



Promoting Cooperative Solutions for Space Sustainability

Earth Observation: Innovations and Socioeconomic Benefits

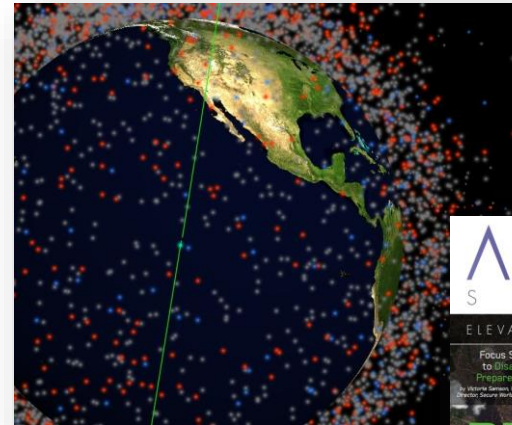
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- SWF is a private operating foundation dedicated to the secure and sustainable use of space
- ***Why space sustainability?*** Increasing reliance on space assets coupled with potentially destabilizing trends
- SWF Focus Areas
 - Space Sustainability
 - Space Law and Policy
 - Human and Environmental Security



Screenshot from *Stuffinspace.net*; cover of *Apogeo Spatial* spring issue; panelists at “Challenges in Sharing Weather Satellite Spectrum with Terrestrial Networks” event held in Wash. D.C.

A dynamic space environment

- Earth observations (EO) a focal point for this dynamism.
 - Enterprise-wide trends include large constellations for layered observations; big data and analytics innovations; open geospatial standards
- EO is a key element of emerging space nation activities
 - *Strong linkage with practical goals of development agenda*
 - *Lower threshold of access, particularly smallsats*
 - *Sought-after mix of indigenous/ commercial activities for complex challenges*
- Established and emerging actors alike: vision of combined data sources to answer increasingly complex questions

Policy framework impacts

- Tension with existing policy, legal, and regulatory practices
- Smallsats for EO a good case study: Impacts across full value chain: from licensing, to on-orbit operations, to data archiving
- Ongoing examination within government, industry, academia, international organizations
- Multi-stakeholder conversations to address issues, such as:
 - Re-examination of stakeholder roles and responsibilities
 - Value and risk evaluation
 - International obligations and precedent
 - Streamlining of regulations

Towards policy framework innovation

- Policy, law, and regulatory mechanisms critical to balance the benefits and challenges of what has been as described as a “geospatial awakening”
- Beyond a short-term conversation in response to a particular disruption: Iterative, holistic process to strengthen link between “innovation” and “socioeconomic benefit” in the long term
- Constantly evolving elements include:
 - **Stakeholder/ community engagement**
 - **Challenges of potential users**
 - **Responsible behavior**

- What are the non-technical innovations that will help build and sustain the socioeconomic benefits of EO innovations?
- SWF interest in ensuring innovations to serve society can be realized in a collaborative and sustainable way
- Our innovations to current trends include:
 - **Space Commerce and Sustainability** - new portfolio of activities
 - **The Handbook for New Space Actors** - publication to provide new space actors a broad overview of the fundamental principles, laws, norms, and best practices for peaceful, safe, and responsible activities in space <http://swfound.org/handbook/>



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THANK YOU!

Questions? Comments?

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