

United Nations/Austria World Space Forum

13 - 15 December 2022



Awareness raising and capacity-building related to the implementation of the Guidelines for the Long-term Sustainability of Outer Space Activities

ORGANIZED JOINTLY BY:

 Federal Ministry
Republic of Austria
Climate Action, Environment,
Energy, Mobility,
Innovation and Technology



UNITED NATIONS
Office for Outer Space Affairs

 Federal Ministry
Republic of Austria
European and International
Affairs

Guidelines for the Long-Term Sustainability of Outer Space Activities

COPUOS Member States adopted by consensus the **Guidelines for the Long-Term Sustainability of Outer Space Activities** in June 2019.

In October 2019, they were welcomed with appreciation by the **UN General Assembly**.

The Guidelines comprise a compendium of **internationally recognized measures** for, and **commitments** to, ensuring the long-term sustainability of outer space activities

The Guidelines include a **preamble** and **4 sections**.

The preamble:

- ❖ Defines the **long-term sustainability** of outer space activities
- ❖ Explains the **voluntary** and **non-legally binding status** of the Guidelines
- ❖ Shares how the guidance that they provide is **to be reviewed** and **updated**

"The purpose of the guidelines is to assist States and international intergovernmental organizations, both individually and collectively, to mitigate the risks associated with the conduct of outer space activities so that present benefits can be sustained and future opportunities realized"

Guidelines for the Long-Term Sustainability of Outer Space Activities (II)

The Guidelines have 4 sections

A. Policy and regulatory framework for space activities

B. Safety of space operations

C. International cooperation, capacity-building and awareness

D. Scientific and technical research and development

Examples of Guidelines

➤ Adopt, revise and amend, as necessary, national regulatory frameworks for outer space activities

➤ Provide updated contact information and share information on space objects and orbital event

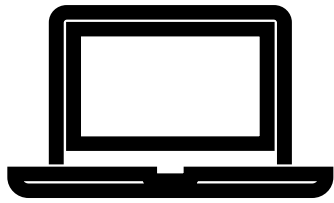
➤ Promote and facilitate international cooperation in support of the long-term sustainability of outer space activities

➤ Promote and support research into and the development of ways to support sustainable exploration and use of outer space

Awareness raising and capacity-building related to the implementation of the LTS Guidelines

In 2020, UNOOSA launched a **multi-stakeholder project** on **awareness raising** and **capacity-building** to support implementation of the LTS Guidelines.

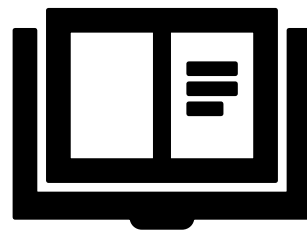
Project implemented in 2 phases.



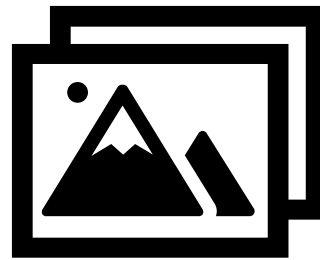
Website



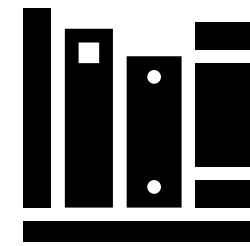
Virtual events



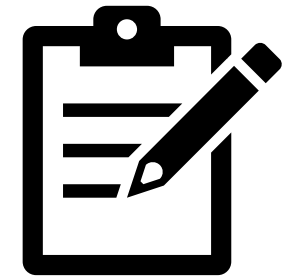
Publication



Infographics



Case studies



Study

All resources publicly available!

*The project is made possible through the generous support of **the United Kingdom***



Awareness-raising and capacity-building related to the implementation of the Guidelines for the Long-term Sustainability of Outer Space Activities

- Home
- About
- Guidelines for the Long-term Sustainability of Outer Space Activities
- Case Studies
- Event Series
- Sponsorship

The Project

The Awareness-raising and capacity-building related to the implementation of the Guidelines for the Long-term Sustainability of Outer Space Activities (LTS Guidelines) is a project of the United Nations Office for Outer Space Affairs (UNOOSA). The Project aims to showcase how the LTS Guidelines of the Committee on the Peaceful Uses of Outer Space (COPUOS) materialize in practice through a multi-stakeholder approach.



Photo: Tim Peake/ESA/NASA



Infographic series on the Guidelines for the Long-term Sustainability of Outer Space Activities



spacesustainability.unoosa.org

Stakeholder Study Report

In the second phase of the Project, UNOOSA conducted a series of interviews with States and intergovernmental organizations focusing on their experiences in

Case study collection

Case Study Database

SEARCH	EXHIBIT TITLE	OFFICE	TYPE	SUBJECT
	Guidelines for the Long-term Sustainability of Outer Space Activities	Outer Space Dept.	Regulatory Framework	Outer Space Dept.

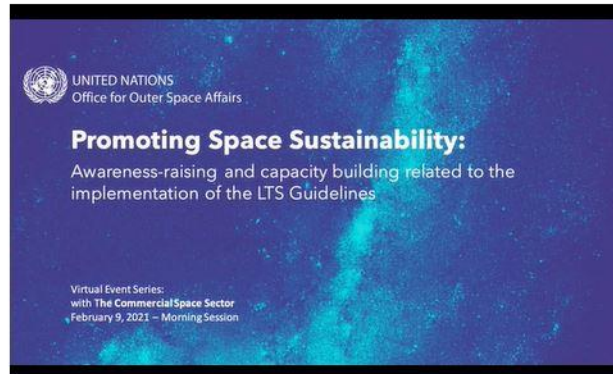
The Guidelines

GUIDELINES



Event Series

First event (09.Febr.2021), commercial space sector, morning session



- **Mr. Sivio Sandrone**, Vice President New Programmes, Space Exploration, Airbus Defence and Space
Mr. Sandrone's presentation in the event recording starts [here](#)
For the presenter's slide, click [here](#)
- **Mr. Shady El-Shafie**, Vice President, Egyptian Company for Space Applications and Remote Sensing (ECSARS)
Mr. El-Shafie's presentation in the event recording starts [here](#)
- **Ms. Abimbola Alale**, CEO, Nigerian Communication Satellite Ltd. (NIGCOMSAT)
Ms. Alale's presentation in the event recording starts [here](#)
- **Mr. Takeshi Hakamada**, CEO, ispace
Mr. Hakamada's presentation in the event recording starts [here](#)
For the presenter's slide, click [here](#)
- **Mr. Nick Shave**, Vice President, Inmarsat; Chair UKspace

The event series

In its first phase, the Promoting Space Sustainability Project convened a series of multi-stakeholder virtual events. The events facilitated peer-to-peer dialogue and an exchange of existing sustainable space activities mapped in the context of the areas covered by the LTS Guidelines. Each event saw contributors from across the international space sector presenting short operational case-studies at the event. The events were tailored to raise awareness about space sustainability and, through sharing operational case-studies and lessons learnt, facilitated capacity building for other operators and stakeholders looking to enhance the sustainability of their own space activities.

All three events of the series consisted of two sessions, built around presentations of operational case studies, illustrating examples of sustainable space activities. The three events included speakers representing:

1. the commercial space sector (09 February 2021)
2. space agency operators (25 February 2021)
3. regulators and policymakers (15 March 2021).



THE INTERNATIONAL COMMUNITY RECOGNIZES THE NEED TO ENSURE SPACE SUSTAINABILITY IN THE LONG TERM

Space is being used by an increasing number of States, international intergovernmental organizations and non-governmental entities.

Space debris, the increasing complexity of space operations, the emergence of large constellations and increased risk of collisions and interference with space objects may affect the long-term sustainability of outer space activities.

This has been, and continues to be, a top area of focus for the United Nations Committee on the Peaceful Uses of Outer Space (COPUOS).

The Earth's
orbital environment
constitutes a
finite resource

#LTSGUIDELINES
#SPACESUSTAINABILITY



INTERNATIONAL COOPERATION IS NEEDED
TO ADDRESS THESE DEVELOPMENTS AND RISKS

- A.1 Adopt, revise and amend, as necessary, national regulatory frameworks for outer space activities
- A.2 Consider a number of elements when developing, revising or amending, as necessary, national regulatory frameworks for outer space activities

POLICY AND REGULATORY FRAMEWORK FOR SPACE ACTIVITIES

Guidelines for the Long-term
Sustainability of Outer Space Activities: Section A

- A.3 Supervise national space activities
- A.4 Ensure the equitable, rational and efficient use of the radio frequency spectrum and the various orbital regions used by satellites
- A.5 Enhance the practice of registering space objects



#LTSGUIDELINES
#SPACESUSTAINABILITY

- B.1 Provide updated contact information and share information on space objects and orbital events
- B.2 Improve accuracy of orbital data on space objects and enhance the practice and utility of sharing orbital information on space objects
- B.3 Promote the collection, sharing and dissemination of space debris monitoring information
- B.4 Perform conjunction assessments during all orbital phases of controlled flight
- B.5 Develop practical approaches for pre-launch conjunction assessments
- B.6 Share operational space weather data and forecasts

SAFETY OF SPACE OPERATIONS

Guidelines for the Long-term
Sustainability of Outer Space Activities: Section B

- B.7 Develop space weather models and tools, and collect established practices on the mitigation of space weather effects
- B.8 Design and operation of space objects regardless of their physical and operational characteristics
- B.9 Take measures to address risks associated with the uncontrolled re-entry of space objects
- B.10 Observe measures of precaution when using sources of laser beams passing through outer space



#LTSGUIDELINES
#SPACESUSTAINABILITY

IN 2019 INTERNATIONAL AGREEMENT WAS REACHED ON GUIDANCE FOR THE LONG-TERM SUSTAINABILITY OF OUTER SPACE ACTIVITIES

The United Nations Committee on the Peaceful Uses of Outer Space (COPUOS) adopted by consensus, a preamble and 21 Guidelines, demonstrating how States collaborate multilaterally to prioritize space sustainability.

The Guidelines for the Long-term Sustainability of Outer Space comprise a compendium of internationally recognized measures for, and commitments to, ensuring the long-term sustainability of outer space activities.

The preamble of the Guidelines defines the long-term sustainability of outer space activities, explains their voluntary and non-legally binding status, and shares how the guidance they provide is to be reviewed and updated.

The Guidelines
are relevant to both
governmental and
non-governmental entities.

#LTSGUIDELINES
#SPACESUSTAINABILITY



THE GUIDELINES PROVIDE DETAILED GUIDANCE ACROSS FOUR SECTIONS:
A) POLICY AND REGULATORY FRAMEWORK FOR SPACE ACTIVITIES; B) SAFETY OF SPACE OPERATIONS; C) INTERNATIONAL COOPERATION, CAPACITY-BUILDING AND AWARENESS; AND D) SCIENTIFIC AND TECHNICAL RESEARCH AND DEVELOPMENT.

- C.1 Promote and facilitate international cooperation in support of the long-term sustainability of outer space activities
- C.2 Share experience related to the long-term sustainability of outer space activities and develop new procedures, as appropriate, for information exchange

INTERNATIONAL COOPERATION, CAPACITY-BUILDING AND AWARENESS

Guidelines for the Long-term
Sustainability of Outer Space Activities: Section C

- C.3 Promote and support capacity-building
- C.4 Raise awareness of space activities



#LTSGUIDELINES
#SPACESUSTAINABILITY

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

SCIENTIFIC AND TECHNICAL RESEARCH AND DEVELOPMENT

Guidelines for the Long-term
Sustainability of Outer Space Activities: Section D

- D.2 Investigate and consider new measures to manage the space debris population in the long term




#LTSGUIDELINES
#SPACESUSTAINABILITY



Available in all official UN languages

Case studies collection



**United Nations**

Awareness-raising and capacity-building related to the implementation of the Guidelines for the Long-term Sustainability of Outer Space Activities

[A-Z Site Index](#)

[Home](#) | [About](#) | [Guidelines for the Long-term Sustainability of Outer Space Activities](#) | [Case Studies](#) | [Event Series](#) | [Sponsorship](#)

Home > Case Studies

Case Studies


Open Call

UNOOSA is seeking to gather and highlight operational case studies on how the Guidelines for the Long-Term Sustainability Outer Space Activities (LTS Guidelines) have been put into practice and related lessons learned. We hope to receive submissions on the activities you are carrying out. **If you would like to have your case study to be included in our collection, please fill out our template and send it to us.**

To download our template for the submission in editable word format, click [here](#).

For questions and to submit your case study, please contact [ooa\[at\]un.org](mailto:ooa[at]un.org) with the subject line: "LTS Guidelines Project".

Introducing the Collection



The screenshot shows a document template for a case study submission. It includes a header with the United Nations logo and the title 'Promoting Space Sustainability'. Below the header, there are three main sections: I. Short description of the outer space activity (1000-word max.), II. Connection with the LTS Guidelines (500-word max.), and III. Lessons learned (200-word max.). Each section has a brief description of what to include.

In this collection you can find case studies of various entities – in reversed order of their date of submission – reflecting on the same three questions, found in the UNOOSA template above, on specific activities related to the Guidelines for the Long-term Sustainability of Outer Space Activities.

You can search among **topics**, specific **Guidelines**, and type of **entities** using the left hand column of the collection.

To open and download a case study, click on a document title.

Case Study Collection

UNOOSA collates operational case studies on practices and challenges.

+30 case studies available!

NIGCOMSAT

NASA **Bureau of Meteorology (Australia)**

Philippines Space Agency **Astroscale**

Asia-Pacific Regional Space Agency Forum

European Space Surveillance and Tracking

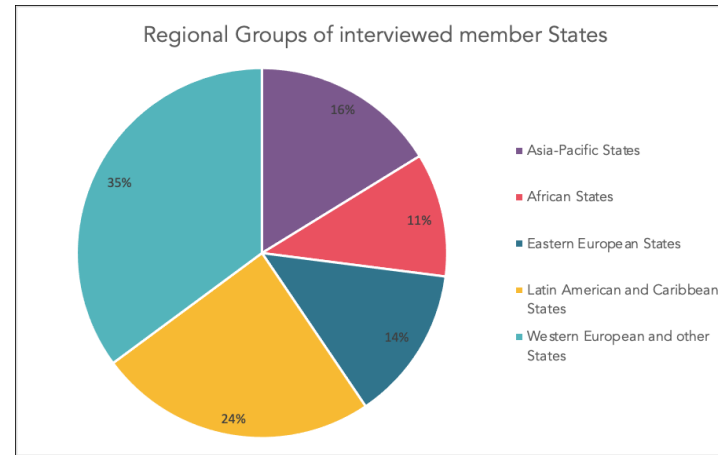
Chilean Air Force

Call for submission is open!

Stakeholder Study Report

UNOOSA conducted interviews with

- ❖ **37 States members** of COPUOS
- ❖ **5 international intergovernmental organizations.**



The Stakeholder Study Report :

- ❖ Focuses on **implementation experiences** of States to understand the applicability of the Guidelines in national contexts;
- ❖ Demonstrates implementation **challenges** that States have experienced/are experiencing;
- ❖ Contains **views on any specific assistance** that States consider necessary to help them implement the Guidelines;
- ❖ Presents views on both **short- and mid-term actions** that could be taken to improve/**drive forward** LTS Guidelines implementation.

Awareness-raising and
capacity-building related to
the implementation of the
Guidelines for the Long-term
Sustainability of Outer Space
Activities
(LTS Guidelines)

Stakeholder Study Report

May 2022

A **landmark achievement** in **space policy** and **space diplomacy**, as well as a crucial step towards **protecting** the Earth's orbital space environment and **ensuring equitable access** to the benefits of exploration and use of outer space for peaceful purposes

- ❖ **Legal and regulatory certainty** is one of the **best incentives** that a State can offer its space sector.
- ❖ Develop a **mutual understanding** of the Guidelines to raise awareness about them and to ensure their implementation.
- ❖ **Voluntary nature** and implementation of “low-hanging fruit” and/or those that best suit the national context.
- ❖ States with **few space assets** focus on **research** activities that benefits **socio-economic development**.
- ❖ **Industry** and the private sector engagement e.g. how companies can support/**encourage** institutional actors to implement the Guidelines.
- ❖ **Transparent**, efficient and **direct communication** and **information sharing**.
- ❖ Some stakeholders remain **unaware** of **what** they should do or **from whom** they can seek assistance when operationalizing the Guidelines.
- ❖ Need for **ongoing international, multi-stakeholder coordination**, which may be supported by regional and international organizations.

STAY TUNED!

More awareness raising and capacity-building through phase 3 of the project!

United Nations/Austria

World Space Forum

13 - 15 December 2022



Thank you!

ORGANIZED JOINTLY BY:

 Federal Ministry
Republic of Austria
Climate Action, Environment,
Energy, Mobility,
Innovation and Technology



UNITED NATIONS
Office for Outer Space Affairs

 Federal Ministry
Republic of Austria
European and International
Affairs