

REPORT OF SPACE LAW COMMITTEE, 2007-2008

1. Introduction

Several noteworthy developments have taken place since last year's Report. Some have been highly constructive, others non-progressive, and others troublesome. The events considered here are the product of public international organizations, private international organizations, the acts of States, and the work of private commercial entities.

2. Public International Organizations

At the United Nations the Office of Space Affairs has promoted events allowing for the sharing of information and professional expertise. Each year the Office in conjunction with the International Astronautical Congress conducts advanced professional seminars. The UN General Assembly has created a Committee on the Peaceful Uses of Outer Space (COPUOS). It is supported by Legal and Scientific and Technical Sub-Committees.

In 2007 the Legal Sub-committee held its 46th session. It continued its inquiry into a proposed definition and delimitation of boundaries and the rational and equitable use of geostationary orbital positions. It considered the conditions under which nuclear power sources might be employed. It contained an agenda item on "capability building in space law," and the means to "provide capital and assistance to developing countries."

The Sub-committee welcomed the March 2007 promulgation of the Scientific and Technical Sub-Committee's "space debris mitigation guidelines." It was deemed that they would complement existing outer space treaties and would promote confidence in the safety of the space environment as well as bringing the benefits of peaceful uses to all countries.

Unfortunately, the membership was mired in prior disagreements and little progress was made. On the brighter side 10 space-resource countries and the European Space Agency (ESA) have established an Inter-Agency Space Debris Coordinating Committee (IADC) with the United States being represented by NASA.

The Scientific and Technological Sub-committee at its 44th session agreed that its 2008 agenda should include space debris with its emphasis on mitigation practice and the promotion of space-based disaster management support. It worked out a carefully considered Annex entitled "Space debris mitigation guidelines of the Scientific and Technical Sub-Committee of COPUOS." With an aging satellite population debris is being recognized as posing risks to spacecraft in Earth orbit including their human occupants as well as damage on the ground. In February, 2008, a U. S. space object

possibly containing hazardous materials including a toxic fuel was destroyed by an American missile launched from a cruiser in the North Pacific. The United States has asserted that this was a one-time event and did not constitute the start of an antisatellite program. However, other countries have been critical of the measures taken and have suggested that the door has been opened for them to embark on anti-satellite programs. Calls have been made for countries to ban weapons of mass destruction from space. The National Security Council considered the matter to be serious enough to issue warnings and assurances against potential harms. The Committee will give further attention to this subject in its 2008-2009 Report.

The Scientific and Technical Sub-Committee in 2007 centered its attention on the mitigation of existing harms rather than the outright prevention of creating debris. Ambassador Finch and Professor Levine have commented on this saying that prevention has become of greater importance as the number of space objects proliferates augmented by China's destruction of its orbiting satellites. The 44th session also gave attention to disaster management, and a global navigational satellite system. As with the Legal Sub-committee the membership was mired in prior disagreements on agenda items, and little progress, other than the promulgation of the non-binding Guideline was made.

At the close of 2007 the General Assembly adopted four outer space resolutions. On December 5 Resolution A/Res/62/20 entitled "Prevention of an Arms Race in Outer Space" was adopted by a vote of 178-1-1. On the same date Resolution A/Res/62-43 entitled "Transparency and Confidence-Building Measures in Outer Space Activities" passed by a vote of 179-1-1. On the same date Resolution A/62-55 the "Report of the Conference on Disarmament" was passed without a vote. On December 22 Resolution A/Res/62/217 "International Cooperation in the Peaceful Uses of Outer Space" was adopted by a vote of 129-6-13. In each instance in which a recorded vote occurred the United States voted against the Resolution.

3. Reports of Private International Organizations

The Office of Space Affairs gathers and publishes "Information on the activities of international intergovernmental and non-governmental organizations relating to space law." Its 2007 Report¹ dealt with space issues authored by Prof. Sylvia Maureen Williams of Argentina on behalf of the Space Law Committee of the ILA. Included in the Report were remote sensing,² national laws and, registration. The Committee had given special attention to the latter. The hope existed that launching states would be more attentive to the terms of the 1975 UN negotiated Convention. It is a scholarly study and reflects the influence that the International Law Association continues to have on the process of developing international space law and the clarification of its meaning.

For many years other international organizations have contributed materially to the orderly uses of outer space. The International Telecommunication Union is a noteworthy example. It continued its efforts to adjust the claims of countries using geostationary orbital positions for broadcast purposes.

4. The 2007 Report of the Intergovernmental Panel on Climate Change (I.P.C.C.)

The I.P.C.C. is a joint venture of the World Meteorological Organization and the United Nations Environment Program. On February 4, 2007, it released its Fourth Assessment Report on the state of the climate. Like earlier reports issued every four years, it had been vetted by thousands of independent scientists, as well as by those employed by governments in 190 participating countries. The scientific acclaim accorded to the Report resulted in the 2007 Nobel Peace Prize being awarded to the I.P.C.C., and two of its leading proponents. They were Albert Gore, a major leader in environmental issues, who furthered the world-wide distribution of the documentary film “An Inconvenient Truth,” and Rajendra Pachuri Said of India, who headed the intergovernmental panel.

There is considerable reason to believe that the scientific facts gathered in large part by remote-sensing satellites will lead to effective actions by national governments in improving the quality of the earth’s atmosphere and the elimination of presence of earth-threatening pollution. This can take many forms including procedures to safeguard weather conditions so that harms resulting from droughts, tropical and other storms, hurricanes, and typhoons might be minimized and more acceptable living conditions might again prevail. The Report demonstrated that corrective environmental measures can now be justified, and the United States has begun to modify its past negative policies regarding the comparative advantages of a clean environment against other powerful economic interests and considerations.

5. The Exploration, Use, and Exploitation of Outer Space for Peaceful Purposes

The United States at the beginning of the space age was a leader in the COPUOS effort to establish a legal regime as reflected in four widely-ratified international agreements and also the largely disregarded Moon Treaty. The 1967 Principles Treaty focused on peaceful uses providing in Article IV that the Moon and other celestial bodies were to be used exclusively for peaceful purposes. The Article also required that Parties not place in orbit around the earth any objects carrying nuclear weapons or any other kinds of weapons of mass destruction, not to install such weapons on celestial bodies, and not to station such weapons in outer space in any other manner. These provisions constitute a partial arms control and delimitation pact. But, it was only partial.

Over the years an effort has been made to effect a distinction between peaceful uses and purposes and those not intended for aggressive purposes. It has been urged that peaceful purposes allowing for the presence of weapons not emplaced for aggressive purposes constituted a valid “militarization,” since such weapons were intended to prevent a possible adversary from initiating aggressive activity, while weapons so intended would be identified as a form of “weaponization,” and thus prohibited. In one instance the weapon would be for the gathering of intelligence information respecting the potential conduct of another country. In the second situation the weapon would be present to further a projected aggressive act.

This problem was considered by Professor Jonathan F. Galloway in remarks in December 11, 2006. He noted that a distinction could be drawn between “peaceful purposes” and “peaceful uses.” In his view “A ‘peaceful purpose’ is an intent to act peacefully, while a ‘peaceful use’ is an act of peace in fact...For instance, defending the state by putting Anti-Satellite weapons (ASATs) in outer space may be a peaceful defensive purpose, but if the effect is to start an arms race in space and increase international tensions, then there is not a peaceful use or a peaceful consequence.”³ He added, “Of course, a peaceful purpose, may in fact, produce peaceful uses or consequences as, for instance, when a state supports disaster management satellites.”

The fact that the two major space resource countries were able to emerge successfully from the “Cold War” era without engaging in armed conflict can be attributed to the depths of their mutual outlooks including the legitimacy of the “militarization” of the space environment. “Weaponization” is a highly suspect activity. Their mutual relationships in the area of disarmament and arms control, while frequently stormy, have not crossed the barrier of “mutual destruction.”

In early January, 2001, a federal space commission, under the chairmanship of Donald Rumsfeld, issued a report on the subject. It took the position that threats to the United States, either real or potential, required that the United States must be able to exercise extraordinary military power in space. This contributed to the separation of “militarization” from “weaponization.”

6. The United States Space Policies Directive of August 31, 2006

On August 31, 2006, President Bush issued a Directive promulgating a space policy replacing that of September 14, 1996.⁴ It recited that “consistent with peaceful purposes” the United States was allowed to engage in “defense and intelligence-related activities in pursuit of national interests.”⁵ The following were identified as principles and goals: National Space Security, Space Guidelines, Civil Space Guidelines, Commercial Space Guidelines, International Space Cooperation, Space Nuclear Power, Radio Frequency Spectrum and Orbit Management and Interference Protection, Orbital Debris, Effective Export Policies, and Space-Related Security Classification.

These pronouncements, employing general terms, sought to achieve a balance between vital domestic commercial, economic, educational, and security considerations. They offered the American public and foreign countries an understanding of American perceptions of international cooperation while reserving the right to maintain a high level of national security. Among the principles was the right to respond to interference and to “deny, if necessary, adversaries the use of space capabilities hostile to U. S. national interests.” This constitutes an on-going commitment to what has been considered in many informed circles as a perpetuation of policies that have failed in the past and which constitute a ratification of the prospect of an advanced weaponization in the space environment. They have been seen as the same policies that in the past had failed to enhance or enlarge an effective national defense posture.

In weighing those portions of the Directive that deal with the use of force in the space environment it is necessary also to take into account the long-time concept of “anticipatory self-defense,” which during the war against Iraq in 2001 ripened into the expression, also referred to as a doctrine, of “preventive self-defense,” now identified as the Bush doctrine. The distinction has been attempted that the latter could be invoked against an enemy or potential adversary earlier in point of time and with less proof of aggressive intent and actions than “anticipatory self-defense.”

Despite the underlying concerns by the U. S. government for security in the space environment, the 2006 Directive also included a new commitment to International Space Cooperation. Without hedging the preoccupation with security interests the new proposals related to space exploration and operating Earth-observation systems. The Secretary of State was charged with carrying out, after consultations with other departments of the government, “diplomatic and public diplomacy efforts, as appropriate to build an understanding of and support for U. S. national space policies and programs and to encourage the use of U. S. space capabilities and systems by friends and allies.”

When, however, on October 11, 2006, the U. S. representative to the General Assembly’s First Committee described the U. S. space policy and continuing opposition to new arms control measures aimed at space activities, a strongly militant and non-cooperative position was advanced. He emphasized American national interests and stated “It is critical to preserve freedom of action in space, and the United States is committed to ensuring that our freedom of action in space remains unhindered.” Lest doubt be directed at the statement he concluded by saying “We recognize our vital national interest in unhindered access to, and use of, space, and we are firmly committed to protecting it.”⁶

Statements from America’s highest level policy makers have recently reemphasized the U. S. commitment to national security employing a space-based system or shield. On October 23, 2007, President Bush in an address given at the National Defense University called for a US-led missile defense system in Europe to counter an emerging capability of attack by Iran.⁷ On the same day Secretary of Defense Gates called on Russia to become partners with the United States in the development of a missile-defense shield. Part of the system would be constructed in the Czech Republic. He indicated that the system would not be activated unless there were “definitive proof” of Iranian missile-testing. The proposal was opposed by Russian leaders who termed it a threat to Russian security.⁸

7. European Programs

In other parts of the world space activities have failed to achieve optimum goals. In April, 2007, it was announced that the two consortiums engaged in the building of the widely-hailed Galileo, a geostationary orbital positioning system, had not been able to meet their obligations and schedules. Disagreements and pressures concerning mutual shares and costs appeared to be non-negotiable. France and the Netherlands had rejected membership in the European Union in 2007, and this impacted on the Galileo project.

However, in February, 2008, cooperating European countries demonstrated they had been able to complete a \$2 billion laboratory module named Columbus. On February 7, 2008, it was launched successfully from the space shuttle Atlantis based at the Kennedy Space Center, with its destination being the International Space Station. A successful transit was effected and the module was successfully installed. Prior to launch detailed collaborative studies had been made identifying practical and legal problems that would result from the launch and incorporation of the module into the Space Station.

In Spain, on the other hand, the government had embarked principally on national initiatives. Private industry was being encouraged to produce supplies and materials for space-oriented programs.

8. China

China is presently engaged in an advanced space program. Like India and Japan it has announced plans for a manned moon launch around 2002. While Japan is more advanced in its space activities with deep space probes and robotic support, and while India has tested successfully a ballistic missile capable of delivering nuclear warheads, China possesses a more extensive space infrastructure. There are three launch sites in China, with a fourth being planned. Like the United States and the Russian Federation, China has been successful with manned space launches

On January 11, 2007, the Chinese People's Liberation Army conducted a kinetic anti-satellite weapons test destroying an obsolete Chinese weather satellite in low earth orbit. This had been preceded in late 2006 by the targeting of a U. S. imaging satellite by a Chinese ground-based laser. This conduct was inconsistent with prior Chinese policy, which had been opposed to space weaponization and favored debris mitigation. Speculation has arisen if the Army were intent on forming a new policy or if the recent activity were based on the Army's misperception of Chinese policy.⁹ In any event the tests have produced American concerns and added strength to its commitment to have unrestricted access to the space environment.

9. Property Rights in Space and Space Resources

Prior to Sputnik One suggestions had been made that private property rights could be established in space and in its natural resources. The most formal assessment of these proposals resulted in the adoption by the General Assembly of the 1979 Moon Treaty with its Common Heritage of Mankind provisions. They did not silence the continued presence of claims for property rights. With the practical death of the Moon Treaty, with its non-acceptance by space resource countries, the support for private property rights has been on the rise. A source often nominated for consideration has been the space rock Amun 3554, whose orbit crosses that of earth at a fairly low elevation. Proponents of space mining assert that the asteroid contains paying quantities of iron, nickel, cobalt, and platinum-like minerals.¹⁰

10. Conclusion

The exploration, exploitation, and use of the space environment and its natural resources continue to be of vast interest to governments and to private entities. National security is of central importance. Private entities have important interests in launching activities, telecommunications, remote sensing, and the huge infrastructure required for success. These interests are shared in countries where such undertakings are subject to governmental ownership and control. All recognize that an abundance of space debris adversely affects all forms of space activities.

The concept of debris mitigation is large enough to accommodate itself to the larger vision of debris prevention, for example, the design of space projects. However, as evidenced by the focus of the Scientific and Technical Sub-Committee on "Guidelines" for the former, it will be the first to be implemented. There is little, if any, support for putting the identified restrictions into a formal international agreement. States will have to become comfortable with the terms of the guidelines. Later they might take on the status of customary international law. This could happen quite quickly if there were sufficient practical experience identifying the benefits demonstrated in such usage.

Notes

¹. A/AC.105/C.2/L.xxx, p. 10 (January 1, 2007).

². Committee members Christol and Gabrynowicz have written extensively on the subject. Professor Christol's most recent book is *INTERNATIONAL LAW AND U.S. FOREIGN POLICY*, 2nd Revised Edition (2006). Professor Gabrynowicz is the Director of the National Center for Remote Sensing, Air and Space and a member of the faculty of law at the University of Mississippi.

³. Committee member Galloway has written extensively on the subject. He is Vice President of the International Institute of Space Law. Ambassador Finch strongly supports these observations.

⁴. NSC-49/NSTC-8. It has been analyzed by G. S. Robinson, *The U. S. National Space Policy: Pushing the Limits of Space Treaties?* ZLW 56.Jg.1/2007, p. 45.

⁵. One view of the general tenor of the Directive is that of J. W. Canan. He has written: "Space is shaping up as a coming combat theater for the U. S. In a departure from the past, the new U. S. National Space Policy permits and endorses unilateral military operations in space under the heading of national security, regardless of the international agreements or treaties that may ban them." *Space: The Next Battlefield?* 45 *Aerospace/America*, No. 2, 36 (February 2007). This view can be conditioned on growing threats from long-range ballistic missiles, global terrorism, and verbal attacks directed at the United States, such as in 2007-2008 by Iran.

⁶. USUN Press Release No. 385(06). Reprinted in 101 *AJIL*, No. 1, 206-207 (January 2007).

⁷. *Christian Science Monitor*, 3, October 24, 2007.

⁸. *Id.* at 8.

⁹. M. O. HANLON, *NEITHER STAR WARS NOR SANCTUARY: CONSTRAINING THE MILITARY USES OF SPACE* (2004); R. F. Doer, *Washington Watch*, 45 *Aerospace/America*, No. 2, 19 (March 2007). He raises the question whether China may be on the verge of embarking on military competition in space. In order to be able to answer this possibility it will be necessary to determine the consequences of the October 24, 2007 launch by China of its first lunar orbiter, Change 1, on board a Long March 3A rocket. It will spend a year studying the Moon's surface with the plan to be the first Asian nation to put an astronaut on the Moon. *Los Angeles Times*, A3, October 25, 2007.

¹⁰. Capturing the popularity of the prospect is the article by J. Adolph, *The Recent Boom in Private Space Development and the Necessity of an International Framework Embracing Private Property Rights to Encourage Investment*, 40 *The International Lawyer*, No. 4, 961 (Winter 2006). Committee member White has written extensively on property rights in space.

Professor Carl Q. Christol, Co-Chair
Professor Jonathan F. Galloway, Co-Chair
Ambassador Edward Ridley Finch, Esq., Member
Professor Arthur L. Levine, Member
Patricia M. Sterns, Esq., Member

10 March 2008