



UNITED NATIONS
Office for Outer Space Affairs

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UNOOSA Supporting Member States in the Implementation of TCBMs in Outer Space Activities

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GGE Report on TCBMs in Outer Space Activities (A/68/189)

GGE recommendations include information on national space policy, military expenditure, notifications on status of space objects, safety of space operations (including collision avoidance, scheduled manoeuvres, re-entry risks, emergency situations, intentional break-ups), hazards (natural), visits.

Resolution refers the recommendations of the GGE report to COPUOS, Disarmament Commission and Conference on Disarmament (CD) for consideration, as appropriate (68/50 and follow up through 69/38, 70/53).

UN system coordination is encouraged by the resolution in operative paragraph 5; GGE report paragraph 66 recommends coordination between UNOOSA, UNODA and other appropriate UN entities.



The GGE Report: States' Views

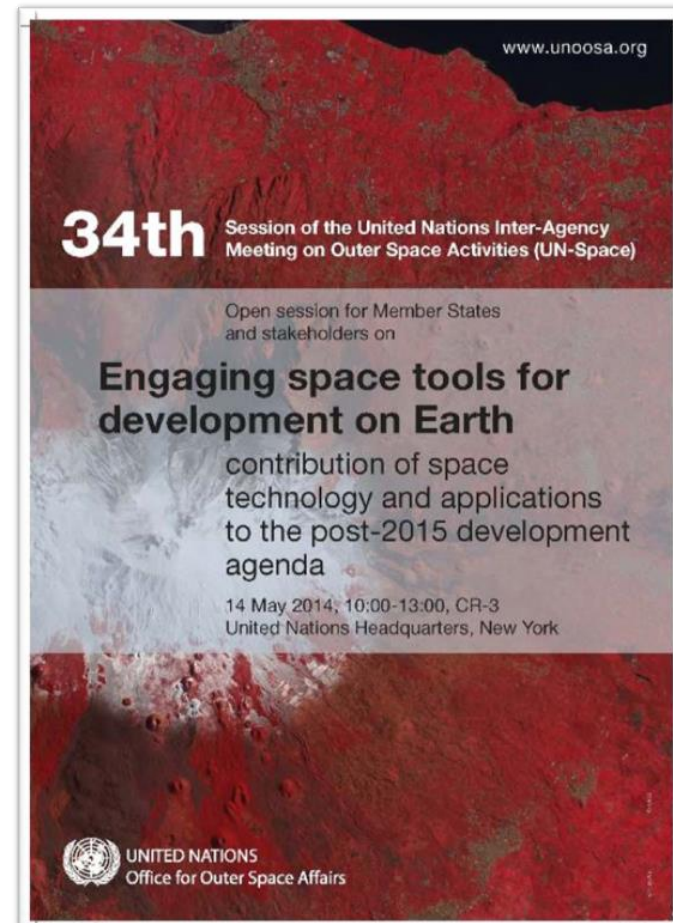
- In 2014, COPUOS invited States members of the Committee to submit their views on making practical use of the recommendations contained in the GGE report (A/69/20, para. 374).
- Replies from Germany, Italy, the Russian Federation and the United States of America were received (A/AC.105/1080 and Add.1 and Add.2) and considered at the fifty-eighth session of the Committee in 2015.



Inter-Agency Coordination on Outer Space Activities (UN-Space)

Recent and ongoing actions and partnerships within the UN-Space framework:

- UN-Space Special report on Space for Global Health (issued 2015 as A/AC.105/1091).
- Secretary-General report 2016-2017 – meeting the 2030 Agenda for Sustainable Development (issued 2016 as A/AC.105/1115).
- UN-Space special report on TCBMs (issued 2016 as A/AC.105/1116).
- UN-Space session on 3 March 2016 held in NY in cooperation with UNODA.
- UNOOSA/ITU Guidance on small satellite registration and frequency management, published in 2015.
- Joint ICAO/UNOOSA Aerospace Symposia: 1st held in Montreal, Canada in March 2015; 2nd held in Abu Dhabi in March 2016; and 3rd to be held in Vienna from 18 to 21 April 2017.





UN-Space and TCBMs

UNITED NATIONS Office for Outer Space Affairs

UNITED NATIONS Office for Disarmament Affairs

36th session of UN-Space

Inter-Agency Meeting on Outer Space Activities

Thursday, 3 March 2016
United Nations Headquarters, New York
Secretariat Building, Room S-2723BR

Organized by the United Nations Office for Outer Space Affairs and hosted in collaboration with the United Nations Office for Disarmament Affairs

unoosa.org un.org/disarmament

Eight United Nations entities participated in the thirty-sixth session of UN-Space, held in New York in March 2016 and hosted in collaboration with ODA. The session focused primarily on the topic of TCBMs (A/AC.105/1114).



UN-Space and TCBMs continued...

- UNOOSA prepared the special report of UN-Space in close collaboration with the UNODA, and with contributions from DFS, IAEA, ITU, UNIDIR and WMO.
- The final version of the report, A/AC.105/1116, was before delegations for consideration at the fifty-ninth session of COPUOS in 2016.
- At that session, COPUOS agreed that States members of the Committee should be invited to submit their views on TCBMs in outer space activities, on the GGE report, and on the document A/AC.105/1116 to the sixtieth session of the Committee in 2017 (A/71/20, para. 272).





UNOOSA & TCBMS:

Information Exchange on Space Policies

- Since the early 1960s, information on national space policies and activities has been disseminated through COPOUS, with the assistance of UNOOSA.
- Information has been disseminated through the general exchange of views and reports submitted under national activities, as well as through specific agenda items, including space debris, the long-term sustainability of outer space activities, the use of nuclear power sources in outer space, space weather, near-Earth objects, and national legislation.
- UNOOSA provides secretariat services for these mechanisms and maintains a publically available information repository on related topics.



UNOOSA & TCBMS:

Discharging the Secretary-General's Treaty Obligations

- Maintaining the Register of Objects Launched into Outer Space (Convention on Registration of Objects Launched into Outer Space art. III).
- Disseminating information relating to outer space activities (including discovery of harmful phenomena) provided by States (Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies art. V and art. XI).
- Disseminating information relating to the recovery of “foreign” astronauts in distress and/or space objects by States within their territory and their return (Agreement on the Rescue of Astronauts, the Return of Astronauts and the Return of Objects Launched into Outer Space art. II b).
- Disseminating information relating to lunar exploration and habitation (Agreement Governing the Activities of States on the Moon and Other Celestial Bodies art. IX).





UNOOSA & TCBMs: Discharging other Secretary-General Obligations

- Disseminating information relating to remote sensing, direct broadcasting (Principles Governing the Use by States of Artificial Earth Satellites for International Direct Television Broadcasting principle I and Principles Relating to Remote Sensing of the Earth from Outer Space principle IX).
- Serving as a facilitator on issues such as nuclear-powered space objects prior to launch and notifications relating to the malfunction and re-entry of nuclear-powered space objects (Principles Relevant to the Use of Nuclear Power Sources in Outer Space principle V).



UNOOSA & TCBMs: Intergovernmental Platforms, Mechanisms and Political Initiatives

- Executive Secretariat to the International Committee on Global Navigation Satellite Systems.
- Secretariat to the Working Group on the Long-term Sustainability of Outer Space Activities.
- Permanent Secretariat to the Space Mission Planning Advisory Group (SMPAG).
- Participant entity in the Joint Radiation Emergency Management Plan of the International Organizations; communication channel with the IAEA Incident and Emergency Centre in place.



UNOOSA & TCBMS: Capacity-Building and Outreach

- The GGE noted that while a number of States have acquired significant space-related capabilities, many non-spacefaring States have a strong desire to participate directly in outer space activities and to share space technology (A/68/189, para. 60).
- UNOOSA was flagged by the GGE as already being well-established in the work of capacity-building (A/68/189, para. 55).
- The General Assembly, in its resolution 70/82, encouraged UNOOSA to conduct capacity-building and outreach activities associated with space security and TCBMs in outer space activities.
- UNOOSA has demonstrated strength in capacity-building.
- UNOOSA capacity-building programmes includes:
 - United Nations Platform for Space-based Information for Disaster Management and Emergency Response (UN-SPIDER),
 - The Programme on Space Applications, and
 - Capacity-building activities in space law and space policy.



UNOOSA Looking Forward: Risk Reduction Notifications

- In June 2016 COPUOS endorsed seven thematic priorities for UNISPACE+50, including Thematic Priority 3, Enhanced information exchange on space objects and events.
- In line with Thematic Priority 3, an online platform could be developed to provide regular notifications relating to risk reduction in outer space activities.
- States could enter information directly into the platform, and that information could be distributed to a network of national focal points.
- The Office's in-house capabilities in the area of space technology could be used, and grown as necessary, to validate and verify the information. In this connection, the Office already has access to the knowledge of a network of experts in the field, including through the Regional Centres.
- Additionally, as it has done in the past through its media monitoring of space activities, the Office could identify possible relevant events for follow-up by national focal points.



UNOOSA Looking Forward: Space Security Repository

- In collaboration with UNODA, possible establishment of a repository for information on the security aspects of national space policies, including information on the military aspects of major outer space research and space application programmes received from Member States.

Pre-Launch Notifications

- UNOOSA provides some pre-launch information using open source data. UNOOSA also provides pre-launch notifications to the IAEA Incident and Emergency Centre on nuclear-powered satellites and other non-nuclear deep space satellite missions.
- Possible expansion of the Office's role in the provision of pre-launch notifications. Software similar to that used to disseminate notifications under the Hague Code of Conduct against Ballistic Missile Proliferation could be used.



UNOOSA Looking Forward: Voluntary Familiarization Visits and Expert Visits

- Art. X of the Outer Space Treaty provides the basis for voluntary visits.
- The Office is well positioned, at the request of Member States, to share information that would facilitate voluntary visits to space launch sites and facilities and demonstrations of rocket and space technologies.
- The Office could also, at the request of Member States, be able to organise the logistics of such visits, providing technical and secretariat support in reporting and developing and maintaining a register of visits undertaken.



Long-term Sustainability of Outer Space Activities

- Agenda item and Working Group under COPUOS' Scientific and Technical Subcommittee .
- Core thematic areas:
 - Sustainable space utilization supporting sustainable development on Earth;
 - Space debris mitigation, safety of space operations, tools to support space situational awareness;
 - Space weather; and
 - Regulatory regimes and guidance for actors in the space arena.
- Direct links with **UNISPACE+50 Thematic Priority 2, Legal regime of outer space and global space governance: current and future perspectives & Thematic Priority 3, Enhanced information exchange on space objects and events.**
- In June 2016 COPUOS agreed on a first set of guidelines for the long-term sustainability of outer space activities (A/71/20, Annex), noting that this first set of guidelines is ready for States and international intergovernmental organizations to consider implementing on a voluntary basis. Negotiations continue on a preambular text and a second set of guidelines. A full compendium of guidelines will be referred to the General Assembly in 2018.
- **Links with the GGE report (A/68/189):** risk reduction notifications, inter alia, on manoeuvres that may result in risk to flight safety of other space objects; uncontrolled high-risk re-entry events; emergency situations; intentional orbital break-ups.



UNISPACE+50 and stronger notification procedures

- UN treaty-based mechanism for information exchange and notification procedures under the treaty obligations of the Secretary-General, including the Registration Convention and resolution 62/101 on registration practice, provide the legal basis under international law for enhanced information exchange and notification procedures of objects launched into outer space.
- GGE-report (A/68/189) recommendations on risk reduction notifications and relevant proposed requirements under the draft set of guidelines on the long-term sustainability of outer space activities to be assessed under the UNISPACE+50 process with the aim of improving overall information exchange and notification procedures on space objects.
- **UNISPACE+50 Thematic Priority 3, Enhanced information exchange on space objects and events** to take stock of current notification and registration regime and analyse requirements to meet recommendations on risk reduction notifications, taking into account the need for safety, security and sustainability of outer space activities.
- High Level Fora offer a unique platform for connecting a broad range of potential stakeholders.
- Agreement in 2018 on concrete time-bound measures to be taken to establish necessary requirements for enhanced information exchange/notification/registration platform under the established long-standing UNOOSA authority in discharging the responsibilities of the Secretary-General under the legal regime on outer space.



Conclusion

With the adoption of the 2030 Agenda for Sustainable Development, global sustainable development not only implies the use of space tools, but also requires that space-related activities, as well as outer space environment itself, continue to be sustainable in the long-term for the benefit of all countries.

The near-Earth environment is fragile and the broadening of application and space operations and the increased strategic value of space have resulted in a growing need to enhance the safety of space operations, security of space assets and systems, and the long-term sustainability of outer space activities.

Complexity of broader space security encompasses safety/security/sustainability measures as well as mechanisms for handling risks and hazards either by natural causes or man-made.

Consideration of strengthened transparency and confidence-building under international space law; enhanced information exchange and risk reduction notification procedures on space objects and events; future space-traffic management.

UNISPACE+50: Role of COPUOS and UNOOSA in global space governance – strengthened institutional framework.



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