

Best Practices for Space: A Necessary Underpinning for the Sustainability of Space Activities

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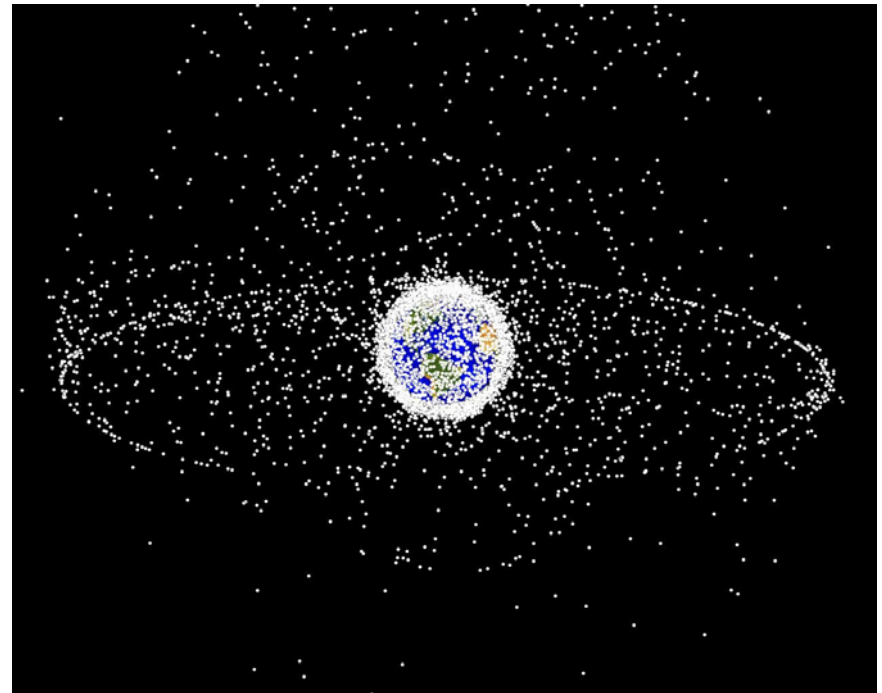
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Multiplication of government and commercial operators in outer space:

- 9 nations operate launch systems (68 launches in 2008);
- 50 states and regional organizations operate satellites in earth orbit;
- An increasing number of large and small private companies operate commercial satellite systems.

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- More than 4600 satellite launches since 1957 till end of 2008;
- About 880 operational satellites;
- 380 active spacecraft on the GEO;
- 13000 tracked and catalogued objects by the US SSN
(larger than about 5 to 10 cm in LEO, 1 m in GEO)



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Increased crowding in low earth orbit as well as in the geostationary orbit creates new challenges.

Managing the orbital and spectral resources will require a new discipline and possibly new international mechanisms to ensure a safe and sustainable use of outer space.

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The space debris situation is a real concern.

Recent events have “waken up” the space community:

- January 11, 2007: Chinese “experimental” ASAT test.
- February 20, 2008: voluntary destruction of USA 193.
- February 10, 2009: collision of Iridium 33 with Cosmos 2251.

...as well as spacecraft breakups in LEO, GEO satellites failures, etc.

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The deployment of weapons in space has not taken place,

...but ground-based weapons can be used against low earth orbit spacecraft.

If they were activated during a conflict, this would jeopardize the secure use of near-earth outer space.

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Crowding of outer space and the proliferation of space debris represent an increased threat to safe orbital operations.

Responsible uses of outer space by all actors is essential to preserve it.

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- The excellent « space debris » work done by the Inter Agency Space Debris Committee (IADC) over many years led to the adoption of UN COPUOS Space Debris Mitigation Guidelines in 2007, [endorsed by UNGA Resolution 62/217 of 21 Dec. 2007](#).
- This process provides a good model of how the international community can make good progress towards a regime of sustainable space operations.

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In June 2007, at its 50th session, I proposed to COPUOS delegations that the Committee should tackle the issue of “Long Term Sustainability of Space Activities” with a bottom-up approach based on the model of the Space Debris Mitigations Guidelines.

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In line with this proposal, a first step took place in 2008:

The establishment of an informal working group of space faring nations and commercial satellite operators devoted to the topic of « Long Term Sustainability of Space Activities ».

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The purpose of this informal working group (20 space faring nations and 3 large commercial operators) was to start developing information exchange mechanisms and consensus-based “Best Practices Guidelines” which will contribute to a safer and sustainable outer space.

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The informal working group is preparing an information report which addresses the various issues affecting the Sustainability of Space Activities:

- Space debris mitigation and remediation
- Improving the safety of space operations
- Managing the electromagnetic spectrum
- The impact of space weather and other natural causes
- Review of existing international mechanism(s) to improve the safety and sustainability of space activities

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- The working group's draft information report is already in its Revision 4 and should be completed by the end of 2009.
- Many space faring countries have contributed to the preparation of the report, as well as international organizations ITU, WMO, ISES, IAASS.
- But just as important is the very active contribution from the commercial satellite operator industry.

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- France proposed to COPUOS during its 52nd session (3-12 June 2009) that the topic of “Long Term Sustainability of Outer Space Activities” be taken up as a new agenda item of COPUOS/STSC in 2010 under a multi-year work plan.
- This was approved by COPUOS last week.
- The information report prepared by the informal working group will serve as a basis for COPUOS consideration of this new topic.

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Conclusion (1)

- Ensuring safe and sustainable access to, and use of outer space is a major issue for all, national governments and commercial operators.
- Recent events have shown that the issue is not an academic one.

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Conclusion (2)

The COPUOS Scientific and Technical Sub-Committee will start discussing “Best Practices Guidelines” beginning of 2010, based on preliminary reflections by the informal working group on Long Term Sustainability of Space Activities established in 2008.

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Hopefully, this bottom up, consensus based approach to the development of “Best Practices Guidelines” will contribute to safer and sustainable outer space activities for the long term.

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Thank you for your attention.