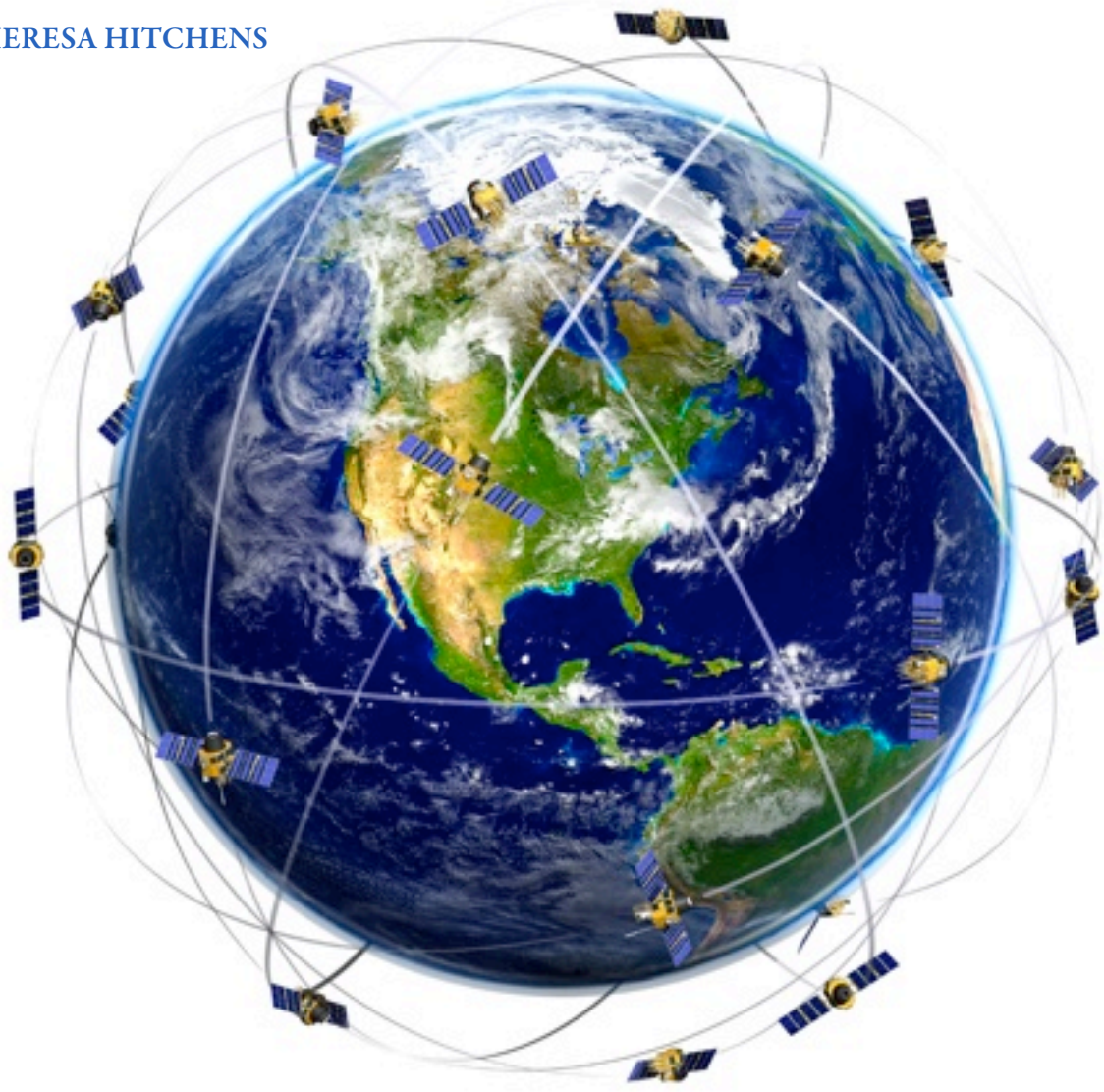
Transparency and Confidence Building in Outer Space

Inching Toward Action

— BY THERESA HITCHENS



Although concerns about the safety and security of humankind's operations in outer space have been with us since the dawn of the space age in 1957, the past decade has seen a steady increase in attention to the issue at the multilateral level.

This reflects the ever increasing importance of space activities to life on Earth. Satellites and spacecraft are critical to the functioning of the global economy: including enabling banking transfers, revolutionizing the movement of goods and services, underpinning the Internet, and predicting weather and natural disasters and enabling rapid response. Space operations are also growing in importance for militaries world wide for operations on the ground, and thus the question of space security – and the potential for satellites to become targets during conflict -- impacts directly on national and international security. Finally, more and more nations are active in the space arena: there are now some 1,100 active spacecraft on orbit and more than 60 states and/or commercial entities owning and/or operating satellites.[2]

It must be said that progress at the multilateral level in addressing the threats to space security – such as competition over access to orbital slots, the proliferation of space debris, and the specter of space warfare – has been glacially slow. No new treaties regarding space security and/or safety

have been signed since 1984, and that treaty, the *Agreement Governing the Activities of States on the Moon and Other Celestial Bodies* (*Moon Agreement*), has little legitimacy with only 13 ratifications and four signatures.

Nonetheless, one can say that 2010-2011 saw the emergence of a consensus around the notion that multilateral cooperation/action is now required to avoid harmful competition, accidents, and the increased potential for conflict in the global commons of outer space. That now unquestioned assessment has led to movement, on several fronts, towards establishing the underpinnings of a more defined international governance structure for space activities. At the foundation of all of these efforts is the widespread recognition that before new governance practices and/or structures can be developed, transparency and confidence in state to state relationships in space must be increased. There are three current multilateral platforms in which the discussion of TCBMs now have a central role: The UN Group of Governmental Experts on TCBMs, established in 2010, that will begin its work in July 2012; the UN Committee for the Peaceful Uses of Outer Space (COPUOS), which started work on a new agenda item, "long-term sustainability of outer space activities," in February 2010; and the European Union's effort to attract international accession to a proposed Code of Conduct for Outer Space.

Transparency and Confidence Building Measures (TCBMs) for Space at the General Assembly

TCBMs have long been an integral part of multilateral statecraft, enshrined in United Nations resolutions as potentially useful for improving mutual understanding, reducing misunderstandings and tensions, and promoting a more favorable climate for arms control and non-proliferation. Nor is the consideration of TCBMs for space new: UN General Assembly resolutions dating back to 1990 recognize their importance. Between July 1991 and July 1993, a Group of Governmental Experts appointed by the UN Secretary-General developed a "Study on the application of confidence-building measures in outer space." The weighty report, which elaborated on potential measures but also revealed strong differences of views about the imperative for action, was transmitted to the General Assembly at its 48th Session in October 1993.

Since 2005, Russia has been the key sponsor of an annual General Assembly Resolution on TCBMs for space activities that has attracted widespread support – with the exception of the United States which voted no from 2005 to 2008. In 2009, the administration of President Barak Obama changed tacks: abstaining from the voting rather than voting no on the text, which invited all UN nations to submit concrete proposals to the Secretary-General and instructed the Secretary-General to compile a report for the October 2010 session of the First Committee. In 2010, another breakthrough was made. Resolution, A/Res/65/68, adopted at the General Assembly's 65th Session, called for the establishment of a new Group of Governmental Experts on "Transparency and confidence-building measures in outer space activities."[2] The resolution passed with 183 nations voting for it, and the United States abstaining. However, during the First Committee debate on space in October 2010, U.S. officials made clear that their lack of a supporting vote should not be seen as a lack of support for TCBMs, rather concern with language in the resolution linking it to the Russian-Chinese draft treaty on the Prevention of the Placement of Weapons in Outer Space and of the Threat or Use of Force against Outer Space Object (PPWT). Indeed, in her Oct. 22 statement to the First Committee, Ambassador to the Conference on Disarmament, Laura Kennedy, stressed U.S. support for TCBMs. She said:

> "*The United States will pursue pragmatic bilateral and multilateral transparency and confidence-building measures (TCBMs) to mitigate the risk of mishaps, misperceptions, and mistrust. ... With regard to TCBMs, the United States supports measures that not only enhance U.S. security, but also the security of our allies, friends, and space partners...*

Examples of bilateral space-related TCBMs include dialogues on national security space policies and strategies, expert visits to military satellite flight control centers, and discussions on mechanisms for information exchanges on natural and debris hazards. The adoption of international norms or multilateral "codes of conduct" are also examples of TCBMs."[2]

Russia, which will chair the GGE to commence on July 23 in New York and include representatives of 14 other UN Member States[3] chosen on the basis of regional balance, had previously put forward a more detailed set of potential TCBMs. The Russian proposal explains that TCBMs might be elaborated under three categories: (1) measures aimed at enhancing more transparency of space programs; (2) measures aimed at expansion of information on space objects in orbits; and (3) measures related to the rules of conduct during space activities.[4] More specifically, the Russian proposal, which was submitted to the CD in a 14 August 2009 letter from Ambassador Valery Loshchinin, calls for:

1. Exchange of information on:
-the main directions of the states' outer space policy;
-major outer space research and use programs;
-orbital parameters of outer space objects.

2. Demonstrations:
-experts visits, including visits to space launch sites, flight command and control centers and other objects of outer space infrastructure on a voluntary basis;
-invitation of observers to launches of spacecraft on a voluntary basis;
-demonstration of rocket and space technologies.

3. Notifications of:
-the planned spacecraft launch;
-the scheduled spacecraft maneuvers which may result in dangerous proximity to spacecraft of other states;
-the beginning of descent from orbit of unguided outer space objects and the predicted impact areas on Earth;
-the return from orbit into atmosphere of a guided spacecraft;
-the return of a spacecraft with a nuclear source of power on board, in case of malfunction and danger of radioactive materials descent to Earth.

4. Consultations:
-to clarify the provided information on outer space research and use programs;
-on ambiguous situations, as well as other issues of concern;
-to discuss the implementation of the agreed TCBMs in outer space activities.

Though no new space treaties have emerged since the mid-1980s, COPUOS has made progress in addressing space safety and security. In 2007, COPUOS adopted a set of voluntary guidelines for space debris mitigation.

5. Thematic workshops:
-on various outer space research and use issues, organized on bilateral and multilateral basis, with the participation of scientists, diplomats, military and technical experts.[5]

All of these proposed measures reflect the application to the space domain of classical TCBM structures, and thus could perhaps form a basis for the launch of discussions at the GGE.

The GGE meets in three sessions: July 23-27, 2012 in New York; April 1-5, 2013, in Geneva; and July 8-12, 2013 in New York. GGEs work by consensus, so if an agreement can be found the final report would be transmitted by the Secretary-General to the First Committee in October 2013. If the group fails to reach consensus one of two things could result: no report would be issued; or a report that reaches no recommendations but instead outlines competing views (similar to the 1993 report) will be forwarded.

COPUOS "Long-Term Sustainability"

There are 69 member states in the Vienna-based COPUOS and a large number of non-governmental and intergovernmental organizations are observers. Technically, COPUOS is the only formal UN body empowered to negotiate new international space treaties; however, COPUOS's mandate does not include military space activities which has meant that discussions of space weapons have been ceded to the Conference on Disarmament in Geneva. COPUOS activities are divided between two subcommittees, the Legal Subcommittee and the Scientific and Technical Subcommittee. Though as stated above, no new space treaties have emerged from the Legal Subcommittee since the mid-1980s, COPUOS has made progress in addressing space safety and security within the Scientific and Technical Subcommittee. And while COPUOS has not addressed directly the issue of TCBMs, its work includes activities that would qualify as de facto TCBMs.

In 2007, for example, COPUOS adopted a set of voluntary guidelines for space debris mitigation based on technical recommendations developed by the Inter-Agency Debris Coordinating Committee (IADC)[6] and subsequently endorsed by the General Assembly in January 2008.[7] The accord is a significant achievement for space security, especially regarding Article 4, which pledges nations not to deliberately create long-lived debris.[8] In its most recent report, the Scientific and Technical Subcommittee

agreed that "implementation of the voluntary guidelines for the mitigation of space debris at the national level would increase mutual understanding on acceptable activities in space, thus enhancing stability in space and decreasing the likelihood of friction and conflict."[2]

Building on the success of the debris mitigation effort, COPUOS in February 2010 initiated a new working group under the Scientific and Technical Subcommittee on the "long-term sustainability of outer space."

The group was empowered to:

> *...examine the long-term sustainability of outer space activities in all its aspects, consistent with the peaceful uses of outer space, and avail itself of the progress made within existing entities, including but not limited to the other working groups of the Subcommittee, the Conference on Disarmament, the International Telecommunication Union, the Inter-Agency Space Debris Coordination Committee, the International Organization for Standardization, the World Meteorological Organization and the International Space Environment Service. The Subcommittee agreed that the Working Group should avoid duplicating the work being done within those bodies and instead identify areas of concern for the long-term sustainability of outer space activities that are not covered by them. [The Subcommittee also agreed that the Working Group should consider organizing an exchange of information with the commercial space industry to understand the views of that community.]*[3]

The working group has been charged to consider new measures to enhance the sustainability of space activities and a possible set of "best practice guidelines."[4] These eventual guidelines in effect fall under the rubric of "space traffic management" – i.e., processes, procedures, and new regulations for how spacecraft are launched, operated and disposed of at the end of their working lifetimes. While the need for a space traffic management regime has for many years been a topic for the professional space community, the issue has not been widely addressed in the political sphere. It is clear that given the increased usage of space and the growing problems of orbital crowding and debris, space operations will soon require more robust and accepted rule sets to avoid accidents and collisions, as well as dampen drivers for conflict in the case of such incidents.

According to the group's terms of reference established by General Assembly Resolution A/AC.105/C.1/L.307/Rev.1, published Feb. 21, 2011[2], the objective of the working group is the production of "a set of guidelines that could be applied on a voluntary basis by international organizations, non-governmental entities, individual States and States acting jointly to reduce collectively the risk to space activities for all space actors and to ensure that all countries are able to have equitable access to the limited natural resources of outer space."

The scope section notes that topics to be studied include several items that could be seen as de facto TCBMs, despite the COPUOS's mandate to cover only the peaceful uses of outerspace:

1. Collection, sharing and dissemination of data on functional and non-functional space objects;
2. Re-entry notifications regarding substantial space objects, and also on the re-entry of space objects with hazardous substances on board;
3. Capabilities to provide a comprehensive and sustainable network of key data in order to observe and measure space weather phenomena adequately in real or near-real time;
4. Pre-launch and maneuver notifications; and,
5. Adherence to existing treaties and principles on the peaceful uses of outer space.

The working group's workplan is multi-year, stretching from 2011 through 2014. A draft report including the agreed guidelines are to be presented to the Scientific and Technical Subcommittee at it's 51st Session in February 2014, where the report is to be finalized and presented to the full COPUOS in June 2014.

EU Proposal for an International Code of Conduct

The First Committee at the 2009 meeting also endorsed the by the 27-nation European

Union to draft a "Code of Conduct on Outer Space Activities" – which was adopted by the EU Council of Ministers in 2008.[2] The proposed code, which was presented to the Conference on Disarmament in 2009, in effect would be another approach to TCBMs by establishing best practice guidelines for space activities and pledging signatories to certain norms of behavior. Rather than a legally binding treaty, the EU has shaped the proposed code as a politically binding set of commitments. Thus, this can be looked at as an effort to develop a set of norms that define acceptable and unacceptable actions in space.

In particular, the draft code would pledge signatories to: "refrain from any intentional action which will or might bring about, directly or indirectly, the damage or destruction of outer space objects unless such action is conducted to reduce the creation of outer space debris and/or justified by imperative safety considerations."[3] It would also commit States to a number of notification measures, including when scheduled maneuvers might result in "dangerous proximity to space objects", as well as to adhere to the existing legal framework governing space.[4]

During 2009 and early 2010, the EU consulted with a number of non-EU states about the content of the draft code. A revised version was adopted in October 2010[5], the EU is now launching a second round of consultations that EU officials hope will result in a signing ceremony in 2013. Although plans for these consultations and a signing have yet to be formalized, the EU is hoping to have a first experts meeting in early June 2012 just prior to the COPUOS meeting. The code is envisioned as a free-standing accord along the model of the Hague Code of Conduct on Ballistic Missiles rather than a COPUOS or CD initiative.

In January 2012, after a long and protracted inter-agency debate, the United States announced that while it could not accept all of the code language as now drafted, Washington would work with the EU to refine the text and to promote participation by other nations. U.S. Secretary of State Hillary Clinton announced the decision on Jan. 17, 2012, saying:

"The long-term sustainability of our space environment is at serious risk from space debris and irresponsible actors. Ensuring the stability, safety, and security of our space systems is of vital interest to the United States and the global community. These systems allow the free flow of information across platforms that open up our global markets, enhance weather forecasting and environmental monitoring, and enable global navigation and transportation.

Unless the international community addresses these challenges, the environment around our planet will become increasingly hazardous to human spaceflight and satellite systems, which would create damaging consequences for all of us.

In response to these challenges, the United States has decided to join with the European Union and other nations to develop an International Code of Conduct for Outer Space Activities. A Code of Conduct will help maintain the long-term sustainability, safety, stability, and security of space by establishing guidelines for the responsible use of space."[6]

Mindful of the routine backlash from right-wing politicians and Members of Congress against any multilateral approaches to space, Clinton stressed: "As we begin this work, the United States has made clear to our partners that we will not enter into a code of conduct that in any way constrains our national security-related activities in space or our ability to protect the United States and our allies."

Therefore, while it is unclear just what textual changes the U.S. government might demand in order to "sign on" the proposed code, but it is a good guess that it will involve language creating "wiggle room" for national security concerns and activities. As of March 1, 2012, no other non-EU nations have expressed formal interest in adopting the code. Indeed, a number of non-European nations – most visibly Brazil, India and South Africa – have questioned the code on the grounds that it might somehow limit their aspirations and development in space. China, meanwhile, is loath to share information on its national space policies and military space doctrines and continues to stress the need for a legally binding treaty to prevent the weaponization of space, and thus remains cold to the code proposal.[2]

Conclusions

While it is apparent that a flurry of interest in and activity towards the development of TCBMs is underway within the international community, there are also a number of potential roadblocks.

First and foremost, there is a serious question yet to be answered about how to coordinate among the three major efforts previously discussed. While treading some of the same ground, at the moment these efforts are being kept stovepiped – indeed, there seems to be some political competition emerging among them. If such political competition becomes full-blown, progress towards a TCBM regime is

likely to be halted in its tracks. Only if these efforts are seen as complementary pieces linking together to form a framework for future international space governance can near term positive action become possible.

A second set of tensions has already arisen between the pursuit of TCBMs and the long-standing pursuit of a treaty on the Prevention of an Arms Race in Outer Space within the Conference on Disarmament. As noted above, the Russians and the Chinese in 2008 put forward the PPWT as a starting text for PAROS negotiations.[2] Both Moscow and Beijing have repeatedly expressed the view that while TCBMs are worthy in and of themselves, they should not be seen as a substitute for a legally binding treaty on space weapons. In addition, a number of civil society groups – particularly in the United States – have expressed similar reservations about the focus on TCBMs and codes of conduct. Despite the fact that the Conference on Disarmament on March 15, 2012, failed once again to agree to a program of work, after 15 years of stalemate, there continues to be a constituency who would prefer discussions of "hard" space security to be focused on an arms control treaty and remain within the CD. Once again, it will be important for making progress toward space security that rather than being seen as competitive, that the two paths be seen as mutually re-enforcing parts of a larger framework.

A third set of potential hurdles is perhaps more obvious: i.e., differing perceptions between established space powers with heavy military dimensions and emerging and or developing space powers about potential constraints on space activities, especially constraints that increase the cost of entry such as a requirement for specific technical measures to mitigate debris creation. The space arena is not immune from long-standing North-South political issues, nor from the economic issues that divide developed and developing nations. It is worth noting, for example, that the COPUOS working group mandate includes measures to help developing states obtain and create space capacity. Resolving these tensions and developing mutual understanding about the threats and solutions to space security will require much good will and concerted diplomatic engagement from all parties to avoid the creation of political "blocks" that can only impede progress.

All that said, there is reason for optimism. The simple fact that there is a globally shared understanding about the need for multilateral solutions in order to keep activities in space safe, sustainable and secure is in and of itself progress. If all goes well, the next five years will prove to be a watershed in establishing space as a global commons requiring global action to protect. ■

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