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**Economic and Social Commission for Asia and the Pacific**  
Fourth Ministerial Conference on Space Applications for Sustainable  
Development in Asia and the Pacific

Jakarta and online, 26 October 2022

**Report on the Fourth Ministerial Conference on Space  
Applications for Sustainable Development in Asia and the  
Pacific****I. Matters calling for action by the Commission or brought  
to its attention****A. Matters calling for action by the Commission**

1. The following recommendation made at the Fourth Ministerial Conference on Space Applications for Sustainable Development in Asia and the Pacific is brought to the attention of the Economic and Social Commission for Asia and the Pacific for its consideration and possible action:

**Recommendation**

The participants in the Fourth Ministerial Conference on Space Applications for Sustainable Development in Asia and the Pacific recommend that the Economic and Social Commission for Asia and the Pacific endorse the Jakarta Ministerial Declaration on Space Applications for Sustainable Development in Asia and the Pacific at its seventy-ninth session, in 2023.

**B. Matters brought to the attention of the Commission**

2. The following decisions adopted at the Fourth Ministerial Conference are brought to the attention of the Commission:

**Decision 1**

The participants in the Fourth Ministerial Conference on Space Applications for Sustainable Development in Asia and the Pacific adopt the Jakarta Ministerial Declaration on Space Applications for Sustainable Development in Asia and the Pacific.

## **Decision 2**

The participants in the Fourth Ministerial Conference on Space Applications for Sustainable Development in Asia and the Pacific support the issuance, in 2024, of the second edition of a biennial report on geospatial practices for sustainable development, which will focus on one subregion in Asia and the Pacific, to share knowledge and experience among members and associate members of the Economic and Social Commission for Asia and the Pacific and to guide policy actions for the implementation of the Asia-Pacific Plan of Action on Space Applications for Sustainable Development (2018–2030).

## **Decision 3**

The participants in the Fourth Ministerial Conference on Space Applications for Sustainable Development in Asia and the Pacific decide to convene the Fifth Ministerial Conference on Space Applications for Sustainable Development in the second half of 2026, to coincide with the end of phase II (2022–2026) and the start of phase III (2026–2030) of the Asia-Pacific Plan of Action on Space Applications for Sustainable Development (2018–2030).

## **II. Organization**

### **A. Opening, duration and organization of the Fourth Ministerial Conference**

3. The Fourth Ministerial Conference was held in Jakarta and online on 26 October 2022. The Executive Secretary delivered an opening statement. Opening statements were also delivered by the Minister of National Development Planning and Head of the National Development Planning Agency of Indonesia, Mr. Suharso Monoarfa; the Chairman of the National Research and Innovation Agency of Indonesia, Mr. Laksana Tri Handoko; the Minister of Education of Sri Lanka, Mr. S.A.D. Susil Premajayantha; the Chairman of the Indian Space Research Organization and Secretary of the Department of Space of India, Mr. S. Somanath (by video); the Director General of the Philippine Space Agency, Mr. Joel Joseph S. Marciano, Jr.; the Vice-Minister of Science and Technology of China, Mr. Zhang Guangjun (by video); and the Secretary-General of the World Meteorological Organization, Mr. Petteri Taalas (by video).

### **B. Attendance**

4. Representatives of the following members and associate members attended: Armenia; Azerbaijan; Bangladesh; Bhutan; China; Fiji; India; Indonesia; Iran (Islamic Republic of); Japan; Kazakhstan; Kyrgyzstan; Malaysia; Maldives; Mongolia; Pakistan; Philippines; Republic of Korea; Russian Federation; Singapore; Sri Lanka; Thailand; Tonga; Türkiye; Tuvalu; United States of America; and Uzbekistan.

5. A representative of the United Nations Environment Programme attended.

6. Representatives of the following United Nations bodies, specialized agencies and funds also attended: Food and Agriculture Organization of the United Nations; United Nations Educational, Scientific and Cultural

Organization; United Nations Institute for Training and Research; and World Meteorological Organization.

7. Representatives of the following intergovernmental organizations also attended: Asian Development Bank; Centre for Space Science and Technology Education in Asia and the Pacific; Multi-GNSS Asia; and South Asian Association for Regional Cooperation.

8. In accordance with rule 12 of the Commission's rules of procedure, the Chair and Vice-Chairs examined the credentials of all the representatives and found them to be in order.

### **C. Election of officers**

9. The participants in the Fourth Ministerial Conference elected the following officers:

Chair: Mr. Laksana Tri Handoko (Indonesia)  
 Vice-Chairs: Mr. S.A.D. Susil Premajyantha (Sri Lanka)  
 Mr. Joel Joseph S. Marciano, Jr. (Philippines)

### **D. Agenda**

10. The participants in the Fourth Ministerial Conference adopted the following agenda:

1. Opening of the Fourth Ministerial Conference:
  - (a) Opening statements and keynote addresses;
  - (b) Election of officers;
  - (c) Adoption of the agenda.
2. Scaling up space applications to advance sustainable development in Asia and the Pacific under the theme "Space+ for our Earth and future".
3. Report on the implementation of the Asia-Pacific Plan of Action on Space Applications for Sustainable Development (2018–2030), phase I (2018–2022).
4. Other matters.
5. Adoption of the report on the Fourth Ministerial Conference and a ministerial declaration on space applications for sustainable development in Asia and the Pacific.

### **E. Other events**

11. The following seminars, side events and special sessions were held in conjunction with the Fourth Ministerial Conference:

- (a) 24 and 25 October 2022, ad hoc session of the Intergovernmental Consultative Committee on the Regional Space Applications Programme for Sustainable Development, co-hosted with the National Research and Innovation Agency of Indonesia;

(b) 24 and 25 October 2022, expert group meeting on the virtual constellations of satellites for disaster risk management, co-hosted with the National Research and Innovation Agency of Indonesia;

(c) 26 October 2022, side event on the launch of *Geospatial Practices for Sustainable Development in South-East Asia 2022: A Compendium*;

(d) 26 October 2022, side event on current and future national space programmes to support the Sustainable Development Goals in Indonesia, organized by the National Research and Innovation Agency of Indonesia;

(e) 26 October 2022, exhibition on the theme “Space+ for our Earth and future”, co-hosted with the National Research and Innovation Agency of Indonesia.

### **III. Account of proceedings**

12. The discussions held during the Fourth Ministerial Conference have been summarized in an account of proceedings (see annex II).

## Annex I

### List of documents

<i>Symbol</i>	<i>Title</i>	<i>Agenda item</i>
<i>General series</i>		
ESCAP/MCSASD/2022/1	Space+ for our Earth and future	2
ESCAP/MCSASD/2022/2	Implementation of the Asia-Pacific Plan of Action on Space Applications for Sustainable Development (2018–2030), phase I (2018–2022)	3
ESCAP/MCSASD/2022/3	Report on the Fourth Ministerial Conference on Space Applications for Sustainable Development in Asia and the Pacific	
ESCAP/MCSASD/2022/3/Add.1	Jakarta Ministerial Declaration on Space Applications for Sustainable Development in Asia and the Pacific	
<i>Limited series</i>		
ESCAP/MCSASD/2022/L.1	Provisional agenda	1 (c)
ESCAP/MCSASD/2022/L.2	Annotated provisional agenda	1 (c)
ESCAP/MCSASD/2022/L.3	Draft report	5
ESCAP/MCSASD/2022/L.4	Jakarta Ministerial Declaration on Space Applications for Sustainable Development in Asia and the Pacific	2 and 5
<i>Information available online</i>		
<a href="https://unescap.org/events/2022/forth-ministerial-conference-space-applications-sustainable-development-asia-and">https://unescap.org/events/2022/forth-ministerial-conference-space-applications-sustainable-development-asia-and</a>	Information for participants	
<a href="https://unescap.org/events/2022/forth-ministerial-conference-space-applications-sustainable-development-asia-and">https://unescap.org/events/2022/forth-ministerial-conference-space-applications-sustainable-development-asia-and</a>	List of participants	
<a href="https://unescap.org/events/2022/forth-ministerial-conference-space-applications-sustainable-development-asia-and">https://unescap.org/events/2022/forth-ministerial-conference-space-applications-sustainable-development-asia-and</a>	Tentative programme	

## **Annex II**

### **Account of proceedings**

#### **I. Introduction**

1. The Fourth Ministerial Conference on Space Applications for Sustainable Development in Asia and the Pacific, which was co-organized by the Economic and Social Commission for Asia and the Pacific (ESCAP) and the Government of Indonesia, was held in Jakarta and online on 26 October 2022. The Fourth Ministerial Conference was convened under the theme “Space+ for our Earth and future” following the recommendations made by the Intergovernmental Consultative Committee on the Regional Space Applications Programme for Sustainable Development at its twenty-fourth and twenty-fifth sessions, held in 2020 and 2021 respectively.

2. The Informal Working Group on the Preparations for the Fourth Ministerial Conference on Space Applications for Sustainable Development in Asia and the Pacific held six meetings between 5 July and 27 September 2022. At the meetings, the Informal Working Group provided guidance for the substantive and logistical preparations by the ESCAP secretariat and the host country and facilitated the development of the draft text of the Jakarta Ministerial Declaration on Space Applications for Sustainable Development in Asia and the Pacific that was adopted on 26 October 2022.

#### **II. Summary of discussions**

##### **A. Opening of the Fourth Ministerial Conference (agenda item 1)**

###### **Opening statements and keynote addresses (agenda item 1 (a))**

3. In her opening statement, the Executive Secretary recognized that ESCAP had taken a major step forward with the adoption in 2018 of the Asia-Pacific Plan of Action on Space Applications for Sustainable Development (2018–2030). The 188 actions in the Plan of Action were grouped across six thematic areas and were all designed to contribute to 37 targets of 14 of the Sustainable Development Goals. The adoption of the Plan of Action had demonstrated that ESCAP members and associate members shared a sense of solidarity and were committed to undertaking regional collaboration in the area of space and geospatial information applications. Moreover, members and associate members had implemented strategic policies and programmes that captured the socioeconomic benefits of space science, technology and their applications for sustainable development. The Executive Secretary highlighted three key messages on the importance of regional cooperation. First, the Plan of Action had been instrumental in mobilizing the expertise, capacities, experiences and resources in the region so that space applications could benefit all, especially those in countries in special situations, the least developed countries, landlocked developing countries and small island developing States. The independent evaluation of the implementation of phase I (2018–2022) of the Plan of Action had shown that the Plan of Action was an effective instrument for aligning the capacity-building programmes of ESCAP and its member States with the priority needs of countries. This had resulted in greater harmonization of regional actions, reduced duplication of efforts, enhanced cooperation among various agencies and stakeholders and strengthened partnerships at different levels. Second, regional cooperation was indispensable for meeting many emerging needs and demands. Although member States had provided

approximately \$4 million to the ESCAP secretariat to provide training and other capacity-building opportunities to more than 1,000 government officials and technical staff during the implementation of phase I, more funds were needed. The demand for knowledge-sharing, technical support and expert training remained consistently high; fortunately, many countries in the region were active providers of data, expertise, capacity-building opportunities and resources to other members and associate members. Third, it was necessary to scale up regional collaboration, as the efforts of countries were taking place against the backdrop of insufficient progress in the region towards achieving the Sustainable Development Goals. The Executive Secretary stressed that, in tandem with space and geospatial data, innovative digital applications were critical tools for transforming policymaking and practices for improving the current and future physical, digital and biological world. She added that the guiding theme for accelerating progress in implementing phase II (2022–2026) of the Plan of Action was “Space+ for our Earth and future”. In that regard, she acknowledged the work and intellectual leadership of the Intergovernmental Consultative Committee on the Regional Space Applications Programme for Sustainable Development, which had led countries to reach a consensus on the theme.

4. The Acting Deputy for Human Development and Culture of the National Development Planning Agency of Indonesia, Mr. Subandi Sardjoko, delivered a message on behalf of the Minister of National Development Planning and Head of the Agency, Mr. Suharso Monoarfa. He reported that one of the key achievements of Indonesia during the implementation of phase I of the Plan of Action was to make remote sensing satellite data available to all central and regional government agencies – free of charge, through an open-access data and information platform – for use in land, marine and coastal area resources management, water resource management and disaster management. Indonesia had increased the capacity of human resources personnel to process data and analyse remote sensing information. The national action plan for the Sustainable Development Goals for the period 2021–2024 and the agreement on integrating geospatial and statistical information frameworks provided a good basis for implementing phase II of the Plan of Action. Moreover, the national action plan for the Goals recognized the role of space technology and geospatial information technology for achieving Goal 2 (Zero hunger), Goal 6 (Clean water and sanitation), Goal 11 (Sustainable cities and communities), Goal 13 (Climate action), Goal 14 (Life below water) and Goal 15 (Life on land). Countries were encouraged to continuously develop platforms that integrated geospatial information and statistics to bridge the environmental, social, economic, legal and governance development pillars in achieving the Goals. Space technology could be used to fill the database and metadata gaps, especially in the environmental dimension of sustainable development. It was expected that the national action plan for the Goals, in conjunction with efforts to implement phase II of the Plan of Action, the use of space technology, innovations and new breakthroughs, including those under the theme “Space+ for our Earth and future”, the integration of geospatial information frameworks with non-geospatial information frameworks, digital technologies and cooperation with States in the Asia-Pacific region, would accelerate progress towards the achievement of the Goals in Indonesia.

5. In his statement, the Chairman of the National Research and Innovation Agency of Indonesia, Mr. Laksana Tri Handoko, stated that the Agency would strengthen the implementation of the space programme in Indonesia through research and innovation in space science and technology, remote sensing technologies and applications, the development of launching facilities and the

promotion of support for commercial space activities. In accordance with the above-mentioned national action plan for the Sustainable Development Goals, Indonesia would continue to implement activities under phase II of the Plan of Action. Indonesia had proposed a regional cooperation initiative that would focus on developing disaster risk management tools by using integrated space technology and geospatial data and by building the capacity of young professionals in space applications. Through that initiative, the Agency would invest in collaborative activities to strengthen the implementation of the Plan of Action in collaboration with national and international stakeholders. To support the use of space applications for sustainable development, Indonesia was planning to develop and operate 19 satellite constellations that would be used for remote sensing applications, including for Earth observation and improved data communication. An additional objective was to ensure the integrity and availability of remote sensing data by deploying the Earth Observation Satellite constellation, which could be utilized for, among other things, better near equatorial space applications. In that regard, the Chairman said that he welcomed further collaboration and partnership with other countries in Asia and the Pacific.

6. In his opening statement, the Minister of Education of Sri Lanka, Mr. S.A.D. Susil Premajayantha, noted that space technology applications had become widely recognized as indispensable for enabling the realization of the Sustainable Development Goals and related targets. His Government had expressed strong support for current and future regional cooperation initiatives under the theme “Space+ for our Earth and future” and had also expressed appreciation for the achievements made during the implementation of phase I of the Plan of Action and support for the implementation of phase II. The national policies and strategies on science, technology and innovation recognized space technologies and applications as a key domain of advanced technology and Sri Lanka needed to develop its national capacity in that domain as part of its efforts on economic transformation. In that regard, the Minister welcomed future collaborative opportunities with stakeholders at the bilateral, regional and international levels.

7. The Chairman of the Indian Space Research Organization and Secretary of the Department of Space of India, Mr. S. Somanath, delivered an opening statement by video. He recalled the intellectual leadership and contributions of India in introducing space applications into the development agenda of the United Nations. He also recalled the historic First Ministerial Conference on Space Applications for Development in Asia and the Pacific, held in Beijing in 1994, which had brought together spacefaring countries in the region to agree on a mechanism for sharing the benefits of space applications – the Regional Space Applications Programme for Sustainable Development; the Second Ministerial Conference on Space Applications for Sustainable Development in Asia and the Pacific, held in New Delhi in 1999, at which the Intergovernmental Consultative Committee on the Regional Space Applications Programme for Sustainable Development was established; and succeeding meetings that had resulted in the establishment of the Regional Cooperative Mechanism for Drought Monitoring and Early Warning. Since its establishment, the Centre for Space Science and Technology Education in Asia and the Pacific had trained more than 3,000 officials from 64 countries with support from ESCAP. India, which had implemented over 100 of the actions identified in the Plan of Action during phase I, supported the implementation of phase II, including by providing continued capacity-building and technical support to other countries to help achieve the Sustainable Development Goals in the region.



8. In his opening statement, the Director General of the Philippine Space Agency, Mr. Joel Joseph S. Marciano, Jr., said that his Government would continue to cooperate with partners in the region in implementing the Plan of Action. A multisectoral approach that included government, industry, academia and civil society to shaping the development of the region in the face of globalization and the fourth industrial revolution was needed. International cooperation played a critical role in the effective implementation of the Plan of Action. The Government of the Philippines intended to make the opportunities and activities arising from international cooperation available to its stakeholders so that they could take part in the global effort to advance knowledge in space science, technology and its applications and contribute solutions to societal issues and challenges.

9. The Vice-Minister of Science and Technology of China, Mr. Zhang Guangjun, delivered his opening statement by video. He noted that space applications would play an exceptional role in supporting sustainable development by providing essential tools to observe and understand Earth, address major global challenges, inform the management of natural resources, help prevent disasters and manage climate change and food security. The development of new information technologies such as artificial intelligence, the Internet of things, cloud computing and big data had brought new opportunities for space technology innovations and applications, generated new products and new business models and forms and unlocked great potential for industries. China had participated in numerous efforts and was actively involved in science, technology and innovation governance at the regional level. As a champion of multilateral cooperation in the area of space technology and its applications in Asia and the Pacific, China would continue to work with all stakeholders to tackle challenges and share experiences in space applications for sustainable development in the whole region. China had always taken such cooperation seriously and was deeply involved in regional science, technology and innovation governance efforts.

10. The Secretary-General of the World Meteorological Organization (WMO), Mr. Petteri Taalas, delivered his opening statement by video. He highlighted the critical role of space applications in the entire value chain of early warning and early action and in weather, climate and water services in general. Space applications could play a critical role in fulfilling the mandate given to WMO by the Secretary-General to ensure that every person was protected by early warning systems within five years. WMO had promoted the availability and utilization of satellite data for all its members. The Japan Meteorological Agency would host the Twelfth Asia-Oceania Meteorological Satellite Users' Conference, to be held in November 2022. Asia-Oceania meteorological satellite users' conferences were held annually to bring together space agencies and user communities in Asia and Oceania and enhance the use of satellites for weather and disaster risk mitigation services. WMO was committed to continuing to work with ESCAP members to make further progress on the Sustainable Development Goals.

**B. Scaling up space applications to advance sustainable development in Asia and the Pacific under the theme “Space+ for our Earth and future” (agenda item 2)**

11. The participants in the Fourth Ministerial Conference on Space Applications for Sustainable Development in Asia and the Pacific had before them the note by the secretariat entitled “Space+ for our Earth and future” (ESCAP/MCSASD/2022/1).

12. The secretariat delivered a presentation to introduce the agenda item.

13. Representatives of the following members and associate members made oral statements: Armenia; Bhutan; China, India; Indonesia; Japan; Maldives; Mongolia; Pakistan; Philippines; Republic of Korea; Singapore; Sri Lanka; Thailand; Tonga; United States of America; and Uzbekistan.

14. Representatives of the United Nations Institute for Training and Research and Multi-GNSS Asia also made statements.

15. Representatives recognized the importance of space applications for advancing the achievement of the Sustainable Development Goals and other internationally agreed goals amid climate change, increasing disaster risks, the coronavirus disease (COVID-19) pandemic and other challenges. Some representatives highlighted the critical role of space applications in monitoring the climate change impacts in countries in special situations such as small island developing States and mountainous landlocked developing countries.

16. Progress had been made in implementing phase I and across the six priority thematic areas of the Plan of Action. Some representatives supported “Space+ for our Earth and future” as the guiding theme for implementing phase II of the Plan of Action and highlighted the progress that their Governments had made in implementing its foundational elements, for example by integrating a host of innovative technologies with space technology to support the Sustainable Development Goals; engaging stakeholders, including the private sector; managing and using data effectively, including by building a “data cube”; and enhancing collaboration and partnerships at the bilateral, regional and global levels.

17. Noting that the future of space applications would be characterized by an increased emphasis on their practical utilization, on data sharing and on the need to scale up their use, representatives expressed a strong interest in building partnerships and collaborating more within the region. A representative of Indonesia proposed concrete initiatives, namely the development of a virtual constellation of satellites for disaster risk management; the modelling of satellite data for use in floods and wildfire hotspot monitoring through machine learning and innovative digital applications; and the building of the capacity of young professionals in space activities to accelerate the implementation of phase II of the Plan of Action. All members and associate members of ESCAP were invited to participate in and benefit from those collaborative activities.

18. Representatives shared information on national initiatives to promote space applications and harness the benefits of space technology to improve the lives of their citizens and support development. Those initiatives included developing institutional and legal frameworks for space activities and other policy initiatives, launching educational activities to raise awareness and interest among youth in space activities and developing open, innovative geospatial platforms.

19. Some representatives said that, while progress had been made, their countries continued to face key challenges, including lack of resources and capabilities. Sharing knowledge and best practices in space applications for sustainable development within the region and providing support for mainstreaming the use of space applications as a tool in development planning were some of the priorities moving forward.

20. Representatives expressed support for the development of a virtual constellation of satellites for disaster risk management, as proposed by the Government of Indonesia, noting that it could significantly support authorities in their disaster risk reduction and disaster risk management efforts, transfer know-how, build the capacities of countries and forge collaboration between communities of scientists, researchers and practitioners in Asia and the Pacific. Other Governments were committed to continuing to support the provision of satellite data, technical expertise and capacity-building efforts to countries in the region, in line with the Plan of Action.

21. Representatives also expressed support for continuing the dialogue to harmonize initiatives within the region by enhancing cooperation and strengthening partnerships among ESCAP members. One representative urged Governments to consider the data and specific capacity-building and technical support requirements of small island developing States as they moved forward in the implementation of phase II of the Plan of Action.

22. As requested by the Chair of the Fourth Ministerial Conference, the Chair of the Informal Working Group on the Preparations for the Fourth Ministerial Conference on Space Applications for Sustainable Development in Asia and the Pacific briefed participants on the drafting of the Jakarta Ministerial Declaration on Space Applications for Sustainable Development in Asia and the Pacific.

23. A Co-Chair of the twenty-sixth session of the Intergovernmental Consultative Committee on the Regional Space Applications Programme for Sustainable Development reported on the key outcomes of the ad hoc session that had been held in Jakarta on 24 and 25 October 2022, prior to the Fourth Ministerial Conference. At that session, ESCAP members had been encouraged to continue to leverage digital innovation and support knowledge-sharing and capacity-building to enhance regional cooperation in the implementation of phase II of the Plan of Action.

**C. Report on the implementation of the Asia-Pacific Plan of Action on Space Applications for Sustainable Development (2018–2030), phase I (2018–2022) (agenda item 3)**

24. The participants in the Fourth Ministerial Conference had before them the note by the secretariat entitled “Implementation of the Asia-Pacific Plan of Action on Space Applications for Sustainable Development (2018–2030), phase I (2018–2022)” (ESCAP/MCSASD/2022/2).

25. The secretariat delivered a presentation to introduce the agenda item.

**D. Other matters (agenda item 4)**

26. No other matters were discussed.

**E. Adoption of the report on the Fourth Ministerial Conference and a ministerial declaration on space applications for sustainable development in Asia and the Pacific (agenda item 5)**

27. The Jakarta Ministerial Declaration on Space Applications for Sustainable Development in Asia and the Pacific and the report on the Fourth Ministerial Conference were adopted on 26 October 2022.