



SUSTAINABLE DEVELOPMENT IN AND THROUGH SPACE

Governance, Financing, and Education
Issues

Ashley Bander and Vincent Sabathier

CSIS

CENTER FOR STRATEGIC &
INTERNATIONAL STUDIES

Space
Initiatives

About Space Initiatives

- A bipartisan, nonprofit organization headquartered in Washington, DC, CSIS conducts research and analysis and develops policy initiatives that look into the future and anticipate change.
- Space activity is at the heart of the national and international security and foreign policy issues that CSIS covers.
- Space Initiatives was started in 2004 to address global space policy issues and opportunities. It is part of the Global Challenges research focus at CSIS.

Sustainable Development Through Space

- International security
 - Cooperation between countries
 - Mutual understanding
 - Building trust
- Innovation
 - Modern habitat
 - Energy generation and management
 - Environmental controls
- Inspiration
 - A timeless global dream



Sustainable Development In Space

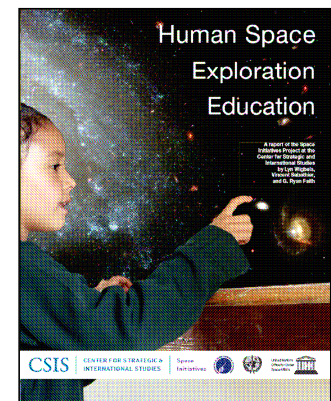
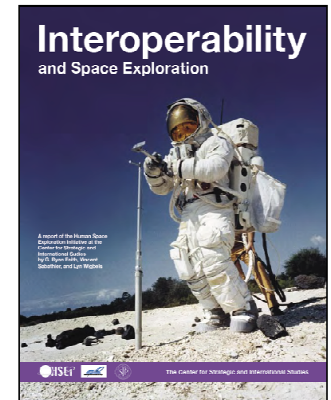
- Secure and expand human sphere of influence in space
 - Increased number of players
 - Increased number of operational systems
 - Pushing the frontier
- Requires better multilateral coordination
 - For example, a code of conduct
 - A governance issue
- Sustain and grow space activity
 - Financing mechanisms
 - Workforce
 - Public support



Space Initiatives at CSIS

We examine these issues of sustainability three ways

- Governance
 - Do we need a governance structure for exploration?
 - How do you address issues like interoperability, redundancy, and standardization?
 - Global Space Development Summit
- Finance
 - Promoting PPPs, industrial cooperation
- Public Support – through Education
 - Across borders, across generations
 - Portal for space education resources with IAF, UNESCO
 - University Initiative to build ties between the Program Managers of tomorrow



Global Space Development Summit

- First Global Space Development Summit was held in Beijing in April 2008 in cooperation with the Chinese Society for Astronautics
- Attended by representatives from 15 countries, including leaders of the aerospace industry and space agencies, academia, representatives from non-profit and international organizations, US congressmen, and diplomats.
 - International organizations included AAS, AIAA, ESPI, IAA, IAF, OECD, Secure World Foundation, Space Foundation, WTO.
- Participants in the first summit agreed that two topics were ripe for global cooperation and issued a joint statement called the Beijing Declaration

Beijing Declaration

GLOBAL SPACE DEVELOPMENT SUMMIT
BEIJING - APRIL 24th 2008
BEIJING DECLARATION¹
北京宣言

We, the signatories:

Recognizing that on April 24, 2008, in Beijing, China, under the leadership of the Chinese Society for Astronautics (CSA) and the Center for Strategic and International Studies (CSIS), the first "Global Space Development Summit" took place;

Acknowledging that the purpose of the Summit was to promote a renewed global dialogue on the future of civil space activity in general, and space exploration in specific, and to address the opportunities for more meaningful international integration of these activities for the benefit of all human kind;

Noting that the Summit was attended by a wide variety of space professionals -- diplomats, elected representatives, leaders of the aerospace industry and space agencies, academia, representatives from non-profit and international organizations, from around the world;

Also noting that fifteen countries, six embassies, six space agencies, two elected representatives, and nine non-profit and international organizations participated in this event;

Also noting the extraordinarily high caliber of the professional participants, and the frankness and depth of the international dialogue conducted under the auspices of the Summit, served as confirmation of the timeliness and importance of the meeting, and contributed greatly to its successful outcome;

Recognizing that the global space enterprise in 2007 was a major economic force, creating more than \$251 billion (US) in revenues, the preponderance (89%) representing commercial space activity²;

Also recognizing that some 31% of global space revenues (\$77.2 billion US) continue to be driven by government space programs, and these programs in turn drive the technologies, innovation, services and international relationships of the future;

Observing that during last fifty years -- the first space age -- astronautics has flourished and science has benefited enormously from the expansion of human activity into space;

Also observing that although originally, a competition-driven and a government-only activity, space is now a vital component of the global society, providing for the economic well-being and security of developed nations;

Also observing that in addition to the US and Russia -- the two original space powers -- new space powers such as China, Europe, India and Japan have emerged;

Considering that global economies are now entering a new era, economic expansion is now powered by "globalism" (全球主义) which is the symbiosis between the driving power of knowledge and related goods and services, and the networking of information technology;

Also considering that the key corollary of this new age is that continuing economic readjustments at macro and micro-levels, particularly at the level of space enterprises, are favored by permanent

- Space, as well as being “a major economic force,” is a powerful foreign policy tool that has the potential to enhance national and international security
- Two areas are ideal for international cooperation
 - Earth Observation [GEO]
 - Exploration [International Lunar Base]

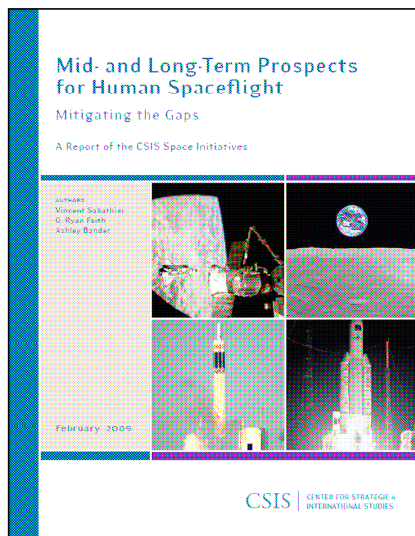
2nd Global Space Development Summit

- Second summit to be held in Washington DC, November 12-13, 2009, co-organized by CSIS, AIAA, Space Foundation, and Chinese Society for Astronautics.
- On November 12th, questions of space exploration governance will be discussed, with a particular emphasis on the international lunar base project recommended in the Beijing Declaration.
- On the 13th, the Symposium on Earth Observation will examine the importance of Earth observations to a variety of national and international issues and discuss the current state of cooperation, particularly with regard to the development of the Global Earth Observation System of Systems (GEOSS).
- The following week, the United States will be hosting GEO's Sixth Annual Plenary meeting (GEO-VI) in Washington, which will include representatives from over 75 governments and more than 50 international organizations.



Space Exploration

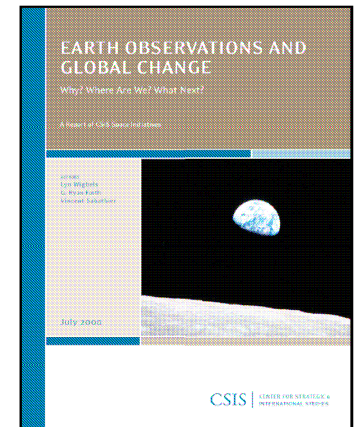
- Although the International Space Station provides one model of international cooperation in space, nothing like GEO exists as a framework for exploration



- As we look beyond the International Space Station, an increasing number of nations are developing indigenous human space flight capabilities and ambitious lunar exploration programs.
- The goal of establishing a permanent international outpost on the surface of the moon by the year 2025, provides an opportunity for broad, project-based cooperation.

Earth Observations

- There is a rapidly growing need for a better understanding of the complexities of Earth's environment.
- A large number of nations have the ability to design, manufacture, and launch earth orbiting satellites.
- The Group on Earth Observations (GEO) provides a framework for beneficial multinational collaboration in space.



Contact us

Space Initiatives at CSIS

www.csis.org/space

space@csis.org

