# The Space Code of Conduct Debate

## A View from Delhi

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With outer space becoming increasingly crowded, congested, and contested, laying out some basic rules in the conduct of space activities by states is becoming particularly important. Establishing a code of conduct on space issues has assumed a certain gravity in recent years, leading to two documents—the *Code of Conduct for Outer Space Activities* prepared by the European Union (hereafter: EU Code) and a model "Code of Conduct" prepared by the Stimson Center. While the Stimson model is less controversial, the EU Code has gained greater attention around the world. The EU initially set a deadline of 2012 to adopt and universalize the code; however, this deadline has been set aside for the time being, given that a majority of non-EU countries have raised serious reservations. This offers other space-faring nations the time and opportunity to discuss the utility of a code in general while debating the EU Code in particular.

At the outset, it must be said that the EU has done a commendable job in laying out the rules of the road for space activities. However, the effort would have been more worthwhile had the EU worked in conjunction with other space-faring nations in creating these rules rather than attempting this unilaterally. Other countries are also interested in framing rules for proper conduct in outer space while keeping it safe and secure; the absence of an inclusive approach is threatening to this common interest. This article details some of the concerns raised in this regard and offers an Indian viewpoint on the emerging debate on a space code while bringing out the reservations that have developed in New Delhi and other capitals. It critiques the EU proposal, focusing on potential problem areas and India's objections; outlines India's views on a code of conduct for space; and concludes with some thoughts on harmonizing these differences.

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## Critical Elements in Writing a Code

A rule-making effort undergoes several different stages. These include politico-diplomatic, technical, and legal steps that must be debated and a consensus reached, both within and between countries, before the rules can take shape as a legitimate and accepted code. Many of the countries in the West that have focused on the technological and safety aspects of outer space, such as space debris, have entirely underplayed the importance of politico-diplomatic endorsement from other major space-faring nations, especially the new space powers.

The EU in this regard clearly missed an opportunity to work with countries such as India, one of the earliest space powers, on an arrangement that would curtail activities that create harmful effects on civilian space assets and also developments that could contribute to a spiraling arms race in space. India has an obvious interest in writing rules of the road for space, given the fact it has at stake civilian assets and is equally concerned about the increasing trend toward weaponization of space.

For India, the debate begins with understanding the kind of space future it wants to see in Asia and thereafter shapes the norms that would guide conducive behavior and avoid activities that may be counterproductive to achieving that future. The political-diplomatic aspects of writing a code are driven by national security. As Michael Listner stated in a recent article, it has to do with the quantity of space debris created essentially during the Cold War years by the United States, Russia, Europe, and China.[1] However, given that the majority of space junk and debris was created by satellites which were used for military and security missions, countries to whom these assets belong will find it difficult, if not impossible, to allow foreign governments or other international bodies to examine or destroy such objects for fear of compromising national security or sometimes even national pride.

One could foresee political difficulties emerging over the kind of technology and hardware that would be used to destroy space junk and debris. Destruction of dysfunctional satellites will also lead to problems, with states not able to reach consensus on the procedures to be used. It is not difficult to foresee a scenario where the absence of a consultative process between the EU and other countries results in a sizeable number of countries believing that the EU Code is a Western ploy to limit the activities of other space-faring countries. This position is gaining momentum, particularly among the bureaucracies of several countries in Asia.

The second important aspect in instituting a code relates to technology, which would deal with space debris and arms control in space as well as overcrowding and congestion. If there is a political consensus among major space-faring nations on the utility of formulating a code, the technical and technological aspects of the problem will be much simpler. Several countries, including India, have been contemplating ways to remove space debris, among other issues. For example, the scientific establishment in India wants to explore the potential for using laser technology in space debris management. This illustrates the sense of commitment India has in addressing some of these issues. In fact, orbital debris remediation could potentially be an area for cooperation between India and the United States and other like-minded countries in ensuring that space becomes less hazardous to civilian uses.

The third and last component is the legal aspects that should feed into an effective code. This is important, since a set of norms which are voluntary in nature do not ensure good behavior. If there are violations of established norms and regulations, they have to be met with penalty-rooted steps through an effective legal framework. Western analysts have been critical of the Indian insistence on a legal framework along with enforcement and verification mechanisms. While insistent on a legal framework, New Delhi understands that such a framework may emerge only much later and that, many times, legal frameworks are a result of previous normative exercises.

## Major Aspects of the EU Code

In 2008, the EU released its code of conduct on space, which was revised in October 2010. While the EU Code appears noncontroversial on the surface, there have already been several objections and reservations that have come about from non-EU capitals. Some of the major elements of the code are as follows:

- It seeks to codify new best practices while emphasizing transparency and confidence-building measures (TCBM) and "is complementary to the existing framework regulating outer space."
- The code would be a voluntary mechanism open to all states.
- The "inherent rights of States for collective self-defence in accordance with the United Nations Charter" will be observed.

- States that become party to the code would be bound by the existing legal arrangements. Their national programs are meant to be guided by the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and other Celestial Bodies (1967); the Agreement on the Rescue of Astronauts, the Return of Astronauts and the Return of Objects Launched into Outer Space (1968); and the Constitution and Convention of the International Telecommunications Union and its Radio Regulations (2002).
- States that become signatories to the code are expected to formulate and implement national "policies and procedures to minimize the possibility of accidents in space, collisions between space objects or any form of harmful interference with other States' right to the peaceful exploration and use of outer space."
- State parties to the code are meant to pass on "information on national space policies and strategies, including basic objectives for security and defence related activities."
- States shall engage in consultations to "seek solutions based on an equitable balance of interests."[2]

## Potential Problem Areas in the EU Code

The EU Code may be considered a good starting point. It lists certain desirable steps to be taken by states to avoid congestion and, thereafter, the potential for collision that would affect civilian assets in outer space. However, some of the provisions remain highly idealistic and are difficult to implement. For instance, Article 8.1 of the code says that states shall provide information on national space policies and strategies, "including basic objectives for security and defence related activities in outer space."[3] It is naïve to assume states such as the United States and China will release information about their strategies. This is not a realistic goal in the code, because states seek to use all means available for security, including space. The increasing geopolitical rivalry suggests that steps taken by China to strengthen its security vis-à-vis the United States cannot be disclosed. Similarly, with security dilemmas a constant feature in Asia, this objective remains highly idealistic. Even if some states do decide to outline their space strategies, these are likely to be more for public consumption rather than for reflecting the genuine national objectives and approaches.

Further, states that endorse the code would need to shape and thereafter prepare their national "policies and procedures to minimize the possibility of accidents in space, collisions between space objects or any form of harmful interference with other States' right to the peaceful exploration and use of outer space."[4] While this clause might sound quite innocuous, countries and multilateral organizations can read it very differently and create abundant scope for misinterpretation. Looking into history, the role of the great powers to make judgments about violations is not credible. For example, many times important nuclear nonproliferation goals were sacrificed for the sake of achieving quick geopolitical gains, as was witnessed during the Cold War years and even thereafter.

The consensual decision-making process in a large grouping may also prove problematic. The consensual principle worked during the Cold War years because the threat was limited in the scale of weapons as well as the number of countries seen as challenges. Today, the challenge has grown and become more widespread. More importantly, great-power politics have essentially hampered the process of consensual decision making (even in identifying challenges) in many international fora, despite the fact that the threat is understood and recognized by all the major powers. This will emerge as a bigger challenge in the years to come. Crisis decision making has become a feature of almost all nonproliferation issues. Under such circumstances, countries need to become innovative in identifying new ways to tackle these challenges.

Will bilateral or regional TCBMs work in the absence of global consensus? This is precisely the issue Listner tried to analyze. Meanwhile, other valuable questions merit attention. What does the code seek to achieve that is not achievable through bilateral or regional means? In fact, Listner has argued along these lines to suggest that bilateral agreements may be the best means to secure guarantees and security rather than global mechanisms.[5] History has shown that global arms control measures and arrangements have been openly flouted by state parties, as seen in the nuclear nonproliferation regime, reflecting the ineffectiveness of these arrangements. Therefore, attaching undue importance to these global norms and practices may not produce desired outcomes.

## Asian Concerns

While the EU is making a last-minute effort to enlist support for universal adoption of the code, it has met with stiff resistance around the world,

more specifically from Asian countries.[6] Having Asia on board is particularly important since it is there that one is likely to see future challenges to a secure space—many of the new space powers are in Asia. Europe must take into account Asian concerns if the code is to move forward. In the absence of such an effort, it is likely to have the same fate as the Hague Code of Conduct (HCOC) against Ballistic Missile Proliferation. It is also quite possible the geopolitics of Asia will dictate new terms and conditions on the space security discourse, which may not be palatable in Europe. But the geopolitical gravity of Asia is not something Europe should neglect.

China, one of the major space giants, has resisted several provisions in the EU Code. Most notably, it stated clearly that it will be "impossible" to share any information on its national space or defense policies to any outside body. In fact, an EU official—speaking recently at a conference in Paris—termed the discussions held with China in July 2011 "very difficult." However, absence of the Chinese endorsement would put several countries in the region at risk in the civilian security domain. With an unchecked China that would continue its military space activities, it would be naïve for the West to expect India to coalesce, sign on to the code, and take measures that would restrict its military options in space. Meanwhile, China has also been categorical that it cannot agree to an instrument that would affect its activities in the military space domain. This is a dichotomy in the Chinese approach, particularly since China has been active at the COPUOS (UN Committee on the Peaceful Uses of Outer Space) on the issue of space debris, whereas its military space program has continued unabated with little international scrutiny.

Similarly, there has been intense debate as to which is of greater importance, space debris or a potential arms race in space. Once again, Beijing has resisted any move to put space debris issues on the agenda, which suggests that China is likely to continue with its antisatellite (ASAT) tests.[7] China's tendency to underplay the space debris problem also suggests it plans a host of other activities that could contribute to space debris. India's options under such circumstances will be complicated. As long as China remains outside such an arrangement, India will be forced to walk a tight rope on the code. In the meantime, China has also suggested that while a code may be necessary, it should be debated by all the space-faring powers within a multilateral setting. To that extent, they see the EU effort as futile and lacking a truly multilateral dimension. This view is gaining popularity

among non-EU countries and is likely to gather further steam in the near future. Such a development would compel the EU and the West in general to take notice of the Asian voice.

It will be interesting to see how Australia responds to the EU code. While Canberra has yet to take a formal position, the broad sense is it does, in principle, agree with the sentiments of the code. This is the same sentiment as other space-faring powers, including India. While there is broad agreement about the need for the code, non-EU third-world states are worried as to how the provisions will be interpreted and applied. In the case of Australia, it is also generally in agreement with the West on transparency and confidence-building measures. Meanwhile, Japan has extended full backing to the code. Hirofumi Katase, deputy secretary general in Japan's secretariat for space policy, has called upon all space-faring nations to become party to the code while endorsing it almost in its entirety.

Debate on the code is likely to undergo a major shift, depending on the kind of stance the United States adopts. There has been no formal US position on the code yet, although the State Department appears to be quite satisfied with the document. It may be willing to accept and adopt the code, obviously with several amendments. The Pentagon appears more reserved, since the code has the potential to significantly restrain US military space options. Similarly, Republicans in the US Congress have been more wary of the code, saying that the United States will be giving away too much. While there is no unified US position on the document, the prevalent view is that the United States should take charge of the EU Code, modify it significantly, and get other countries to become parties.

## India's Reservations on the EU Code

While India has interests in drafting rules of the road on space issues, the EU has lost an ideal opportunity to co-opt India as a major space-faring power to shape the debate. India's interests in writing the rules are driven by the fact that it has been one of the earliest space powers and therefore should have been part of the debate. In addition, it has interests in formulating rules that would affect and curtail certain space activities. India's interests also have to do with its economic growth story that is increasingly dependent on space.

Overcrowding in space with the attendant potential for conflict is a problem not unique to the EU or to the West. This is a universal problem

and should have been debated by all space-faring countries accordingly. India's concerns are growing in this regard due to the significant amount of civilian investment India has in space. For instance, India has assets worth around $37 billion, including ground-based infrastructure and value-added services, and clearly has a big stake in the safety of these assets.[8] While the economics of this investment is one aspect, the other equally important aspect for consideration is the utility of these assets in the daily lives of the people of India. India's growth story is heavily reliant on these assets, and their importance is going to grow manifold in the coming years.

As a voluntary measure the EU Code lacks the teeth to enforce it, and this potentially would make it an ineffective mechanism. For instance, while the Hague Code of Conduct is a good instrument, it is unfortunate that countries seen as "critical" with regard to missile proliferation remain outside this arrangement. Whereas there are nearly 130 state parties to this measure, a good number of countries that represent challenges—Pakistan, Iran, North Korea, and China—are not. This speaks volumes of the effectiveness of the HCOC. While the EU Code is a voluntary measure, it asks states to "establish and implement national policies and procedures" to manage the problems of space collisions. Such a requirement is perceived as intruding into a state's legitimate rights and interest, however indirect it may be.

The lack of a legal framework in addressing space security is also seen as a lacuna in the EU Code. One can be reasonably certain the United States will never become party to such a legal instrument, although the utility of institutionalizing an arrangement with legal means has to be acknowledged. The potential fear among US leaders may be that they will be sacrificing their nation's lead in the area as well as freedom of action. On the other hand, China and Russia may become parties to a legal instrument but potentially cheat on the arrangement as they continue advancing their programs. These concerns are valid, and they are not unique to the United States. States such as India will find themselves in a similar position, and concerns regarding China's military space activities are on the rise.

China has been notorious for signing on to treaties but flouting the provisions. Therefore, there is a fear that countries like India and the United States may sign on to a document and follow through its various provisions, which will even affect their defensive/offensive capabilities, whereas China may continue with its military space activities. This aspect merits attention,

because even when China and Russia have co-sponsored a draft treaty on outer space activities (Treaty on Prevention of the Placement of Weapons in Outer Space and of the Threat or Use of Force Against Outer Space Objects—PPWT), which highlights weaponization of outer space, the Chinese PLA has continued unabated in its military space activities. Also, the fact that ground-based weapons that have outer space utility are not highlighted in the proposed PPWT indicates again China's intention to advance its military space program.

Lastly, issues of verification further complicate an already vexed issue. There is no good way to verify space technologies, given that they are inherently dual-use in nature. Rocket engines can be used either to boost civilian satellites into orbit and also as ASAT weapons or to launch ASAT weapons. This creates a verification nightmare for arms controllers.

## India's Position on a Space Code

India has actively participated in various nonproliferation negotiations, including the Nuclear Non-proliferation Treaty (NPT), indicative of India's interest in tackling nonproliferation challenges under a multilateral umbrella. However, New Delhi has had mixed response if one were to audit its effectiveness in influencing various nonproliferation instruments. It appears yet again faced with the challenge of making effective interventions in the space security discourse. While India has enormous interest in formulating new norms and conditions, it has developed certain reservations about signing on to the EU-formulated code of conduct for space. The "not invented here" syndrome characterizes India's position on the EU Code. However, if India were to create a code, it might not look significantly different from the EU Code, although it is important that the debate would include India at the outset, giving it ownership in the instrument. Today, there is resistance to the code among both the Indian civil and military bureaucracies because they have not been part of the "creative process." The EU and the West in general need to understand that India has been a responsible space power that should have been part of the debate—shaping that debate, rather than being shaped by it. These differences—while they may seem innocuous—have significant political as well as geopolitical value, which Europe seems to be overlooking more often than not.

Similarly, India's stated position is for a legally binding mechanism, articulated in the relevant international forum. India, as a member of the Group of 21 (nonaligned nations in the Conference on Disarmament), has articulated the need for a legally binding mechanism while supporting TCBMs as good supplementary steps. TCBMs, however, provide too many loopholes allowing countries to flout rules which are voluntary in nature. Therefore, while they are good supplementary measures, they cannot compensate for the importance of legal measures, particularly from the viewpoint of implementation.

India has an interest in taking the lead in formulating the code, and such a lead is seen as beneficial in many ways, both direct and indirect. First, India's taking the lead would ensure that it prepares an instrument that is holistic in its approach and content. Such an instrument would ensure a legal framework along with execution and verification clauses, although India is realistic enough to understand that legal measures may not be the starting point and that it may have to work backward, beginning with a broad set of rules and regulations. India's insistence for a legal framework will not, however, preclude it from having its security options. This would essentially mean that India will formulate an instrument with built-in clauses to keep open its military options in space if there were to be a drastic deterioration in the security environment. India also has an incentive in this initiative because taking the lead would boost its image as a responsible space power willing to shoulder greater responsibilities in carrying out its role in administration of the global commons. In geopolitical terms, such a lead on India's part would enhance its leadership credentials and also send a message to friends and foes alike on its potential role in any security discourse. In short, while certainly interested, India's presence and participation in any dialogue should not be taken for granted, and the EU must understand these sensitivities.

A related issue likely to figure in future debates on space is the allocation of space or space property rights. There has already been disproportionate allocation of space rights to Western powers; indeed, it may not be inaccurate to say that the West has forcefully occupied space. Now that outer space is becoming more crowded with marginal (in relative terms) increases in the share from Asian and other developing countries, the developed countries appear to want to curtail development and growth of space assets by the developing countries. Because of the disproportionate occupation of space by the West, from an Indian standpoint it is now vitally

important to articulate the need for an equitable space order, or rather an equitable utilization of space.

## What is the Way Out?

It must be borne in mind that tackling issues and problems and not countries should become a guiding principle if there is to be a solution. This principle should ideally incorporate all space-faring countries, thereby providing an inclusive forum. An inclusive approach co-opting other countries into the debate in shaping new norms and regulations will have far-reaching impact. Creating a large political base will go a long way in ensuring the longevity of the space code instrument even though it may become an all-pervasive document including issues from space debris, to arms races in space, to equitable space order.

An American lead in the space code debate may reduce the gap between EU and non-EU capitals. While certain sections of the US government may argue for endorsement of the EU Code, differences exist among US bureaucracies. The United States could potentially take the lead in bringing other countries to the table and debate the concerns and issues. If India and the United States decide to work together, more can be achieved than by the EU making any last-minute effort to gather support.

Can states around the world agree to an "Intergovernmental Panel on Climate Change" model of experts to address space issues? Given that space debris or an arms race in space are universal problems confronting every nation-state, the idea of constituting a panel of experts under the aegis of the United Nations may be a good starting point. This may be the kind of inclusive mechanism India should aim for while making an effort to enlist the support of other key space-faring countries.

Obviously space traffic management is at the core of the entire issue. Countries could mull over new initiatives along the lines of the International Civil Aviation Organization (ICAO). Letting technical experts handle issues is one way to reduce political salience and competition.

Also, is the Conference on Disarmament (CD) still a relevant forum to discuss and debate space security? More than a decade has passed since the CD debated and moved forward on important security issues. Given such a track record, it is time to consider alternate venues to tackle these challenges. The ICAO model may be appropriate, since overcrowding,

industrialization, and weaponization of space and management of space traffic have become critical issues.

One has to think of new platforms outside the CD, given the problems with the consensual decision-making process in the CD. Can there be a major grouping of space-faring powers similar to the P-5 who are the nuclear weapon countries recognized by the NPT? Such a grouping might be keener on making decisions and moving forward than any other conceivable forum.

Finally, the EU has to recognize that geopolitics has significant value in determining and shaping norms and establishing practices. In this regard the geopolitical weight of Asia may be in a position to dictate new terms and conditions in formulating these norms and practices. Getting as many Asian countries as possible on board would be a major plus if the EU is keen on pushing an agenda. This is also important considering the increasing trend toward securitization of geopolitics in Asia. Therefore, the EU must listen and understand the Asian realities and concerns. SSQ

**Notes**

1. Michael Listner, "The Legal and Political Issues of Space Debris Removal," *OnOrbitWatch*, n.d., http://www.onorbitwatch.com/feature/legal-and-political-issues-space-debris-removal.

2. *Draft Code of Conduct for Outer Space Activities* (Brussels: Council of the European Union, 3 December 2008), 5–7, http://www.eu2008.fr/webdav/site/PFUE/shared/import/1209_CAGRE_resultats/Code%20of%20Conduct%20for%20outer%20space%20activities_EN.pdf.

3. Ibid., 10.

4. Ibid., 8.

5. Michael Listner, "A Bilateral Approach from Maritime Law to Prevent Incidents in Space," *Space Review*, 16 February 2009, http://www.thespacereview.com/article/1309/1.

6. Even newer space-faring powers, such as South Africa, have resisted the EU Code because they have not been party to its creation process. It should be remembered that South Africa started its space program in a concerted manner only in 2007.

7. For details, see Rajeswari Pillai Rajagopalan, *Debate on Space Code of Conduct: An Indian Perspective*, Occasional Paper no. 26 (New Delhi: Observer Research Foundation, October 2011), http://www.orfonline.org/cms/sites/orfonline/modules/occasionalpaper/attachments/ocp26_1319777951241.pdf.

8. Subrahmanyan Chandrasekhar, "The Emerging World Space Order and Its Implications for India's Security," in *South Asia at a Crossroads: Conflict or Cooperation in the Age of Nuclear Weapons, Missile Defense, and Space Rivalries*, eds. Subrata Ghoshroy and Goetz Neuneck (Baden-Baden, GE: Nomos Verlagsgesellschaft, 2010), 219–20.