

January 23, 2009

## Earth and Space Security: Progress and Challenges Ahead

The coming year presents challenge and promise for the secure and sustainable use of space for the benefit of Earth and all its peoples.

In 2008, significant steps were taken for the cooperative and effective use of space for the protection of the Earth's environment and human security.

Those actions help build a bridge to 2009 to better deal with a host of space-related topics, from coping with hazardous space debris to ensuring the peaceful uses of outer space, as well as using space systems to protect and preserve Earth's environment.

"In our search for a secure world, we face many challenges and opportunities in 2009," said [Cynda Collins Arsenault](#), President and co-founder of the [Secure World Foundation](#) (SWF). "Many issues loom in the foreground—the economy, the environment, poverty, health care, etc. In our interconnected world we can no longer understand or approach these problems in isolation...or solve them with polarized views."

Arsenault observed that studies, articles and reports abound with dire predictions for 2009. But among the bigger stories are multitudes of examples of good news—signs of cooperation, new ideas, and greater efficiency. "Many of these are enabled by our space assets and the knowledge gained from them," she said.

For the coming year, Arsenault added, there are a number of practical problems to face, and the foundation works with its partners to find solutions to them—from menacing orbital debris, ever-crowded orbits and the lack of sufficient governance mechanisms for problem solving.

"We can learn from what's worked and what hasn't worked on Earth to apply our best ideas in space to create a secure and sustainable environment," Arsenault said.

The SWF spotlights progress in 2008 on several fronts:

- ◆ The work underway by the [Association of Space Explorers](#), which has flagged the danger to the planet from incoming asteroids, organizing a series of workshops to identify possible institutional mechanisms for dealing with this problem. In 2008 they presented their findings to numerous international bodies including the United Nation's (UN) Security Council.
- ◆ Consideration by the [European Union](#) of a Code of Conduct for outer space activities. Recognizing that a first step for space will be an international agreement on a Code of Conduct for space activities, both the European Union and a group of non-governmental organizations (NGOs) headed by the Stimson Center spent much of 2008 diligently addressing model Codes of Conduct. These models are being taken to the larger international community.
- ◆ The incoming [Obama Administration](#) recognizes the importance of international approaches to global issues, offering new possibilities for moving forward on related space issues in 2009. SWF partners have contributed White Papers on matters related to space governance, which were presented to the Obama transition team and to space-related staff members in the [White House Office of Science of Technology Policy](#) and the [Department of State](#).
- ◆ France has convened an informal working group of space experts, governments and industry to develop a set of practical "Best Practices" for the term "sustainability of outer space."
- ◆ Space situational awareness and space traffic management became more visible topics as the satellite industry, military and governments explore better options



The Earth and Moon as seen from Mars. Photo: NASA.

## News Bits

The Secure World Foundation is now a member of Action Team-14, a special working group dedicated to near Earth objects (NEOs) within the Scientific and Technical Subcommittee of the [United Nations Committee on the Peaceful Uses of Outer Space](#) (UNCOPUOS).

Action Team-14 focuses on the following: 1) Review the content, structure and organization of ongoing efforts in the field of Near Earth Objects (NEOs); 2) Identify any gaps in the ongoing work where additional coordination is required and/or where other countries or organizations could make contributions; and 3) Propose steps for the improvement of international coordination in collaboration with specialized bodies.

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[Forecasting Space Weather and its Economic Impact](#) is a NASA-funded study to assess the hazards of severe space weather and describes how extreme solar eruptions could have severe consequences for communications, power grids and other technology on Earth.

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The University of Arizona's Catalina Sky Survey sets a new record for discoveries of near Earth objects (NEOs), and receives additional funding through 2012.

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[Did a Comet Hit Earth 12,000 Years Ago?](#) The story suggests that nanodiamonds found across North America suggest that major climate change could have been cosmically instigated.

for keeping their satellites safe from Earth orbiting debris. Representatives from these groups came together this year in Rome where the commercial satellite industry and the Center for Space Standards and Innovation discussed their embryonic effort to create a data center to share satellite tracking data... possibly the beginning of true international civil space situational awareness.

#### Accomplishments and the year ahead

Dr. Ray Williamson, SWF's Executive Director, highlighted key accomplishments of the Foundation in 2008. These included:

- ◆ Attained Permanent observer status with the UN Committee on the Peaceful Uses of Outer Space (COPUOS).
- ◆ Admitted to UN COPUOS Action Team 14 (Working Group on Near Earth Objects).
- ◆ Established Space Security Committee in International Astronautical Federation.
- ◆ Developed key relationships in China as well as work with Latin American officials on space policy development.
- ◆ Looking into the coming year, SWF is engaged in an action-oriented agenda on space security, partnering with several different organizations to develop new methods of ensuring space security while maintaining the peaceful uses of outer space.

Additionally, among other activities, SWF is focusing on planetary defense and the international policies needed to respond to the threat from near Earth objects (NEOs) conferences in Nebraska and Granada, Spain.

As we look to the future, SWF's Cynda Collins Arsenault asks: "What new leaders will step forward to inspire us in terms of our use of space for problem solving? What new discoveries will be made? What new inventions will open doors?"

Dr. Williamson also noted: "Whatever the future brings, SWF plans to be there to promote the international cooperative use of space for benefit of Earth and all its peoples."

### Secure World Foundation and the Embassy of Canada sponsor "Reaching Out: A New Approach to Security in Space"

On January 8, SWF and the Embassy of Canada co-sponsored a panel discussion designed to showcase the information and analysis contained in the Space Security Index. The discussion, called "Reaching Out: A New Approach to Security in Space," was intended to offer a new vision of security in space, and explore opportunities to achieve it. The event took place at the Embassy of Canada in Washington, DC.

The Space Security Index is the only annual, comprehensive and integrated report on trends and activities in outer space and their impact on space security, defined as secure and sustainable access to and use of space, and freedom from space-based threats. The purpose of the Space Security Index is to improve transparency on space activities and support policy development to ensure secure access for all. It also facilitates dialogue on space security challenges and potential responses. It has become an indispensable tool for debate and decision making among stakeholders and policy-makers.



The Space Security Index is produced by a consortium that includes Project Ploughshares, SWF, the Institute of Air and Space Law at McGill University, the Simons Centre for Disarmament and Non-proliferation Research at the University of British Columbia and the Space Generation Foundation. It is financially supported by the Department of Foreign Affairs and Trade of the Government of Canada, the Ploughshares Fund, SWF and The Simons Foundation.

Ben Baseley-Walker, left, Policy and Legal Consultant for the Secure World Foundation, was responsible for coordinating the successful Space Security Index event. **Photo: SWF.**

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Spot Image has a story on remote sensing satellites being used for humanitarian action.

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Beyond "Fortress America": National Security Controls on Science and Technology in a Globalized World explains that U.S. national security controls on science and technology are broken and should be restructured is the essence of a new. This major release from the National Research Council includes information on satellite and space hardware. The report stresses that current regulations were designed for a world that no longer exists and are unsuitable for today's adversaries. Immediate executive action is needed to restructure this system to prevent further declines in U.S. scientific and technological competitiveness.

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Nuclear Challenges and Policy Options for the Next U.S. Administration is edited by Jean du Preez of the James Martin Center for Nonproliferation Studies and includes discussion on China's perceived anti-satellite plans, the U.S. response to these plans and how this relates to the overall debate on space weaponization.

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