

55th IISL COLLOQUIUM ON THE LAW OF OUTER SPACE (E7)

Nandasiri Jasentulyana Keynote Lecture on Space Law

Congress/IAC-12/E 7/1/

## The Legal Dimension of the Sustainability of Outer Space Activities: the Draft Code of Conduct on Outer Space Activities

Sergio Marchisio

Full Professor of International Law National Research Council of Italy and Sapienza University of Rome

### 1. Introduction.

First of all, I would like to thank the International Institute for Space Law, its President, Tanja Masson Zwaan, and its Board of Directors, for having asked me to address the 55<sup>th</sup> Colloquium on Space Law at the IAC Congress in Naples, Italy, with the prestigious Nandasiri Jasentulyana Keynote Lecture on Space Law. It is a pleasure and an honour that I would try to satisfy at my best. The topic that I was suggested to develop, namely the draft international code of conduct on outer space activities, is not an easy one. In fact, the code is a draft within an on-going diplomatic initiative. The text is still a work in progress, the latest version having been established on 5th of June 2012 only as a working document for internal purposes. This means that I would not be in a position to say definitive words about this instrument to be hopefully adopted in the near future. However, my assumption is that this international initiative originating from the European Union presents some peculiarities from the legal point of view, and deserves the outmost interest even if it has not yet reached its final stage.

The most fructuous way for addressing the Code is, in my opinion, to consider it in the context of the efforts that are carried out at the international level for ensuring a safe, secure and sustainable environment in outer space. Time is ripe, for space lawyers, to develop convincing arguments concerning the legal dimension of the sustainability of outer space activities. If outer space would not be safe, secure and sustainable, it would also become non peaceful. Thus, the ability to use it could be denied to all, in contrast with the general principles contained in Article I of the 1967 of the Outer Space Treaty.

But, what do we mean with sustainability of outer space activities? What is the legal shape of the sustainability of space activities? Another difficult question to answer. I will try to give an answer borrowing some concepts from a cousin field of international law, namely international environmental

law. In this perspective, sustainability means the use of outer space in a way that maintains its potential to meet the needs and aspirations of present and future generations, and that ensures that all humanity continue to use it for peaceful purposes, scientific and technological advancements and socioeconomic benefits. As I said, sustainability is a new but old concept, close to the concept of sustainable development, which has been developed by Vice-President Weeramantry in his separate opinion to the ICJ Judgment of 25 September 1997 in the Gabčíkovo-Nagymaros Project Case between Hungary and Slovakia, where the need to reconcile the principles of development and care for the environment was at stake.

"The Court - he wrote - needs to draw upon the wisdom of all cultures. Among the principles that can be so derived from these cultures are the principles of trusteeship of earth resources, intergenerational rights, maximization use of natural resources, preservation of their regenerative capacity, and the principle that development and environmental protection should go hand in hand"<sup>1</sup>

Similar arguments can be brought forward with regard to the sustainability of space activities, where a body of experience is becoming available in line with UN treaties on outer space, in particular with the principle of the province of all mankind, the freedom of exploration and use by all States without discrimination, and the principle of due regard to the corresponding interests of all other States.

The road towards a sustainable use of space requests decision makers to balance many differing priorities and needs including, but not limited to, sensitive national security interests, equitable access to the space domain for emerging States, and protecting the space environment.

Time is ripe. In fact, threats are already a reality: space debris, collisions and fragmentations in space, frequencies overlapping, collisions among space objects, intentional and unintentional harmful interferences, deliberate destruction of satellites. No one denies that accidents in outer space must be avoided in order to prevent loss of life and creation of damaging orbital debris<sup>2</sup>

---

<sup>1</sup> ICJ, Reports, 1997, p. 88 ss.

<sup>2</sup> In February 2009, two satellites collided accidentally, creating a large amount of debris circling the Earth 800 kilometres above. Hundreds of bits of metal, foil and plastic spreading the former satellites' orbits threaten other satellites. After that a US Congresswoman, Gabrielle Giffords, said in 2009: "One thing is already clear - the space environment is getting increasingly crowded due to the relentless growth of space debris. If the spacefaring nations of the world don't take steps to minimize growth of space junk, we may eventually face a situation where low Earth orbit becomes a risky place to carry out civil and commercial space activities." <sup>3</sup> These measures look at limiting the probability of accidental collision in orbit; avoiding international destruction and other harmful activities; minimizing potential for post-mission break-ups resulting from stored energy; limiting the long-term presence of spacecraft and launch vehicle orbital stages in LEO after the end of their mission; limiting

Technical rules on fundamental mitigation and safety measures, such as management measures, design measures and operational measures<sup>3</sup>, to limit debris released during normal operations and minimize potential for break-ups during operational phases, have already been adopted at different levels.

But space debris are not the only threat. Space objects and technologies that can be used for aggressive purposes are not necessarily arms. Space objects can be used as armaments or weapons: it is a matter of intent. In the same line, direct ascent ASAT, anti-satellite technologies, are equivalent to surface-to-air missiles<sup>4</sup>. These threats impose the need to sustain and protect critical public and private space infrastructures in outer space. Once again the sustainability of space activities is the key concept, joined by associated concepts, such as safety and security.

## 2. The three pillars for the sustainability of outer space activities.

Against this background, in the last decade several initiatives have been launched at the international level to face the challenge of space sustainability. The first basket is composed by the technical set of rules adopted for space debris<sup>5</sup>. New initiatives are now considered and planned towards active space debris remediation and development of related technologies, for services in orbit and ground-based lasers.

However, the adoption of technical standards does not exhaust the legal tools that are being put in place to face the risks of an unsustainable environment in outer space. There are at least three on-going initiatives aimed at ensuring space sustainability, safety and security. I call them the three pillars for outer space sustainability: respectively, the UNCOPUOS Long-Term Sustainability of Space Activities Working Group (LTSSA); the Draft International Code of Conduct for Outer Space Activities (CoC), and the Group of Governmental Experts on Transparency and Confidence Building Measures in Outer Space Activities (GGE). From the temporal point of view,

---

the long-term interference of spacecraft and launch vehicle orbital stages with GEO region after the end of their mission.

<sup>3</sup> The Space Debris Mitigation Guidelines set out in 2002 by the Inter Agency Debris Committee, and updated in 2007, have defined the notion of space debris as all man-made objects, including fragments and elements thereof, in Earth orbit or re-entering the atmosphere, that are non functional. Then, other international standards have followed, such as the European Code of Conduct for Space Debris Mitigation adopted in 2007 by ASI, UK Space Agency, DLR, CNES and ESA; the COPUOS Space Debris Mitigation Guidelines of 2007, endorsed by UNGA Resolution 62/217 of 21 December 2007.

<sup>4</sup> In January 11, 2007, as China's inoperable weather satellite passed overhead and a modified Chinese ballistic missile was launched from China's Xichang Center and streaked toward the satellite, deliberately colliding and creating thousands of small pieces. The satellite destruction created some 2,500 trackable pieces of orbital debris. Many of these pieces remained in the original polar orbit, the prime location for most Earth observation satellites, including weather and climate satellites operated by NASA, NOAA, and ESA.

they are quite coetaneous. They present some commonalities, but also evident differences.

Beginning with the common elements, it should be said that all of them address in a pragmatic way potential and actual threats to the safety, security and sustainability of space activities, without indulging in ideological conflictive considerations; secondly, their outcome is expected to result in non binding international instruments, to be accepted by the interested States on voluntary basis, without prejudice for further normative developments; thirdly, they are interrelated as complementary, not alternatives, initiatives.

However, the three initiatives maintain different origins and purposes: the LTSSA is held under the umbrella of the COPUOS Scientific and Technical Subcommittee (STS) and is tasked with producing a consensus report outlining voluntary guidelines for all space actors to ensure the long-term sustainability of outer space. The measures to be proposed by the WG would address ways and means to prevent potential risks and to redress existing dangerous situations. The WG operates following a bottom-up scheme, involving - through member States - the main stakeholders, public and private, and is supposed to deliver its final draft report in 2014.

The International Code of Conduct for Outer Space Activities, is, in its turn, an instrument aimed at building non legally binding norms of responsible behaviour in space activities. The CoC is a top-down process; the prevailing approach is that negotiators cannot be left to their own devices to interpret a general policy meant to discourage more countries from having unsustainable behaviors in space. The issue of potential harmful interferences in outer space requires top-level political attention.

In 2007, the European Union (EU) initiated the process, which led to the endorsement of a draft Code of conduct on outer space activities by the EU Council in 2008 as a part of the Common Foreign and Security Policy and as a reply to the UNGA resolutions calling member States to submit concrete proposals in the field of transparency and confidence building measures (TCBMs) in outer space. Since early 2012, the process has acquired an international dimension, the EU being joined by a group of non-European like-minded States representing a vast group of space faring nations. The next stage is its opening to the contribution of all States through a series of multilateral meetings and finally its adoption at a diplomatic ad hoc conference. I will come back to these aspects later on.

Last but not least, we have the Group of Governmental Experts on TCBMs. The Group, made of 15 international experts nominated by member States of the UN on the basis of equitable geographical representation, is an organ of the UNGA, in accordance with its resolution 63/68 of 2011. It is expected to produce by 2013 a consensus report outlining recommendations on TCBMs. These measures are aimed at reducing the risks of misunderstanding and

miscommunication and helping ensure strategic stability in outer space activities. TCBMs are part of the legal and institutional framework supporting military threat reductions and confidence-building among nations. They have been recognized by the UN as mechanisms that offer transparency, assurances and mutual understanding amongst States and reduce misunderstandings and tensions. They also promote a favorable climate for effective and mutually acceptable paths to arms reductions and non-proliferation. A number of TCBMs are implemented by the States unilaterally and represent their political commitments<sup>6</sup>

The outcome of these initiatives is also an important issue to be considered. All of them will lead to the adoption of non legally-binding instruments. However, we should not deny the normative character of the instruments that would constitute the outcome of these processes. Recommendations, standards, technical norms and codes of conduct have always legal consequences. They are elements of a practice that can later lead to the adoption of binding treaties or consolidate in customary rules. It is not a case if the mentioned initiatives recognize the relevance of space law: the WG on LTSSA has set up a Expert Group D on "Regulatory Frameworks and Guidance for actors", composed mainly by lawyers; the drafting and negotiating process of the CoC has largely involved the contributions of lawyers; finally, the GGE recognized since its first meeting the importance of the legal perspective in addressing the issue of TCBMs in outer space.

### 3. The story of the Code so far

Within this general context, I will now consider more in details the main features of the draft Code of Conduct on Outer Space Activities.

The proposal of a draft Code was first conceived in an informal paper circulated by Italy on March 15, 2007 within the UN CD in Geneva. The document was entitled "Food for Thought on a Possible Comprehensive Code of Conduct for Space Objects" and linked to the issue of the prevention of arms race in outer space (PAROS). The Italian interest for this matter dated back to the Seventies, when similar initiatives were presented to the CD. Since then, the Italian diplomacy noticed that in spite of a repertory of existing Transparency and Confidence Building Measures (TCBM), there were still several gaps. The scope of the Italian proposal was explained by Ambassador Carlo Trezza in his paper on "A Possible Comprehensive Code of Conduct for Space Objects in an EU Perspective", presented at the "EU Conference on Security in Space, the Contribution of Arms Control and the Role of the EU", held in

---

<sup>6</sup> Russia has been informing the international community through the Internet on the forthcoming launches of spacecraft and their mission since 2003. In 2004 we made an important pledge not to be the first to place any type of weapons in outer space. The USA conducts regularly space dialogues with allies and other countries as a measure of confidence building.

Berlin on 21-22 June 2007.<sup>7</sup> It considered that a more focused EU approach to this issue within the framework of both the CD and UNGA would propitiate the adoption of a program of work to allow the CD to resume its institutional task.

The proposal was then presented for endorsement to the European partners, as a possible "food for thought" of the EU on a Comprehensive Code of Conduct which should codify new confidence building measures and strengthen existing best practices. After all, the EU unanimously voted in favour of UNGA resolutions regarding TCBMs in outer space, while most EU's countries co-sponsored the resolutions inviting member States to submit to the Secretary General "concrete proposals on international TCBMs".

Following the EU's reply to GA Resolution 61/75 of 2007, the initiative was finally endorsed by the EU. The Portuguese Presidency prepared a Food for Thought on a Comprehensive Code of Conduct for Space Objects (2nd REV.), based, among others, on the principles of freedom to use outer space for all for peaceful purposes; preservation of the security and integrity of space objects in orbit and due consideration for the legitimate security and defence interests of States. The same EU's Joint Reply was also adopted as a contribution to respond to UNGA Resolution 62/43 on "TBCMs in Outer Space Activities" of 5th December 2007, and to similar resolutions adopted between 2008 and 2011.

4. The rationale for a Code of Conduct The legal and institutional setting of the draft Code was under Title V (Articles 11-27) of the EU's Treaty of Nice 2001, on Provisions concerning the Common Foreign and Security Policy (CFSP). The second Pillar of the EU's Treaty was governed at the time by the intergovernmental method, while the Commission was associated to the work without deliberative power. The Presidency in office, assisted by the Secretary General/High Representative, kept its role and prerogatives according to the Treaty, both internally within the EU and in the external representation of the EU.

I should note that the legal framework is changed only in minimal part after the entry into force, in 2009, of the Lisbon Treaty, that has rearranged the Common Foreign and Security Policy with the institution of the High representative, Vice-President of the Commission, and the consolidation of the European External Action Service (EEAS). However, according to Article 24 of the TEU: "The common foreign and security policy is subject to specific rules and procedures. It shall be defined and implemented by the European Council and the Council acting unanimously, except where the Treaties provide otherwise." Sometimes this aspect is misunderstood and it is thought that the Code lies within the European Space Policy framed by the

---

<sup>7</sup> Panel 3 on "Arms Control Approaches in Outer Space".

Commission in cooperation with the ESA, under the 2004 framework cooperation agreement. On the contrary, the process is managed within the intergovernmental process that governs the CFSP.

On December 2008, after more than a year of work within the Council Working Group on Disarmament in the United Nations (CODUN), the Council of the European Union endorsed in its Conclusions, under the Presidency of France, the Draft Code of Conduct for Outer Space Activities, as finalised by the Working Party on Global Disarmament and Arms Control (WPGD) and approved by the Political and Security Committee (PSC).

The European Union has consulted the Code with other space faring nations with the aim of reaching a text that would be acceptable for as many States as possible. Several rounds of consultations were held between 2008 and 2012. Among the consulted States are Russian Federation, the People's Republic of China, the United States of America, Canada, India, Australia, Japan, Indonesia, South Africa, Japan, the Republic of Korea, Brazil and so on.

A new consolidated Draft of the Code, including comments and proposals by third consulted States was endorsed by the Council of the European Union the 27 September 2010. In 2012, the process was further enlarged, with the constitution of a group of like-minded States and of a group called the Friends of the Code, led by Australia. These developments towards the internationalization of the Code were certainly favoured by the statement delivered in February 2012 by the U.S. Secretary of State Hillary Clinton that the United States will lend its support to international efforts to craft a Code of Conduct for responsible space-faring nations. Her announcement affirmed however that the United States 'will not enter into a code of conduct that in any way constrains our national security-related activities in space.'

Another point non always well understood is that the Code initiative should be considered as self-sustained. In other words, the draft Code is not intended for negotiation at any existing forums. Multilateral bodies, such as the UN Committee on the Peaceful Uses of Outer Space (COPUOS), the Conference of Disarmament (CD), the General Assembly First Committee and others will continue to be informed on progress with this initiative, but the process will end with a diplomatic ad hoc Conference if a sufficient number of countries show interest in the Code. The model followed is that of the Hague International Code of Conduct against Ballistic Missiles Proliferation, of November 25, 2002 and of the Missile Technology Control Regime of November, April 1987. In summary, the process for the adoption of the Code still provides for several steps: consult with major space faring nations, build the support, revise the text and finalize the draft; convene a diplomatic conference, adopt the Code and open the Code to subscribers; then, implement the Code.

A further important point to be stressed is that the Code is not alternative to the proposal on a draft Treaty on the Prevention of the Placement of Weapons in Outer Space, the Threat or Use of Force Against Outer Space Objects (PPWT) tabled by China and Russia on 12 February 2008 within the CD. On the contrary, the project is seen as a way for favouring the adoption of voluntary guidelines as a first step towards an international binding treaty. Most States acknowledge that TCBM do not replace verification, but may function as a start to a step-by-step approach on preventing an arms race in outer space.

Arms control measures relating to outer space are beyond the intended scope of the Code for the main reason that the Code is not an appropriate instrument through which to pursue this objective. The Conference on Disarmament is clearly mandated to negotiate arms control treaties and has a specific theme on Preventing an Arms Race in Outer Space (PAROS) for that purpose. The Code has taken a different approach, focusing on confidence-building behaviours, not banning weapons systems or their deployment.

## 5. The added value of the Code

The main objective of the Code of Conduct is to strengthen the safety, security and predictability of all space activities, therefore limiting or minimising harmful interference in space activities. What then makes the EU Code of conduct so significant? In my opinion, the answer lies in three aspects.

The first aspect is the all encompassing scope of the Code, a scope that is readily apparent from the titles of the various parts of the Code. While other instruments have dealt with specific aspects, this is the first time that a systematic approach has been adopted to cover all dimensions of space operations. It applies to military as well as civil operations in outer space and is based on the principles of non harmful interference against space objects.

The second aspect is the Code's stress on the preventive approach and the introduction of a new understanding of the complex nature of the space activities and the uncertainties inherent in the management of such activities. Activities in outer space are per se ultra-hazardous activities, the focus being upon the exceptional risk of severe damage. For this reason, they should be carried out with a high standard of care and due diligence, transparency and with the aim of building confidence. An ultra-hazardous activity is perceived to be an activity with a danger that is rarely expected to materialize but might assume, on that rare occasion substantial proportions.

The third aspect is the dynamic nature of the Code. The progress in implementing the Code will be monitored through the meetings of the Parties



and the Code will be revised and updated as necessary in light of the forthcoming developments.

## 6. Main content of the Draft Code

The Code addresses all outer space activities conducted by a Subscribing State or jointly with other States or by non-governmental entities under the jurisdiction of a Subscribing State, including those activities conducted within the framework of international intergovernmental organisations. While not being a treaty, the Code is framed in a like-treaty mode, with a preamble and twelve sections divided in numeral points.

Within the Preamble, which assists the interpretation of the Code, the Subscribing States stress some general considerations, namely that all States should actively contribute to the promotion and strengthening of international cooperation relating to the activities in the exploration and use of outer space for peaceful purposes and to the formation of a set of best practices aimed at ensuring security in outer space could become a useful complement to international space law. They note also that such best practices could apply to all types of outer space activities and reaffirm their commitment to resolve any conflict concerning actions in space by peaceful means.

## 7. General Principles of the Code

The second section of the Code lists the general principles to which Subscribing States decide to abide of. The term "general principles" is not used, of course, in the same sense than in the Statute of the International Court of Justice, the so-called "general principles of law". We are not dealing, here, with sources of international law. However, the statements contained in this section of the Code assume the character of basic rules that should govern the outer space activities and that qualify State's behaviours as responsible. Perhaps, then, their most significant independent contributions will forever be as "gap-fillers" for notoriously under-elaborated, treaty-generated legal regimes.

But, what are these general principles?

The first is the freedom for all States, in accordance with international law, to access, to explore, and to use outer space for peaceful purposes without interference, fully respecting the security, safety and integrity of space objects and consistent with internationally accepted practices, operating procedures, technical standards and policies associated with the long-term sustainability of outer space activities, including, inter alia, the safe conduct of outer space activities.

This principle makes reference not only to the classic freedom of exploration and use of outer space embodied in Article I of the OST, but build upon it underlying the freedom of access to outer space "for peaceful purposes". Freedom of access to space could be considered also a sensitive issue, being linked to the missile proliferation issue.

Launch technologies and missile programmes are very close, so that the acquisition of launch technologies could lead to ballistic missile proliferation. Launch technology are means to exercise the freedom of access to space. The 1967 OST recognizes that outer space "shall be free for exploration and use by all States without discrimination of any kind"; it is true that there is no corresponding provision recognizing that all States have the right to "access space", however the same Treaty recognizes that there shall be "free access to all areas of celestial bodies", which seems unworkable without a corresponding freedom of access to outer space.

However this freedom, in principle unlimited, can be restricted by international obligations. Security Council Resolutions 1718 and 1874 demanded that the Democratic People's Republic of Korea not conduct any further nuclear test or launch of a ballistic missile; decided that it should suspend all activities related to its ballistic missile programme and in this context re-establish its pre-existing commitments to a moratorium on missile launching; decided also that the DPRK should abandon all other existing weapons of mass destruction and ballistic missile programme in a complete, verifiable and irreversible manner. Resolution 1929, in its turn decided that Iran should not acquire an interest in any commercial activity in another State involving ... technology related to ballistic missiles capable of delivering nuclear weapons; decided that Iran should not undertake any activity related to ballistic missiles capable of delivering nuclear weapons, including launches using ballistic missile technology, and that States should take all necessary measures to prevent the transfer of technology or technical assistance to Iran related to such activities. It is unambiguous that the freedom of access space is unlimited, unless international law, which comprises the binding Security Council Resolutions, provide otherwise in case of threats to peace. In this sense, the statement of the freedom of access to space invoked by the Code should not be interpreted in tension with provisions of some UN Security Council resolutions.

Secondly, the Code makes reference to the inherent right of individual or collective self-defence as recognised in the United Nations Charter. This is also sensitive aspect, which has raised strong concerns among some States. Moreover, over twenty countries currently deploy short-and medium range ballistic missiles, a weapon used in a dozen of conflicts, mainly as a palliative to combat aviation. This potential threat is the object of continuous technological improvements aimed at improving operational capacities. In the U.S., the Missile Defense Agency's mission is to develop, test, and field an integrated, layered, ballistic missile defense system to defend the United

States, its deployed forces, allies, and friends against all ranges of enemy ballistic missiles in all phases of flight.

Now, references to the inherent right of self-defence in the Code simply reflect the objective facts under international law. Article III of the 1967 Outer Space Treaty makes very clear that international law, including the Charter of the United Nations, applies to outer space. The right of self-defence is a fundamental principle of international law and integral to the UN Charter, recognised in Article 51. If there were any doubt as to whether the drafters of the OST intended that reference to apply to the right of self-defence, the wording makes clear that this reference is in the context of "maintaining international peace and security". With this in mind, the inclusion of these reference in the Code does not change the status quo and cannot be construed as encouraging the deployment of arms in outer space.

#### 8. No harmful interference

The following principle embodied in the Code regards the responsibility of the States to take all appropriate measures and cooperate in good faith to prevent harmful interference in outer space activities. The notion of harmful interference appears already in the third sentence of Art. IX, of the OST, where it is said that a State planning an activity or experiment should undertake, before proceeding, appropriate consultations if the planned activity or experiment entails "potentially harmful interference" with activities of other States in the peaceful exploration and use of outer space<sup>8</sup>. We should note that this Article deals with activities that are not prohibited by international law and that are normally important to the interests of the State of origin.

However, a general principle of international law prescribes that these activities should not cause harmful interference and that the concerned States should take appropriate preventive measures to avoid such harm. The duty of preventive action finds its roots in general international law, as stated by the ICJ in the consultative opinion of 1996 on the use of nuclear arms in armed conflicts. Once applied to outer space, this principle means that States are bound to ensure that the exercise of their rights and freedoms in outer space does not interfere with, or compromise the safety of, space operations of other States.

To be considered as harmful, interference must cause serious detrimental effects, not merely a nuisance or annoyance that can be overcome by appropriate measures. "Harmful" retains its meaning of causing or capable of causing significant harm. It does not deal with the legitimacy of the

---

<sup>8</sup> Furthermore, a State potentially affected by an activity or experiment planned by another State has the faculty to request that the latter enter into consultations concerning the activity or the experiment that would cause potentially harmful interference.

interference, but with the effects of the action. In this respect the work of the International Law Commission (ILC) on the Draft Articles on 'Prevention of Transboundary Harm from Hazardous Activities', adopted in 2001, is particularly significant. The focus here is on "harm" as linked to the exceptional risk of severe damage.<sup>9</sup>

## 9. Compliance with and Promotion of Treaties

The following section of the Code regards the compliance with and promotion of Treaties, Conventions and Other Commitments Relating to Outer Space Activities by the Subscribing States. The existing international legal instruments include the four core UN treaties, the ITU Constitution and Convention and its Radio Regulations, as amended, as well as the Treaty Banning Nuclear Weapon Tests in the Atmosphere, in Outer Space and under Water (1963) and the Comprehensive Nuclear Test Ban Treaty (1996).

Among the declarations of principles and recommendations, the Code mentions the instruments on the International Co-operation in the Peaceful Uses of Outer Space adopted by the United Nations General Assembly's (UNGA) Resolution 1721 (December 1961); the Declaration of Legal Principles Governing the Activities of States in the Exploration and Use of Outer Space as adopted in UNGA Resolution 1962 (XVIII) (1963); the Principles Relevant to the Use of Nuclear Power Sources in Outer Space as adopted by UNGA Resolution 47/68 (1992); the Declaration on International Cooperation in the Exploration and Use of Outer Space for the Benefit and in the Interest of All States, Taking into Particular Account the Needs of Developing Countries as adopted by UNGA Resolution 51/122 (1996); the International Code of Conduct against Ballistic Missile Proliferation (2002), as endorsed in UNGA Resolutions 59/91 (2004), 60/62 (2005), 63/64 (2008), and 65/73 (2010); the Recommendations on Enhancing the Practice of States and International Intergovernmental Organisations in Registering Space Objects as endorsed in UNGA Resolution 62/101 (2007); and the Space Debris Mitigation Guidelines of the United Nations Committee for the Peaceful Uses of Outer Space, as endorsed in UNGA Resolution 62/217 (2007).

In this sense, the Code would support the efforts made to make the UN treaties universally accepted, a goal that is far from being realized.

---

<sup>9</sup> Harmful "interference" in outer space could take several forms: direct damaging or destroying a satellite or temporarily interfering with its normal operation in a way that does not cause permanent damage. Anti-satellite (ASAT) has the most prominent role in destroying satellites. Furthermore, the orbital path of a satellite can be manipulated in such a way to collide with other space objects. In sum, the interference very often does not differentiate between malicious and benign aims. There are also methods of interfering with satellites that may not result in permanent damage but still prevent the satellite from performing its desired function, as is the case of jamming.

## 10. Measures on Space Operations and Mitigation of Space Debris

The key measures of the Code are those contained in section 4, where the Subscribing States commit to establish and implement policies and procedures to minimise the possibility of accidents in space, collisions between space objects or any form of harmful interference with another State's peaceful exploration, and use, of outer space.

The most relevant commitment is to refrain from any action which brings about, directly or indirectly, damage, or destruction, of space objects. That would, in effect, constitute a political commitment to ban the testing of destructive anti-satellite weapons in space. The Code establishes a clearer rule of behaviour against intentional destruction of outer space objects – one of its most important components. This is also more rigorous than Guideline 4 of the Space Debris Mitigation Guidelines, which specifies "the intentional destruction of any on-orbit and space vehicle orbital stages or other harmful activities that generate long-lived debris should be avoided."

The clearer and unambiguous rule against the intentional destruction of outer space objects contained in the Code also requires greater precision in the exceptions that apply to the general ban. The tightly defined scope of the exceptions contributes to ensuring that acts of destruction do not happen except in very exceptional and clearly defined circumstances. These are the following: the action is conducted to reduce the creation of outer space debris or is justified by the inherent right of individual or collective self-defence as recognised in the United Nations Charter or by imperative safety considerations. Where such exceptional action is necessary, it should be undertaken in a manner so as to minimise, to the greatest extent possible, the creation of space debris and, in particular, the creation of long-lived space debris.

The section continues by committing States to take appropriate measures to minimize the risk of collision when executing manoeuvres of space objects, for example, to supply space stations, repair space objects, mitigate debris, or reposition space objects, as well as to make progress towards adherence to, and implementation of International Telecommunication Union regulations on allocation of radio spectra and orbital assignments.

Regarding the minimisation of space debris and the mitigation of their impact in outer space, the Code build upon the existing commitments, insisting on the avoidance, to the greatest extent possible, of any activities which may generate long-lived space debris. To that purpose, States commit to adopt and implement, in accordance with their own internal processes, the appropriate policies and procedures or other effective measures in order to implement the Space Debris Mitigation Guidelines of the UNCOPUOS as endorsed by UNGA Resolution 62/217 (2007). Once again, the Code represents a tool for strengthening the commitment of Subscribing states to better implement the existing space debris guidelines. Furthermore, there is

a need to make unambiguous, as the Code does, that this commitment applies to all categories of space debris from the intentional destruction of space objects, whether for military or civilian purposes.

## 11. Cooperation mechanisms

The Draft Code also regulates some cooperation mechanisms, such as notification of outer space activities, registration of space objects, information on outer space activities, consultation mechanism and a mechanism to investigate proven incidents affecting space objects and to collect reliable and objective information facilitating their assessment.

On notification of outer space activities, this commitment includes scheduled manoeuvres which may result in dangerous proximity to the space objects of both Subscribing and non-Subscribing States; pre-notification of launch of space objects; collisions, break-ups in orbit, and any other destruction of a space object(s) which have taken place generating measurable orbital debris; predicted high-risk re-entry events in which the re-entering space object or residual material from the re-entering space object would likely cause potential significant damage or radioactive contamination; malfunctioning of space objects which could result in a significantly increased probability of a high risk re-entry event or a collision between space objects.

The Subscribing States commit to provide the notifications described above to all potentially affected States, including non-Subscribing States where appropriate, through diplomatic channels, or by any other method as may be mutually agreed, or through the Central Point of Contact to be established under the Code. In notifying the Central Point of Contact, the Subscribing States should identify, if applicable, the potentially affected States. The Central Point of Contact should ensure the timely distribution of the notifications to all Subscribing States.

Section 8 deals with information sharing on outer space activities. The Subscribing States commit to share, on an annual basis, where available and appropriate, information on their space policies and strategies; their space policies and procedures to prevent and minimise the possibility of accidents, collisions or other forms of harmful interference and the creation of space debris; and efforts taken in order to promote universal adoption and adherence to legal and political regulatory instruments concerning outer space activities. The Subscribing States may also consider providing timely information on outer space environmental conditions and forecasts to the governmental agencies and the relevant non-governmental entities of all space faring nations, collected through their space situational awareness capabilities.

## 12. Consultation Mechanism

It is a matter of fact that Article IX of the 1967 OST presents several pitfalls: the timing for the request for consultation is not clear (Can the State potentially affected ask for consultation before and/or during the performance of such activity?); then, it focuses more on the State of origin of the activity than on the State potentially affected; it limits the consultation mechanism to a bilateral relationship. This is why the Code, without prejudice to existing consultation mechanisms provided for in Article IX of OST and in Article 56 of the ITU Constitution, creates a new consultation mechanism.

A Subscribing State or States that may be directly affected by certain outer space activities conducted by a Subscribing State or States and has reason to believe that those activities are, or may be contrary to the commitments made under this Code may request consultations with a view to achieving mutually acceptable solutions regarding measures to be adopted in order to prevent or minimise the potential risks of damage to persons or property, or of potentially harmful interference to a Subscribing State's outer space activities. One element is that it envisages not only bilateral, but also multilateral consultation.

Furthermore, any other Subscribing State or States which has reason to believe that its outer space activities would be directly affected by the identified risk may take part in the consultations if it requests so, with the consent of the Subscribing State or States which requested consultations and the Subscribing State or States which received the request. The Subscribing States participating in the consultations will seek mutually acceptable solutions in accordance with international law.

In addition, the Subscribing States may propose to create, on a case-by-case basis, independent, ad hoc fact-finding missions to investigate specific incidents affecting space objects and to collect reliable and objective information facilitating their assessment. These fact-finding missions, to be established by the Meeting of the Subscribing States, should utilise information provided on a voluntary basis by the Subscribing States, subject to national laws and regulations, and a roster of internationally recognised experts to undertake an investigation. The findings and any recommendations of these experts will be advisory, and will not be binding upon the Subscribing States involved in the incident that is the subject of the investigation.

## 13. Organizational aspects

The Code provides for biennial Meetings of the Subscribing States to define, review and further develop the Code and ensure its effective implementation. The decisions at such meetings, both substantive and procedural, are to be taken by consensus of the Subscribing States present. Any Subscribing State

may propose modifications to this Code. Modifications apply to Subscribing States upon acceptance by all Subscribing States. Finally, a Central Point of Contact to be established by Subscribing States will receive and announce the subscription of additional States; maintain an electronic database and communications system; serve as secretariat at the Meetings of Subscribing States; and carry out other tasks as determined by the Subscribing States. The organisational system should be completed by an electronic database and communications system, which should be used in order to collect and disseminate notifications and information submitted in accordance with the Code; and serve as a mechanism to channel requests for consultations.

#### 14. The legal nature of the Code

Having examined the main content of the Code, I would like to continue now with some considerations on the legal nature of the Code. Over the past centuries, State practice has developed a variety of terms to refer to international instruments by which States establish rights and obligations among themselves or adopt non-legally binding frameworks. In recent times, the issue of the function of non-binding norms in international space law has been widely addressed by the doctrine. The title assigned to such international instruments thus has normally no overriding legal effects. The title may follow habitual uses or may relate to the particular character or importance sought to be attributed to the instrument by its parties. The degree of formality chosen will depend upon the gravity of the problems dealt with and upon the political implications and intent of the parties.

Codes of conduct do not have any authorized definition. At a very basic level, they all aim to define standards and principles that ought to guide the behaviour of the addressee in a particular way. As such, they are regulatory instruments. They may respond to a broad range of regulatory concerns and be established at the initiative of governments, international organizations, individuals, and private organizations. A distinguishing feature of codes of conduct is that they are voluntary in nature, rather than legally binding, and thus not legally enforceable. However, they carry the weight of a joint political commitment on the part of the Subscribing States that represents their firm expectation of good conduct, reflecting the values and aspirations of the group.

The Code of Conduct is voluntary and open to all States. It does not want, in itself, to establish any legal rights or obligations. It contains general principles and responsible rules of behaviour that could be detailed in subsequent legal instruments, such as treaties and conventions, as well as national legislation or that can develop as customary international law.

However, I do not think that the Code, once adopted and subscribed by signatory States at the level of Ministers of Foreign Affairs will be endowed, in legal terms, with a merely hortatory value. It seems rather to me that it



will belong to the genus of non legally binding normative instruments, such as the declaration of principles and other political commitments that are considered important tools in the process of evolving international law.

The Code does not contain specific clauses concerning its conclusion and the acceptance by States or other subjects, such as Regional Integration Organization and intergovernmental organizations, which are mentioned however as possible partners. Some terms relating to Code actions evoke the realm of treaties. First, we have the notion of "adoption", being said that the Code will be adopted at a diplomatic conference. "Adoption" is indeed the formal act by which the form and content of a proposed international instrument are established. As a general rule, the adoption of the text of an instrument takes place through the expression of the consent of the States participating in the making process and in the diplomatic conference. Then, the actors of the Code are the "Subscribing States". Subscription is equivalent to signature, which normally establishes the consent of the state to be bound by an instrument. Furthermore, it is said that "adherence" is voluntary and open to all states, once again evoking the idea of an expression of consent.

Moreover, the value of the political commitments contained in the Code should not be underestimated. The Code would provide a clear standard against which the behaviour of States will be judged, and there will be a clear expectation on States to abide by the commitments they have made. In my opinion, the main legal consequence the Code would produce is the effect of legality. Still, I do not conceive this effect in the same fashion that has been advocated by an eminent Italian jurist with regard to the effect of recommendations of the UNGA, namely that a State do not commit a wrongful act when, in order to carry out a recommendation of a UN organ, it acts in a way that is contrary to commitments previously undertaken by agreement or to obligations deriving from customary international law.<sup>10</sup> This seems an ultra legal consequence, which goes too far beyond the admissible scope of the Code.

In reality, the effect of legality means that a State's behaviour consistent with a commitment contained in the Code is presumed to be legal and licit and would enjoy the benefit of the doubt should its legality be called into question. On the other hand, any action contrary to the provisions of the Code can result in the shifting of the burden of proof against the subject violating them.

## 15. Conclusions

---

<sup>10</sup> B. Conforti, *The Law and Practice of the United Nations*, The Hague-London-Boston, 1996, pp. 275-277.

It has been questioned that the Code is not in the interest of developing and emerging space faring nations. It is my opinion that developing countries have a strong interest in ensuring that the space environment is used in a sustainable and responsible way, so that they can fully enjoy the benefits of space activities and launch space initiatives to the benefit of their citizens. The Code does not impose any requirements on countries that might act as a barrier to space activities of developing countries. The Code also provides a roadmap that will assist new entrants into space with awareness of best practices in the conduct of space operations. And through the Meetings of Subscribing States, the Code will provide developing countries with a voice in the future development of norms for outer space activity.

In this perspective, the EU and the like-minded States supporters of the Code are actively encouraging developing countries to engage in consultations on the Code, including by arranging Multilateral Experts Meeting to enable as many countries as are interested to participate in the process. The Code, once completed and signed, could be hopefully submitted to the UN General Assembly for endorsement, along the lines of the Hague Code of Conduct. This would be a real sign of the legitimacy of the Code within the international community.

If outer space faces a sustainable governance problem, the three pillars that I mentioned at the beginning of my lecture are a first step, which we hope will be followed by many more. We need to build up concrete, feasible, pragmatic solutions for policymakers. Space sustainability will not be accomplished by 2014 though the three initiatives are expected to conclude that year. To make them as meaningful and successful the need for educating and informing various groups is a central theme.