asian Nations (ASEAN) Space Capacity towards New Space Economy with the attendance of representatives from the Office for Outer Space Affairs, National Research and Innovation Agency (BRIN), Geo-Informatics and Space Technology Development Agency (GISTDA), Philippine Space Agency (PHILSA) and Office for Space Technology & Industry (OSTIn) to name a few.

(v) Malaysian Space Industry Corporation (MASIC)

MASIC is the union of local space industries players undertaking space activities and developing the space sector. It was established and inaugurated by the Prime Minister on 24 May 2023 with the objective to position Malaysia as a competitive hub in space and contributing to the country's economic development through space industry. Led by the Malaysian Industry-Government Group for High Technology (MIGHT), it is aimed to create a dynamic space industry ecosystem that promotes Malaysia's space capabilities while attracting investment, talent and partnerships from around the world.

(vi) International Space Forum

Malaysia has organized the SpaceTech Nexus programme that includes the Langkawi International Space Forum 2023 in conjunction with the Langkawi International Maritime and Aerospace Exhibition (LIMA'23) held from 23 to 27 May 2023. The objective of the forum is to provide a new space economy cooperation platform to drive the growth of national and regional space sector. Various activities and programmes were executed including commercial exhibitions, bilateral meetings with six spacefaring countries, round table discussions with the heads of ASEAN space agencies, exchange of Memorandum of Understanding (MoU) and Letter of Intent (LoI) as well as side events sessions with school children. Total attendance for this programme was 4,347 participants from 23 countries. The potential value of activities and investments expected as a result of this programme is estimated at RM1.1 billion.

(vii) Education and Awareness Program

Various activities have been held at the national level involving government agencies, industries, academia and non-governmental organizations throughout the month of October to enliven the celebration of World Space Week 2023. Among the activities implemented were exhibitions, inter-school and universities competitions, radio telecommunication with the International Space Station (ISS), quality day, space day, seminars, conferences, engagement sessions and international collaboration projects. Integrated involvement between the Government and various parties has successfully strengthened the strategic cooperation network especially in the aspects of capacity development, expertise, technical and commercial cooperation opportunities and

facilitated investment in the space industry to boost local start-up industry growth, in line with this year's theme "Space and Entrepreneurship".

National Space Week is one of MOSTI's initiatives in the effort to mainstream innovation activities and national creativity of the citizen. To date, more than 120 activities have been held involving various age levels with the participation from students and communities from the city and countryside.

(viii) Feasibility Study Guideline for the Development of Launching Facilities

The National Space Committee (JANGKA) on 2 November has endorsed the Feasibility Study Guideline for the Development of Launching Facilities in Malaysia in line with Thrust Two of the National Space Policy 2030 focusing on space technology, infrastructure and application significant to the nation. The main objective of this document is to facilitate any entities that are interested in carrying out the feasibility study and at the same time avoid any gaps or overlap with current regulations and acts that are taking effect. The guideline is applicable and can be used by all parties who intend to develop launch facility in Malaysia. The scope or aspects of the feasibility study are not limited to the ones listed in the guideline and the document will be reviewed and added accordingly from time to time.

(ix) International Space Cooperation

Malaysia appreciates the support from the Office for Outer Space Affairs on capacity-building initiatives and committed to work together with all other member States of the Committee on the Peaceful Uses of Outer Space. In 2023, Malaysia has actively involved and participated in many international and regional space initiatives organized by the Office for Outer Space Affairs, the Asia-Pacific Regional Space Agency Forum (APRSAF), the ASEAN Subcommittee on Space Technology and Application (SCOSA), the Asian Association on Remote Sensing (AARS), the International Astronautical Federation (IAF) and the International Astronomical Union (IAU).

The Memorandum of Cooperation (MoC) between MYSA and the Japanese Aerospace Exploration Agency (JAXA) has been finalized and is expected to be signed in December 2023. Malaysia looks forward to further strengthen the cooperation with the Office for Outer Space Affairs and other stakeholders in promoting access to programmes that can support the attraction of investment, research and development in the country.
