



# Promoting Space Sustainability

[Virtual Event 3/3 -  
Regulators,  
Policymakers]  
[APSCO]  
[15 March 2021]

## Implementation of the Guidelines for the Long-term Sustainability (LTS) of Outer Space Activities of the Committee on the Peaceful Uses of Outer Space

### Operational Case Studies

[Operational case studies are drafted by the submitting entity in their own words using the following template. Please avoid using national jargon and spell out acronyms to assist readers from other jurisdictions. All case studies will be made publicly available to facilitate peer-to-peer exchange, share experiences and raise awareness.]

### I. Short description of the outer space activity [1000-word max.]

APSCO considers Long-term Sustainability of Outer Space an important subject and gives special attention to creating awareness and building capacity of its Member States in this area.

The following are the areas where initiatives and activities are being carried out:

#### 1. Long-term sustainability of outer space as part of APSCO Vision 2030

*"APSCO shall significantly enhance capability of its Member States in particular, and in the Asia-Pacific region in general, in peaceful uses of outer space, in the domains of space science, space technology and space technology applications; by establishing the basis of cooperation through voluntary sharing of financial, technological and human resources, and leading the regional cooperation, work with and contribute to the collective efforts of international space community toward space governance **and long-term sustainability of the outer space activities.**"*

#### 2. Long-term sustainability of outer space as part of APSCO's Strategic Objectives

*"To encourage the Member States to practice towards the space governance and long-term sustainability of outer space activities that are complying with the guidelines of the United Nation's Committee on Peaceful Uses of Outer Space (UN-COPUOS)."*

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### **3. Long-term sustainability of outer space as part of the Development Plan of Cooperative Activities of APSCO 2021-2030**

The Development Plan of Cooperative Activities of APSCO 2021-2030, was approved by the 14<sup>th</sup> Meeting of APSCO Council in 2020. The Development Plan serves as a guidelines document for APSCO and provides direction for different activities.

APSCO focuses on the following areas related to Long-term sustainability of Outer Space in its Development Plan:

- a. *Space Science and Exploration: conduct study, research and develop capabilities in space environment, space weather and solar physics fields.*
- b. *Space Debris Mitigation: The domain definition of space debris and mitigation shall include the study and research development related to Space Situation Awareness (SSA), Space Traffic Management (STM) and Active Debris Removal (ADR).*
- c. *Space observation, monitoring and mitigation technologies: APSCO shall work on the development of Space Traffic Management (STM) capabilities is also needed to enhance the safety of on-orbit operations by reducing the collision risks and interference.*
- d. *Space Debris Data Centre: APSCO shall study to establish the organization's platform that Member States could share and utilize the data.*
- e. *Capacity Building on Space Debris Mitigation: APSCO shall focus on the capacity building related to space debris mitigation guidelines and best practices, data sharing policy, as well as space traffic management regulations and standards.*

### **4. Related APSCO Projects:**

- a. *APOSOS (the Asia-Pacific Ground-based Optical Space Object Observation System) project:*

APOSOS consists of three 15cm telescopes installed in Peru, Iran and Pakistan. It aims to unite the member states of APSCO to establish a global optical space observation network to track member states' space assets and interesting space objects. The project was completed in 2017 and still works and gathering data.

- b. *APSSO (The Asia-Pacific Space Science Observatories) Project:*

APSSO is the second phase of the APOSOS and will consist of 50cm telescopes, and they will be installed in all eight member states. It aims to make full use of multilateral platforms for international cooperation and establish a global optical space observation network to conduct joint observation on space objects to ensure the safety of space assets and ground personnel.

### **5. Education and Training**

APSCO conducted the distance-training course on "Space Debris: Challenges and Mitigation Techniques" from 22 to 26 June 2020, focused on imparting knowledge to the professional in the following areas:

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Introduction to Space Debris Environment  
History of Space Debris  
Space Debris Tracking and Cataloguing  
Space Debris Challenges  
Designing for the Debris Environment  
Space Debris Mitigation Techniques

**6. Supporting Member States to Develop Legal mechanisms to address long-term Sustainability of Outer Space**

a. *Strategy for Space Law and Policy of APSCO (2021-2030)*

This strategy focuses on enhancing the role of APSCO in the field of space law and policy to provide more practical benefits to Member States and strengthening the contribution of APSCO in the international community in the fields of space law and policy

b. *APSCO/UNOOSA joint cooperation on capacity building in national space legislation for APSCO Member States*

UNOOSA shall provide advisory services to APSCO Member States on development of National Space Legislation.

**II. Connection with the LTS Guidelines [500-word max.]**

[Please indicate any relevant links between the activity above and the LTS Guidelines or portions of the preamble.]

Guideline A.1 **Adopt, revise and amend, as necessary, national regulatory frameworks for outer space activities**

Guideline A.2 **Consider a number of elements when developing, revising or amending, as necessary, national regulatory frameworks for outer space activities**

Guideline B.1, **Provide updated contact information and share information on space objects and orbital events**

Paragraph 2

Guideline B.3 **Promote the collection, sharing and dissemination of space debris monitoring information**

Guideline B.6: **Share operational space weather data and forecasts**

Paragraph 1,3,4,5,6,7

Guideline B.7: **Develop space weather models and tools and collect established practices on the mitigation of space weather effects**

Paragraph 1,4,6,7

Guideline C.1 **Promote and facilitate international cooperation in support of the long-term sustainability of outer space activities**

Guideline C.3 **Promote and support capacity-building**

Guideline C.4 **Raise awareness of space activities**

Guideline D.1 **Promote and support research into and the development of ways to support sustainable exploration and use of outer space**

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Paragraph.1,5

### **III. Lessons learned [500-word max.]**

[Please share any information or observations that may assist others in their space activities.

- a. Limitation in openly sharing of real-time and near-real-time space weather data;
  - b. Lack of key observations data for space weather monitoring and modelling;
  - c. Lack of know-how and best practice on space weather models;
  - d. Lack of standards and procedures for debris monitoring and data sharing at international level;
  - e. Lack of public awareness about the effects of space weather on especially socio-economic and
  - f. Lack of hands-on practices, and experts.
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