

SPACE SECURITY INDEX



Committee on the Peaceful Uses of Outer Space

Vienna, 11 June 2015

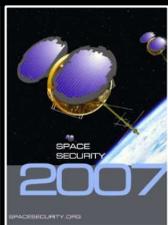
Anna Jaikaran - SSI Project Manager



The Space Security Index



- Annual assessment of developments affecting space security
- Supports the development of *policy* to ensure secure access to space for all
- 12th edition





Defining Space Security

“The secure and sustainable
access to and use of space,
and freedom from
space-based threats”





- **Theme 1:** Condition of the space environment
- **Theme 2:** Access to and use of space by various actors
- **Theme 3:** Security of space systems
- **Theme 4:** Outer space policies and governance



Condition of the space environment



Theme 1: Condition of the space environment

- *Indicator 1.1: Orbital debris*
- *Indicator 1.2: Radio frequency (RF) spectrum and orbital positions*
- *Indicator 1.3: Natural hazards originating from space*
- *Indicator 1.4: Space situational awareness*



Developments in the *2015 Space Security Index*:

- **International dialogues on debris problem, active debris removal, and other solutions continue**
- **Support growing to allow ITU to track sources on interference**
- **Greater coordination of activities related to space weather**
- **Enhanced SSA capabilities and sharing agreements**
- **Commercial space situational awareness services emerge**



Access to and use of space by various actors



Theme 2: Access to and use of space by various actors

- *Indicator 2.1: Space-based global utilities*
- *Indicator 2.2: Priorities and funding levels in civil space programs*
- *Indicator 2.3: International cooperation in space activities*
- *Indicator 2.4: Growth in commercial space industry*
- *Indicator 2.5: Public-private collaboration on space activities*
- *Indicator 2.6: Space-based military systems*



Developments in the *2015 Space Security Index*:

- Constellations of small satellites allow more frequent data collection than traditional EO satellites systems
- Geopolitical tension between the United States and Russia adversely affects cooperative agreements
- Cooperation in space-based military activities increases
- The association between commercial satellites and specific states becomes less clear

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Theme 3: Security of space systems

- *Indicator 3.1: Vulnerability of satellite communications, broadcast links, and ground stations*
- *Indicator 3.2: Capacity to rebuild space systems and integrate smaller satellites into space operations*
- *Indicator 3.4: Earth-based capabilities to attack satellites*
- *Indicator 3.5: Space-based negation enabling capabilities*



Developments in the *2015 Space Security Index*:

- Continued vulnerability of satellite systems to cyberattack
- Further development and testing of missile defense systems
- Continued development of various responsive launch capabilities
- United States and Russia launch satellites capable of Rendezvous and Proximity Operations



Theme 4: Outer space governance

- *Indicator 4.1: National space policies*
- *Indicator 4.2: Multilateral forums for space governance*
- *Indicator 4.3: Other initiatives*



Developments in the *2015 Space Security Index*:

- U.S. National Defense Authorization Act increases emphasis on offensive space control
- United States explores commercial rights to space resources
- UNGA passes resolution on No First Placement of Weapons in Outer Space
- UNGA calls for unprecedented meeting of First and Fourth Committees in 2015 to address possible challenges to space security and sustainability
- In COPUOS, plan of work to complete draft Guidelines for Long Term Sustainability of Outer Space extended to 2016



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SSI Report

Full report available Autumn 2015

www.spacesecurityindex.org

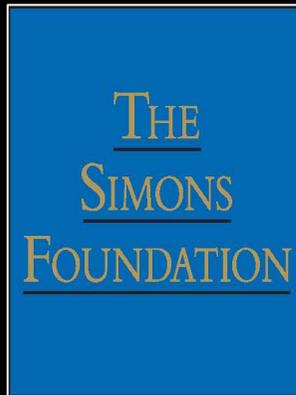
Executive Summary available at COPUOS
courtesy of the Canadian Space Agency





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SSI Project Partners



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