

Some Thoughts on Space Policy

Ray A. Williamson

Secure World Foundation

rwilliamson@swfound.org

- The Secure World Foundation Agenda
- Space issues facing the international community
- Why do States decide to develop a space policy and a space agency?
- Space policy development
- Human Security and Space



Secure World Foundation?

Promoting Cooperative Solutions for Space Security

The Secure World Foundation (SWF) is a private operating foundation...

Dedicated to the secure and sustainable use of space for the benefit of Earth and all its peoples.

What does the Foundation do?

Promoting Cooperative Solutions for Space Security

- **Engages** with academics, policy makers, scientists and advocates in the space and international affairs communities to support steps that strengthen global space security.
- **Promotes** the development of cooperative and effective use of space for the protection of the Earth's environment and human security.
- **Acts** as a research body, convener and facilitator to advocate for key space security and other space related topics and to examine their influence on governance and international development.

- **Space Sustainability**
 - Protection of continued utility of space resources
- **Human security**
 - Development and disaster assistance
 - Environmental and climate change
 - Countering degradation of land, air, water, and ice
- **Planetary threats**
 - Mitigating the threat of collision from a Near-Earth Object (NEO) through the establishment of effective international governance for response

- Security and sustainability of space activities
 - Need for coordinated approach
- Growth in number of space actors, especially from developing countries
 - Increases number of possible partners for cooperation
 - Increases need for international agreements on management of space activities
- Rapid expansion of space activities, including space tourism



Space Issues Facing the International Community

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- How to improve use of space resources for the benefit of humanity
- Low level of member states adhering to space treaties
- Need for coordinated international approach to the long-term threat of near Earth objects (NEOs)—asteroids, comets

- Ability to continue to use space for its benefits not guaranteed
 - Increasing crowding in some key orbits
 - Increasing amounts of orbital debris
 - Use of space weapons threatens space environment
 - Anti-satellite weapons, most especially, debris-causing Asats
 - Jamming of satellite signals

Why Do Countries Seek to Build Space Capabilities?

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- Advance technological development, e.g.,
 - Information technologies
 - Communication
 - Health
 - Resource management
- Advance in-country scientific capacity
- Improve use and management of State resources
- Advance economy
- Gain International Prestige
- Improve national security



States Vary Widely in Resources and Ambitions

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- Medium to large economies seek to develop a wide range of capabilities
- Less affluent States tend to focus on applications and science
 - Earth observations
 - Communications
 - Space science

- Space activities require public and private funding and they require clear focus
- Investment in space systems largely a governmental activity because of:
 - The scale of the investment, and
 - Most benefits profit the public in the form of public goods (improved weather forecasting, natural resource management, national security, etc.)
- The private sector can and should be an important partner
- Although the government funds most space activities, in any state, many actors play a part

Policy Logic Coalitions

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	SCIENCE	TECHNOLOGY	COMMERCE	SECURITY	AUTONOMY	FINANCE
ACTORS	Scientists	Engineers	Business	Defense & Intelligence	Politicians	Treasury
VALUES	Shared knowledge	Innovation, Competitiveness	Competitiveness, Profit	Stability predictability	National security, Prosperity	Fiscal discipline, Priorities
VIEW SPACE AS	Object of Scientific exploration	Opportunity to improve quality & technological Capability	A growing business opportunity	Space for intelligence, Force enhancer	National prestige, foreign policy tool, Intl negotiating power, regional autonomy	In cost vs. benefit terms
FUTURE TRENDS	Global science	Sharing costs & risks	Global supply chains	Situational awareness	Regional cooperation	Cost sharing

POLICY IS SHAPED BY COALITIONS OF ACTORS

The Importance of Establishing a Structured Space Policy

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- A policy allows government to focus its investments and to shape the evolution of the space arena
- Without a formal policy, activities tend to evolve in an ad hoc manner that may lack coherence and long-term sustainability
- A well-structured space policy can assist capacity-building and sustainable development
 - Science and technology education
 - Technology development

It is not enough just to establish a space agency

- All space activities are ultimately funded by individuals
 - but risks and reward expectations differ:
 - Public sector: tax payers (many, low individual risk)
 - Private sector: investors (fewer, higher risk)
- Private sector can, and should be, a major partner in executing space policy
- The policy challenge is to establish the “right” level of investment in publicly-funded space activities
 - Has implications for other policies; e.g., remote sensing data distribution policy

- The public generally very poorly informed about the benefits of space technology and the value of investing in space activities.
 - Important to invest in public awareness programs about the value of space activities to individual and collective welfare
- Space-related non-governmental organizations (NGOs) can play a significant role in building awareness, e.g.,
 - Space Generation Advisory Council (SGAC)
 - Planetary Society
 - World Space Week

- Ratifying the 1967 Treaty on Outer Space and the later international agreements
- Taking active part in COPUOS and its subcommittees
- Contributing constructively to other international space-related organizations
- Taking an active role in assuring the long term sustainability of outer space.
 - Adherence to the Orbital Debris Guidelines
 - Membership on technical committees focused on sustainability

- Concept developed out of the experiences of the Cold War in which major power politics very often rode roughshod over the needs of individuals, communities, and small states.
- Economic security, food security, health security, environmental security, community security, personal security, and political security.
- Each of these may depend on the others in complicated ways

- World community operates sufficient numbers and varieties of satellite systems to make an enormous positive difference in the lives of billions of people
- The benefits to society worldwide potentially very great.
- Yet space system operators not well organized
- Need appropriate tools to turn data into useful information and appropriate services.
- Need to collaborate more deeply and effectively with satellite and ground system operators around the world
- Collaborate with end users of INFORMATION



Global Monitoring for Environment and Security (GMES)

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- Joint European Union – European Space Agency Program
 - Major step toward creating unified Earth applications that integrate the output of space systems with more traditional, detailed local-scale data and information.
 - Includes
 - Data collected from ground-based sensors
 - Contributing satellites
 - Four “sentinel satellites”
 - Provide data for some 18 specific applications to support Europe’s needs for accurate information about the planet



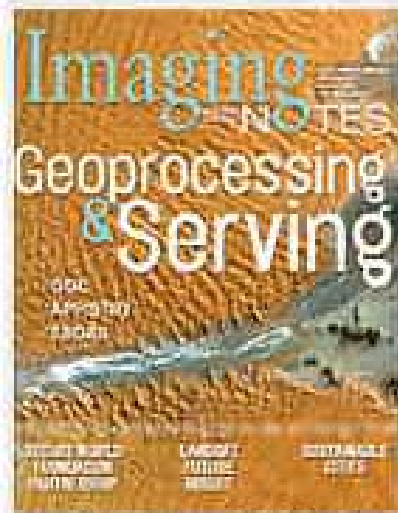
Global Earth Observing System of Systems (GEOSS)

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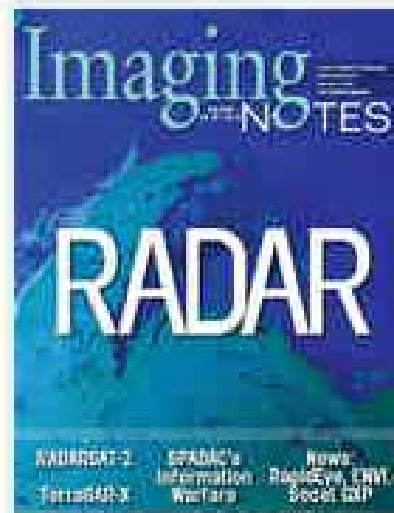
- Began July 2003
- Now 74 State members and 51 Participating Organizations
- Secretariat in Geneva, with staff seconded from different governments

SWF and Human Security

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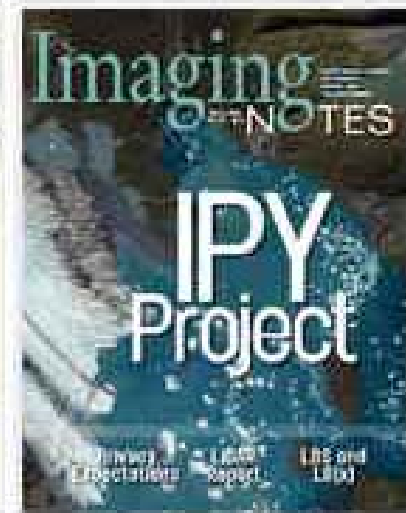
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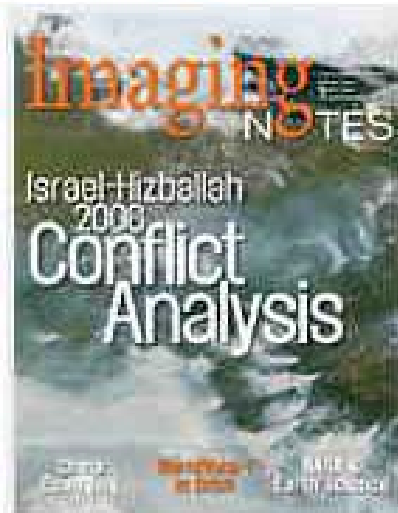
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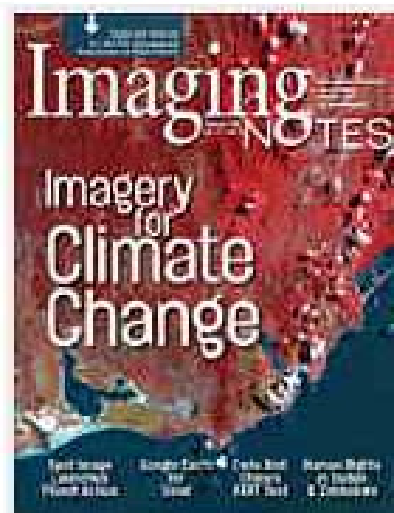
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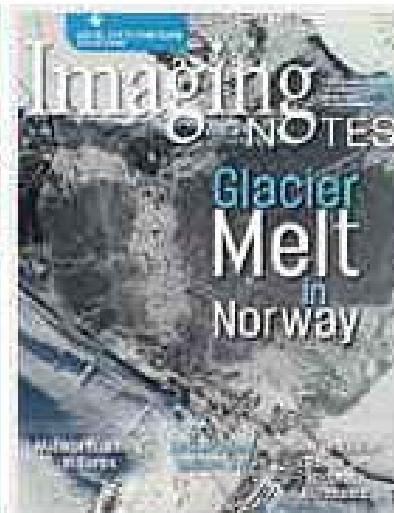
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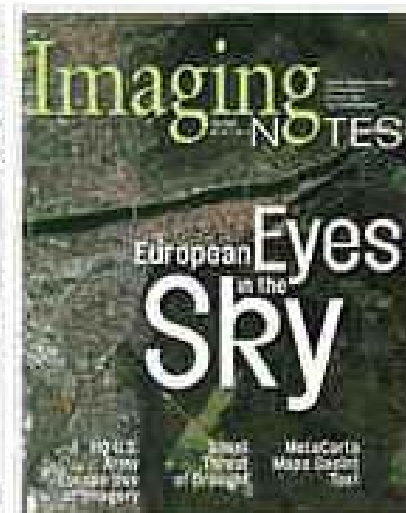
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Human Security Now Depends on Space Security

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- Hence, need to continue the drive toward the long term sustainability outer space to:
 - Assist further development of benefits to humanity from space

THANK YOU!

QUESTIONS?