



Promoting Cooperative Solutions for Space Sustainability

Regional Perspectives on Policy Issues Related to Space Sustainability

Brian Weeden

- **SWF Mission:** develop and promote ideas and actions for *international collaboration* that achieve the *secure, sustainable, and peaceful uses of outer space*
- Raising *awareness* of key issues and building *consensus* for action among space actors are integral to accomplishing our mission
- **Key Question:** what is the *international* awareness of and attitude towards key space sustainability issues?
 - Is it uniform or does it differ by region?

- Survey of attendees at the 2012 Space Generation Congress in Naples, Italy
- Ages 18-35
- 28 countries
- Total of 78 completed surveys

Born	Work/Study	Region
3	3	Southern Africa
1	1	Western Africa
5	5	Central America
2	1	South America
15	15	North America
6	5	East Asia
4	1	South Asia
1	2	Southeast Asia
4	4	West Asia
3	2	Eastern Europe
5	5	Northern Europe
7	7	Southern Europe
11	13	Western Europe
9	11	Oceania

- Rate the following uses of space on a scale of 1 (unimportant) to 5 (very important)

	1-2	3	4-5
National Security	31%	32%	37%
Environment / Natural Resource Monitoring	21%	14%	65%
Communications	10%	13%	77%
Navigation	18%	17%	65%
Science and Exploration	18%	12%	71%

- Strong consensus on importance of Environmental monitoring, Communications, Navigation, & Science/Exploration but not National Security

Average score by geographic region (born)

National Security	Env / Res	Comm.	Nav.	Sci/Exp	Region
2.87	3.67	3.60	3.27	4.20	North America
2.73	4.27	4.18	4.18	4.18	Western Europe
4.50	3.67	4.17	3.67	3.33	East Asia
2.56	3.00	4.22	3.00	3.33	Oceania

red = high value(s) for category
blue = low value for category

- National security was most important among those from East Asia (China, Japan, Korea)
- Science and exploration were most important among those from North America and Europe

Threats to Space Sustainability

- How much do the following threaten space sustainability on a scale of 1 (no threat) to 5 (biggest threat)?

	1-2	3	4-5
Space Debris	3%	19%	78%
Space Weaponization	19%	24%	56%
Radio Frequency Interference	29%	32%	38%
Space Weather	35%	36%	29%

- Suggests there is consensus on importance of space debris and weaponization, to a lesser extent, but not RF or space weather

Threats to Space Sustainability

Average score by geographic region (born)

Space Debris	Weaponization	RF	Space Weather	Region
3.87	3.87	2.73	3.00	North America
4.45	3.09	3.45	2.73	Western Europe
3.67	4.17	2.83	3.17	East Asia
4.22	3.56	3.33	2.56	Oceania

red = high value(s) for category
blue = low value for category

- Strong correlation between attitudes in Western Europe and Oceania, and North America and East Asia
- Weaponization much more of a concern in East Asia than elsewhere

- Are current international laws and regulations enough to ensure space sustainability (1 – not enough, 5 – more than enough)

	1-2	3	4-5
Laws and Regulations	71%	23%	6%

Average	Region
2.07	North America
2.00	Western Europe
2.33	East Asia
2.00	Oceania

- Indicates a general consensus that more work needs to be done in this area

- Distinctive difference in what is an important space sustainability issue between regions
- International support likely exists for political action on some issues, but will likely require consensus-building efforts
 - Not all countries/regions may be motivated to engage at first
 - May not be able to get all countries to agree on a topic
- **Key question:** what drives these differences?