

A Normative System for Outer Space Activities in the Next Half Century

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I. Introduction

It is contended,¹ in addressing sociological writings, distinguishing *technicians* from *utopians*, that both categories of extreme mindsets, are presumably ineffective and unhelpful to another category of scholars dubbed *judicious reformers*. A comparison could be made, analogous to the debate concerning the applicable legal framework underpinning over five decades of humankind's venture into space, during which significant achievements have been made and in respect of which, for instance, it was recently reported that NASA's Voyager 1 spacecraft officially became the first human-made object to venture into interstellar space, placing the 36-year-old probe at about 12 billion miles from the earth's sun. This development, being the latest in a multitude of milestones, alongside far reaching plans aimed at exploration and exploitation of outer space resources, mark the steady advancements in humankind's endeavors, benefits of which can be said to have become an inextricable part of our daily existence. The diversity of national statements at multilateral *fora*, amongst others, ensuing State practice, and voluminous doctrine, all serve to underscore the pivotal nature of a question which lies at the heart of the legal framework governing peaceful uses of outer space, and presents a need for the balanced and pragmatic consideration of law as it is and law as it should be. Dr. Nandasiri Jasentuliyana, whom I first met in Vienna, Austria at the 1999 Third United Nations Conference on the Peaceful Uses of Outer Space (UNISPACE III) and in whose honour this lecture is delivered, set forth visionary perspectives regarding the *lex lata* and *lex ferenda* during the course of his professional

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1 Introduction by, A. Cassese (ed) in: *Realizing Utopia: The Future of International Law* (2012) Oxford, at page xvii, citing: A. Huxley, *Proper Studies* (1927) London, Chatto and Windus, IX-XI.

life in the service of United Nations. As we approach the 50th anniversary of the *Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies*,² I have chosen to address, in this lecture, what the next semi-centennial period of lawmaking holds for activities in outer space.

In this regard, 4 (four) observations should be highlighted. *Firstly*, it is firmly established that international law including the Charter of the United Nations are applicable to activities in outer space.³ *Secondly*, States are expected to carry out activities in the exploration and use of outer space in the interest of maintaining international peace and security and promoting international cooperation and understanding.⁴ *Thirdly*, it is widely acknowledged that significant changes have occurred in the structure and content of the space endeavor, reflected in the emergence of new technologies and the increasing number of actors at all levels.⁵ *Fourthly*, there is the growing realisation that long term

2 United Nations, *Treaty Series*, vol. 610, No. 8843. The treaty has 102 States Parties and 26 Signatories as of January 2013.

3 See General Assembly resolution 1721 (XVI) A (International Co-operation in the Peaceful Uses of Outer Space); Preamble of General Assembly resolution 1802 (XVII) (International Co-operation in the Peaceful Uses of Outer Space); General Assembly resolution 1962 (XVIII) (Declaration of Legal Principles Governing the Activities of States in the Exploration and Use of Outer Space); and Article III of the 1967 Outer Space Treaty. For related doctrine, see I. Brownlie, *The Maintenance of International Peace and Security in Outer Space*, (1964) British Yearbook of International Law, Vol. 41 at page 1 to 2; M. Lachs, *The Law of Outer Space: An Experience in Contemporary Law-Making* (1972) Sijthoff, Leiden, at pages 14 to 17; C.W. Jenks, *Space Law*, (1965) Stevens & Sons, London, at pages 207 to 209; O.O. Ogunbanwo, *International Law and Outer Space Activities* (1975) Martinus Nijhoff at pages 24 to 25, citing the work of D. Goedhuis, *Some Suggestions regarding the interpretation and the implementation of the United Nations Outer Space Treaty of 13 December 1966*, presented at the 1967 Third World Conference on World Peace Through Law at page 3; and B. Cheng, *Le Traité de 1967 sur l'espace* at page 564.

4 In accordance with provisions of the United Nations Charter. With respect to the duty of States to co-operate with one another in accordance with the Charter, see: General Assembly resolution 2625 (XXV) (Declaration on Principles of International Law concerning Friendly Relations and Co-operation among States in accordance with the Charter of the United Nations); and General Assembly Resolution 51/122 (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).

5 See General Assembly resolution 66/71 (International cooperation in the peaceful uses of outer space) and Annex - *Declaration on the Fiftieth Anniversary of Human Space Flight and the Fiftieth Anniversary of the Committee on the Peaceful Uses of Outer Space*, at paragraph 9.

threats to sustainable development⁶ will also come from natural or artificial changes to the outer space environment. Part II below examines various sources of obligation, in the form of principles and rules, as they concern or relate to outer space activities. Part III discusses the interrelationship between various sources of obligation, their respective subjects and content, as well as mechanisms by which these norms (i.e., rules and principles) and related obligations are implemented. Part IV focuses on the fundamental purpose and obligation of fostering international co-operation whilst maintaining peace and security. Part V concludes with forward looking remarks.

II. Sources of International Obligation

It is contended⁷ that United Nations treaties, constitute the first of two layers of legal norms applicable to outer space activities represented by international law governing activities of international persons, i.e. States and international intergovernmental organizations.⁸ This distinguished author noted further that the United Nations core of international space law must be completed by other valid sources, such as the statutes and acts of international intergovernmental space organizations and numerous agreements on international cooperation in this field. Whilst a second layer of legal norms, are comprised of national (i.e. municipal or domestic) laws adopted by individual space-faring States governing governmental and non-governmental activities. It is also contended that the essential part of space law has been created by the United Nations and this foundation of space law should be respected by all. Furthermore, national laws as well as the activities of non-governmental entities performing them under

6 The term sustainable development is construed in this lecture as defined in United Nations World Commission on Environment and Development, *Our Common Future* (1987) Oxford University Press (also known as Brundtland Report) to mean... “development that meets the needs of the present, without compromising the ability of future generations to meet their own needs”. See also, UN Doc. A/66/20, *General Assembly Official Records Sixty-sixth Session Supplement No. 20 - Annex II, Terms of reference and methods of work of the Working Group on the Long-term Sustainability of Outer Space Activities of the Scientific and Technical Subcommittee*, at paragraphs 8 to 10. (COPUOS S&TSC LTS WG ToR).

7 V. Kopal, *Existing United Nations Treaties: Strengths and Needs*, Proceedings of the Workshop on Space Law in The Twenty-First Century, UNISPACE III Technical Forum, 1999 at page 11; V. Kopal, *Introduction to the United Nations Treaties and Principles on Outer Space*, Proceedings of the United Nations / International Institute of Space Law Workshop on Capacity Building In Space Law, the Hague 2003, at pages 10-11.

8 V. Kopal, *Comments and Remarks*, in Proceedings of the Workshop on Space Law “Disseminating and Developing International and National Space Law: The Latin America and Caribbean Perspective” 2005, UN Publication, ISBN 92-1-100977-4, at page 25.

the jurisdiction of individual States should remain in full harmony with international obligations arising from the international law of outer space which should be respected as the basis of all “space law”.⁹

In this regard, the distinction between two layers of legal norms appears to correlate with the dualist theory which, in addressing the interplay between the international legal order and municipal legal systems, is based on the assumption that international law and municipal legal systems constitute two distinct and formally separate categories of legal orders that differ as to their subjects, sources and content.¹⁰

On the other hand, the notion that space law is founded on the United Nations outer space treaties and that national laws, including the subjects of municipal systems, conform to international obligations arising from the international law of outer space being the basis of all “space law”, is consistent with *one* of several postulates propounded by advocates of the monistic theory, regarding the primacy of international law over municipal law, albeit within a unitary legal system. The reference to international obligations implies the existence of multiple sources of obligation beyond the aforementioned United Nations Treaties such as those deriving from customary international law. This may well be the case regarding certain principles of space law that are now considered as customary international law and which it is contended may even have acquired the status of *jus cogens*.

Thus, it has been argued¹¹ that “... the character of customary international law can now be assigned without doubts [to] the principles included in the 1963 Declaration of Legal Principles. They were adopted without any opposition or reservation with the intention to establish a set of fundamental rules of international space law. They have been honoured as such by constant practice of international legal persons. Later on, they were transformed into the 1967 Outer Space Treaty and other legally binding documents and there has not been any attempt at derogating the Declaration either as a whole or some of its principles. It is even possible to go further in this direction and affirm that the fundamental principles of this document have become peremptory norms of general international law/*jus cogens* accepted and recognized by the international community of States as a whole. No derogation is permitted from such norms and they can be modified only by subsequent norms of general international law having the same character.”

This is noteworthy, not solely due to the obligatory nature of customary rules but because an examination of the *Declaration of Legal Principles Governing*

9 V. Kopal, *Existing United Nations Treaties: Strengths and Needs*, (1999), note 7, loc. cit.

10 On the relationship between international law and municipal law, including evaluations of historical arguments and doctrine, see: I. Brownlie, *Principles of Public International Law*, (5th edn 1998) at page 31 to 56; A. Cassese, *International Law*, (2005) 2nd edn, at pages 213 to 237.

11 See: V. Kopal, *Comments and Remarks*, note 7, loc.cit.

*the Activities of States in the Exploration and Uses of Outer Space*¹², reveals they are in fact wholly reproduced in corresponding provisions of the 1967 Outer Space Treaty, at: Principle 1 - Exploration and use for the benefit and in the interests of all mankind (Article I); Principle 2 - Freedom of exploration and use in accordance with international law; (Article I and III); Principle 3 - Non - appropriation (Article II); Principle 4 - Exploration and use of outer space in accordance with international law, and Charter of the United Nations (Article III); Principle 5 - International responsibility for national activities in outer space (Article VI); Principle 6 - Cooperation and mutual assistance (Article IX); Principle 7 - Jurisdiction, control and Ownership (Article VIII); Principle 8 - International liability for damage (Article VII); Principle 9 - Astronauts as envoys of mankind (Article V).

In examining the relationship between treaty and custom, the above contention is of importance concerning the universal nature of the fundamental principles and rules of space law embodied in the 1967 Outer Space Treaty, given that "...analysis of the practice of States, however, shows that there is ground for the assumption that notwithstanding the fact that there is no universal formal recognition of the Treaty, all the members of the international community are bound by the fundamental principles and rules contained in it because these principles and rules have acquired the status of general customary law. It follows that, independent of the formal participation in the 1967 Outer Space Treaty, all States should observe the obligations arising from its provisions because these provisions are binding as rules of customary law."¹³ Others have stated¹⁴ that "...the universal acceptance of these principles has consolidated their customary value, which can hardly be questioned even by the strictest and most positivistic test of legal effectiveness." In the same vein, it has been argued¹⁵ that "...the fundamental principles of international space

12 General Assembly Resolution 1962 (XVIII) cf, M. Lachs, op. cit, note 3 at pages 113 to 118. For related doctrine, see T. Brisibe, *Customary International Law, Arms Control and Protection of the Environment in Outer Space*, Chinese Journal of International Law, 2009, Volume 8, Issue Number 2, pages 375 to 393 at note 67, citing, Brownlie, note 9 at page 264; C. W. Jenks, *Current Problems In Space Law: A Symposium* (British Institute ICL Series No. 6, 1966) at page 16; C. W. Jenks, note 3 at page 186; M. Lachs, note 3 at page 138; S. H. Lay and H. J. Taubenfeld, *The Law Relating To Activities of Man In Space* (1970) pages 81 to 87; and Blaine Sloan, *General Assembly Resolutions Revisited (Forty Years Later)*, British Yearbook of International Law (1987) at page 87.

13 V.S. Vereschetin and G.M. Danilenko, *Custom as a Source of International Law of Outer Space*, 13 Journal of Space Law (1985) at page 32.

14 S. Marchisio, *The Evolutionary Stages of the Legal Sub-Committee of the United Nations Committee on the Peaceful Uses of Outer Space (COPUOS)* (2005) Journal of Space Law, at page 225.

15 In Vereschetin & Daninlenko, op.cit, note 13 at page 33, citing R. S. Jakhu, *Developing Countries and the Fundamental Principles of International Space Law*, in New Directions in International Law (1982).

law, confirmed and declared by the Outer Space Treaty, have been formulated and recognized and accepted by express consent or acquiescence by virtually all countries, developed as well as developing.”

Consequently, the contention¹⁶, with which this author agrees is that, today in order to recognize the principles of general international law on the subject – for example of the law of treaties, international humanitarian law, diplomatic law, law of the sea, *law of outer space*, or law on the use of force and self defence, we turn to the major international conventions on the subject, assuming that what is proclaimed in them corresponds (at least in large part) to general international law. This it is submitted, conforms to the consensus of United Nations set forth in the 50th Anniversary Declaration¹⁷, annexed to Assembly Resolution 66/71, recalling at paragraph 6, the entry into force of the 1967 Outer Space Treaty which establishes the *fundamental principles* of international space law. Express declarations have also been made by States on the customary and obligatory nature of some of the principles set forth in the 1967 Outer Space Treaty.¹⁸ In effect, the Treaty constituted a framework instrument in anticipation of future types of activities and indeed future situations which did not exist at the time of its conclusion. As a consequence of which 4 (four) additional treaties¹⁹ elaborated on the fundamental principles which have been supplemented further by General Assembly resolutions, establishing a number of principles.²⁰ In attempting to address the question with which this lecture is

16 L. Condorelli, *Customary International Law: The Yesterday, Today and Tomorrow of General International Law*, in A. Cassese (ed), *Realizing Utopia: The Future of International Law*, note 1 at page 152, wherein the terms international custom and general international law are used synonymously.

17 Note 5.

18 Vereschetin & Daninlenko, note 13 loc. cit. citing statements made at various COPOUS sessions by representatives of Czechoslovakia, USSR, Italy and Japan supporting freedom of exploration in outer space and the principle of non-appropriation. Thus refuting the position of a number of equatorial countries laying claims to segments of the geostationary orbit in the absence of their being party to the 1967 Outer Space Treaty. cf G.M. Danilenko, *Law-Making in the International Community*, (1993) Martinus Nijhoff Publishers, at page 152, note 91.

19 Agreement on the Rescue of Astronauts, the Return of Astronauts and the Return of Objects Launched into Outer Space (United Nations, *Treaty Series*, vol. 672, No. 9574); Convention on International Liability for Damage Caused by Space Objects (United Nations, *Treaty Series*, vol. 961, No. 13810); Convention on Registration of Objects Launched into Outer Space (United Nations, *Treaty Series*, vol. 1023, No. 15020); and Agreement Governing the Activities of States on the Moon and Other Celestial Bodies (United Nations, *Treaty Series*, vol. 1363, No. 23002).

20 General Assembly resolution 37/92 (1982 Principles Governing the Use by States of Artificial Earth Satellites for International Direct Television Broadcasting); General Assembly resolution 41/65 (Principles Relating to Remote Sensing of the Earth from Outer Space); General Assembly resolution 47/68 (Principles Relevant to the Use of Nuclear Power Sources in Outer Space); General Assembly resolution 51/122 (Dec-

concerned, i.e., a normative system for outer space activities in the future, one must necessarily enquire about what gaps if any exist in the current framework. And in respect of which, for instance, the view has been taken that "...the United Nations Charter, the existing treaties on outer space, the relevant bilateral and multilateral arms control provisions, customary international law and national law are all complementary in a manner such that: [...] they provided an equitable, practical, balanced and extensive legal system for ensuring the use of outer space for peaceful purposes."²¹ Others have argued that although the provisions and principles of the United Nations treaties on outer space constituted the regime to be observed by States and more States should be encouraged to adhere to them, the current legal framework for outer space activities required modification and further development in order to keep pace with advances in space technology, changes in the nature of space activities and the increase in the volume of such activities. In other words, the lacunae resulting from the current legal framework could be addressed by the development of a universal, comprehensive convention on space law without disrupting the fundamental principles contained in the treaties currently in force.²² Nonetheless, amongst other developments in the outer space endeavor, including challenges associated with access to the spectrum / orbit resource, there is the growing realization that long term threats to sustainable development will also come from natural or artificial changes to the outer space environment. These circumstances provide the necessary impetus for regulatory efforts required to address matters such as vicarious liability, standards of negligence, establishment of fault and liability, procedures for removal of abandoned spacecraft, dispute resolution, and equitable access to outer space and its resources.

In all, it is certain that outer space usages (i.e., custom) do in fact exist and that they have been generally accepted by enough States, including non-space-faring States, as to be considered obligatory. Noting however, that for as long as there are no further treaty type instruments adopted by States, the 1967 Outer Space Treaty and the customary rules set forth therein, will continue to serve as a framework document from which subsequent instruments will emerge. Furthermore, the notion that certain principles of international space law could now be regarded as having assumed the status of peremptory norms

laration 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). Others include: General Assembly resolution 59/115 (Application of the concept of the "launching State") and General Assembly resolution 62/101 (Recommendations on enhancing the practice of States and international intergovernmental organizations in registering space objects).

21 See the statement of the United States of America in Report of the AD Hoc Committee of the Conference on Disarmament on Prevention of an Arms Race in Outer Space, CD/1271, 24 August 1994, 7.

22 UN Doc A/AC.105/917, Report of the Legal Subcommittee on its forty-seventh session, held in Vienna from 31 March to 11 April 2008.

has been canvassed²³ with respect to paragraphs 1 and 2 of Article I to the 1967 Outer Space Treaty. Likewise, Judge Lachs, in his seminal work²⁴ on the law applicable to outer space activities, took the view that some of the rights and obligations under outer space law concern States engaged in outer-space activities, others are of a general nature, and there are those which were in effect *erga omnes*. This is important for several reasons, noting that at the April 2013 52nd session of the UNCOPUOS Legal Subcommittee, some delegations expressed the view that the Subcommittee should consider matters relating to space debris not only through the review of legal mechanisms, but also by looking at other instruments, such as the 1992 *Rio Declaration on Environment and Development*²⁵, in particular its principle 2.²⁶ Principle 2 of the Rio Declaration provides that:

“... States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental and developmental policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction.”

The potential for extension of this principle to outer space which has traditionally been considered as relevant to human ecosystems such as the oceans and the atmosphere would have far reaching normative implications particularly if one were to construe this extension as potentially encompassing *erga omnes* obligations to protect outer space in the sense that it constitutes a common amenity or resource. In as much as it has been contended²⁷ in this regard, that “...no specific obligation to protect the environment has arisen in general international law with the characteristics of a community obligation, that is, an obligation towards all the other members of the international community, attended by a corresponding legal entitlement accruing to all the other members of the world community, to demand fulfillment of the obligation.”

23 C.Q. Christol, *The Jus Cogens Principle and International Space Law*, (1983) 26th Colloquium on the Law of Outer Space, at pages 1 to 9.

24 M. Lachs, note 3 at page 113.

25 UN Doc. A/CONF.151/26 (vol. I) / 31 ILM, 874 (1992). See also, *Legality of the Threat or Use of Nuclear Weapons*, Advisory Opinion, ICJ Reports 1996, pp. 241-242, paragraph 29; *Gabčíkovo–Nagymaros Project*, Judgement, ICJ Reports 1997, p. 41, paragraph 53.

26 See UN Doc. A/AC.105/1045, at para. 149.

27 A. Cassese, note 10 at page 489. cf. P.M. Dupuy, *The Deficiencies of the Law of State Responsibility Relating to Breaches of Obligations Owed to the International Community as a Whole: Suggestions for Avoiding the Obsolescence of Aggravated Responsibility*, in A. Cassese, note 1, op. cit. at pages, 210 to 226; F. Francioni, *Realism, Utopia, and the Future of International Environmental Law*, in A. Cassese, note 1, op. cit. at pages 442 to 445, 447 to 448 and 453 to 458.

III. Implementing International Obligations

Regarding the obligation²⁸ to implement domestic legislation, it has been argued²⁹ that arising from the nature of treaty obligations and from customary law, there is a general duty to bring internal law (i.e. municipal or domestic law) into conformity with obligations under international law. This argument notes³⁰ however, that in general a failure to bring about such conformity is not in itself a direct breach of international law, and a breach arises only when a State concerned fails to observe its obligations on a specific occasion. Another view contends³¹ that if such a duty existed, each time a State fails to comply with an international rule as a result of the failure of its domestic law making body to pass the necessary implementing legislation, it would breach both that rule and the general principle imposing the duty in question. And, at least in the current regulation of the international community, subject to specific exemptions³², a perusal of State practice shows that no such general duty exists. It is in this regard, that the question as to whether Article VI of the 1967 Outer Space Treaty imposes an obligation on States to implement domestic legislation, and in respect of which a third view³³ posits in the affirmative. Pivotal to the thrust of this lecture, is the contention³⁴, that apart from the general rule barring States from adducing domestic legal problems from not complying with international law, and treaty or binding customary rules, from which no derogation is allowed, which in turn impose the obligation to enact implementing legislation, international law does not contain any regulation of implementation.

28 Regarding the implementation of obligations contained in the United Nations Outer Space Treaties, see: T. Brisibe, *An Introduction to UNCOPUOS Recommendations on National Legislation Relevant to the Peaceful Exploration and Use of Outer Space*, (2013) German Journal of Air and Space Law, Vol. 62, No. 4 at pages 728 to 739. For a comprehensive historical account on the subject of state obligation, see generally: J. L. Brierly, *The Basis of Obligation*, in H. Lauterpacht and C.H.M. Waldock (Eds.), *International Law and Other Papers*, 1-67 (1958); I. Brownlie, *System of The Law of Nations – State Responsibility Part I* (1983).

29 I. Brownlie, note 10, at page 35, citing Fitzmaurice, 92 Hague *Recueil* (1957) II, at page 89; Oppenheim, *International Law* (1992) Vol, I, 9th edn. by R. Jennings and A. Watts (Eds.) at pages 82 to 86.; Guggenheim, *Traité De Droit International Public* (1967) Vol. I, 2nd edn, at pages 31 to 33; and *Exchange of Greek and Turkish Populations* (1925), PCIJ, Ser. B, no. 10, at page 20.

30 *Id.*, citing McNair, *Law of Treaties* (1961) at page 100; and Fitzmaurice, loc. cit.

31 A. Cassese, note 10 at page 218.

32 *Id.* Referring to specific treaties laying down a set of obligations explicitly imposing upon contracting States the duty to enact legislation and general rules that have acquired the rank of and status of peremptory norms or *jus cogens*.

33 S. Marchisio, *The 1983 Italian Law N. 23 on the Compensation for Damage Caused by Space Objects*, 54 (2) German Journal of Air & Space Law, 2005 at pages 261-270.

34 A. Cassese, note 10 at page 219.

Consequently, international law leaves each State *complete freedom* with regard to how it fulfils, nationally, its international obligations.

In April 2013, the Legal Subcommittee of UNCOPUOS at its 52nd session considered and agreed upon text which served as the basis for a United Nations Assembly Resolution 68/74 - *Recommendations on National Legislation Relevant to the Peaceful Exploration and Use of Outer Space*, adopted by the 68th session of the United Nations General Assembly at its 65th meeting on 11th December 2013. The resolution, amongst other things, emphasizes that obligations under international law and those specifically contained in the United Nations treaties on outer space are implemented. The *Declaration on the Fiftieth Anniversary of Human Space Flight and the Fiftieth Anniversary of the Committee on the Peaceful Uses of Outer Space*, annexed to United Nations Assembly Resolution 66/71 also recalls the entry into force of the 1967 Outer Space Treaty, which establishes the fundamental principles of international space law and urges that States not yet party to the United Nations treaties on outer space, give consideration to ratifying or acceding to those treaties in accordance with their domestic law, as well as *incorporating* them in their national legislation. What role will the General Assembly resolution play, and what does it achieve? In its preambular provisions, the Resolution notes, amongst other things, the need for *consistency* and *predictability* with regard to the *authorization* and *supervision* of space activities and the need for a practical regulatory system for the involvement of *non-governmental entities* to provide further incentives for enacting regulatory frameworks at the national level, noting that some States also include national space activities of a governmental character within that framework. Furthermore, the resolution recognizes that there are different approaches taken by States in dealing with various aspects of national space activities, namely by means of *unified acts* or a *combination* of national legal instruments, and that States have adapted their national legal frameworks according to their specific needs and practical considerations and also that national legal requirements depend to a high degree on the range of space activities conducted and the level of involvement of non-governmental entities.

We will recall the UNCOPUOS Legal Subcommittee's Working Group on National Space Legislation Relevant to the Peaceful Exploration and Use of Outer Space, Chaired by Prof. Dr. I. Marboe (*Austria*) in concluding its final report,³⁵ presented its findings, encompassing 9 (nine) issues which had been considered during its multiyear work plan. These issues comprise: (1) Reasons for States to enact national space legislation or the reasons for the absence of such legislation; (2) Scope of space activities targeted by national regulatory frameworks; (3) Scope of national jurisdiction over space activities; (4) Competence of national authorities in the authorization, registration and supervision of space activities; (5) Conditions to be fulfilled for registration and authorization; (6) Compliance and monitoring; (7) Regulations concerning liability; (8) Regula-

35 See: UN Doc. A/AC.105/C.2/101 *Report of the Working Group on National Legislation Relevant to the Peaceful Exploration and Use of Outer Space on the work conducted under its multi-year workplan.*

tion by States of transfers of ownership of space objects and of transfers of authorized space activities to third parties; and (9) The participation of private individuals in space flights and the treatment in service-provider contracts of issues of liability and responsibility for collisions of satellites in outer space.

Based on the aforementioned findings, the Working Group, in its conclusions, agreed that a number of elements be considered by States when enacting regulatory frameworks for national space activities, as appropriate, taking into account the specific needs of the State concerned. It is these elements, and corresponding regulative categories, which were transformed, following consultations and review between member States in the intersessional period of the UNCOPUOS Legal Subcommittee and during the 52nd session, into the 8 (eight) recommendations to be set forth in the General Assembly resolution. Thereby commending to States for their consideration, as appropriate, when enacting regulatory frameworks for national space activities, in accordance with their national law, taking into account their specific needs and requirements, specific guidance encompassing³⁶: (1) scope of application (i.e. of the relevant national instrument); (2) authorization and licensing; (3) jurisdiction and control; (4) safety; (5) continuing supervision of activities of non-governmental entities; (6) registration; (7) liability and insurance; and (8) transfer of ownership or control of space objects in orbit. These developments provide a suitable premise for the notion that a principal item for consideration in both international space law and municipal legal systems towards implementing international obligations, would be how the obligations become recognized at the municipal level so that both rights and obligations are created not only for the State and its institutions, but also for individuals and non-governmental entities.

Differences in modalities for implementing these two principal sources of international obligation should be highlighted. Regarding customary international law, it would appear that a common feature, is their implementation by a modality referred to as *automatic standing incorporation*, by which, aside a handful of exceptional circumstances, national constitutions or statutes of judicial decisions of most States stipulate that such rules become domestically binding *ipso facto*, that is, by the mere fact of their evolving in the international com-

36 The Recommendations, rely on various provisions of the Outer Space Treaty (Articles VI, VII, VIII, IX); Liability Convention (Articles II, III); Registration Convention; General Assembly resolution 47/68 (Principles Relevant to the Use of Nuclear Power Sources in Outer Space; Space); Debris Mitigation Guidelines of the Committee on the Peaceful Uses of Outer Space in *Official Records of the General Assembly, Sixty-second Session, Supplement No. 20 (A/62/20)*, annex; General Assembly resolution 59/115 (Application of the concept of the “launching State”); General Assembly resolution 1721 (XVI) B (International Co-operation in the Peaceful Uses of Outer Space); and General Assembly resolution 62/101 (Recommendations on enhancing the practice of States and international intergovernmental organizations in registering space objects).

munity.³⁷ In other words³⁸, with an added qualification, customary rules are to be considered as part of the law of the land and enforced as such, only so far as is not inconsistent with Acts of Parliament or prior judicial decisions of final authority. Thus, distinguishing³⁹ between the doctrine of *incorporation* and that of *transformation*. The modalities for implementation of Treaties, on the other hand, differ subject to constitutional variations, by means of which have been referred⁴⁰ to as: *automatic standing incorporation of international rules* and *legislative ad hoc incorporation of international rules* (comprised of: statutory *ad hoc* incorporation of international rules and automatic *ad hoc* incorporation of international law).⁴¹ For illustration, consider the modalities for implementing international obligations in two African countries, namely the Federal Republic of Nigeria and the Republic of South Africa. Recalling the *Constitution of the Federal Republic of Nigeria (Promulgation) 1999 No. 24*⁴² (*Nigerian Constitution* hereinafter) one source of obligations, i.e., treaties, are defined under Section 3(3) of the *Nigerian Treaties Making Procedure Etc. Act, 1993 No. 16*⁴³ (*Treaty Making Act* hereinafter) as:

“...instruments whereby an obligation under international law is undertaken between the Federation and any other country and includes “conventions”, “Act”, “general acts”, “protocols”, “agreements”, and “modi-vivendi”, whether they are bilateral or multi-lateral in nature”.

However, the *Nigerian Constitution* at Section 12 provides, with respect to the implementation of treaties:

37 A. Cassese note 10 at page 224.

38 I. Brownlie, note 10 at page 42.

39 See DJ Harris, *Cases and Materials on International Law*, (2004) 6th edn. at pages 77 to 78, examining the dictum of Lord Denning in *Trendtex Trading Corporation v. Central Bank of Nigeria* [1977] 1 QB 529, where in distinguishing between the doctrine of *incorporation* and that of *transformation*, Lord Denning had adopted the *incorporation* approach, whilst in the case of *Thakra v Secretary of State for the Home Office*, [1974] Q.B. 684, CA, Lord Denning quoted parts of Lord Atkin’s speech which in delivering the opinion of the Privy Council in *Chung Chi Cheung v The King* [1939] A.C. 160 at 167-168, that: *It must always be remembered...so far, at any rate, as the Courts of this country are concerned, international law has no validity save in so far as its principles are accepted and adopted by our own domestic law. There is no external power that imposes its rule upon our code of substantive law or procedure.*

40 A. Cassese note 10 at page 220 to 222.

41 Op. cit. at page 226.

42 CAP C.23 Laws of the Federation of Nigeria, Vol. 3, 2004.

43 CAP T. 20 Laws of the Federation of Nigeria, Vol. 15, 2004.

- 1) No treaty between the Federation and any other country shall have the force of law except to the extent to which any such treaty has been enacted into law by the National Assembly.
- 2) The National Assembly may make laws for the Federation or any part thereof with respect to matters not included in the Exclusive Legislative List for the purpose of implementing a treaty.
- 3) A bill for an Act of the National Assembly passed pursuant to the provisions of subsection (2) of this section shall not be presented to the President for assent, and shall not be enacted unless it is ratified by a majority of all the House of Assembly in the Federation.

In addition, Section 19 of the *Nigerian Constitution* states that the Foreign Policy objectives shall be *inter alia*:

- (d) Respect for international law and treaty obligations as well as the seeking of settlement of international disputes by negotiation, mediation, conciliation, arbitration and adjudication.

A cursory examination of the constitutional provisions cited above, leads one to the conclusion that treaties are not to be regarded as an automatic source of rights and obligations in Nigerian domestic law. At least not without their specific incorporation by way of an Act passed by the National Assembly. It is therefore typically, not open to the executive to alter domestic laws by means of a treaty instead of through the enactment of legislation. A process which no doubt ensures supremacy of an elected National Assembly.

That said, the *Treaties Making Act* provides, in its Section 2:

“...without prejudice to the generality of the provisions of the Constitution....all treaties to be made between the Government of the Federation and any other country shall be classified into the categories specified in this Act and dealt with accordingly.”

Section 3 (1) of the *Treaties Making Act*, classifies treaties as either:

- (a) law making treaties, being agreements constituting rules which govern interstate relationship and co-operation in any area of endeavour and which have the effect of altering or modifying existing legislation or which affects the legislative powers of the National Assembly;
- (b) agreements which impose financial political and social obligations on Nigeria or which are of scientific or technological import;
- (c) agreements which deal with mutual exchange of cultural and educational facilities.

Section 3 (2) of the *Treaties Making Act* states further that the treaties or agreements specified in: paragraph (a) of subsection 1 need to be enacted into law; paragraph (b) of subsection 1 need to be ratified; and paragraph (c) of subsection 1 may not need to be ratified. The implementation or compliance with

international obligations under the Nigerian Constitution arising from Section 19 which state ...“*respect for international law and treaty obligations*”, as part of Nigeria’s foreign policy objectives deserves special mention. Consequently, whilst obligations to be respected may derive from international law or treaties, in the absence of Acts by the National Assembly and judicial decisions interpreting same, use of the words “respect for international law” therein can be said to imply a respect for international law and the obligations which may be derived from a number of “sources”. Albeit stressing, particularly with respect to customary international law, that the actual conduct of States in their relations with other nations is only a subsidiary means whereby the rules which guide the conduct of States are ascertained. The firm statement by the State of what it considers to be the rule is far better evidence of its position than what can be pieced together from the actions of a country at different times and in a variety of contexts.⁴⁴

The *Constitution of the Republic of South Africa*, 1996, entered into force on 4th February 1997. It’s General Provisions contained in Sections 231 to 233 address matters pertaining to International law. In particular, Section 232 provides that:

“... Customary international law is law in the Republic unless it is inconsistent with the Constitution or an Act of Parliament”.

Section 231 (International Agreements) also provides:

1. The negotiating and signing of all international agreements is the responsibility of the national executive.
2. An international agreement binds the Republic only after it has been approved by resolution in both the National Assembly and the National Council of Provinces, unless it is an agreement referred to in subsection (3).
3. An international agreement of a technical, administrative or executive nature, or an agreement which does not require either ratification or accession, entered into by the national executive, binds the Republic without approval by the National Assembly and the National Council of Provinces, but must be tabled in the Assembly and the Council within a reasonable time.
4. Any international agreement becomes law in the Republic when it is enacted into law by national legislation; but a self-executing provision (emphasis mine) of an agreement that has been approved by Parliament is law in the Republic unless it is inconsistent with the Constitution or an Act of Parliament.
5. The Republic is bound by international agreements which were binding on the Republic when this Constitution took effect.

44 R. Baxter, *Multilateral Treaties as Evidence of Customary International Law* (1965) British Year Book of International Law 41, pp. 298-300.

In the context of this lecture, it is noted⁴⁵ that given the provisions in Section 231 (4) above, for the purpose of ensuring a more complete and effective implementation of international law, preference should always be given to the legislative *ad hoc* incorporation of international rules whenever they turn out to be non-self-executing. Conversely, whenever international rules are self-executing, it would be preferable to resort to automatic (whether permanent or *ad hoc*) incorporation of international rules. This approach it is argued, better safeguards the correct application of international rules because rather than ossify (i.e., to make inflexible) them it enables the national legal system to adjust itself fully to international rules as they are construed and applied in the international sphere.

Still on the subject of implementing obligations, it is acknowledged that the outer space environment is being used by more and more States, non-governmental organizations and private sector entities. The proliferation of space debris and the increased possibilities of collisions and interference with the operation of space objects raise concerns about the long-term sustainability of space activities, particularly in the low-Earth orbit and geostationary orbit environments.⁴⁶ In this regard, recent events, intentional and accidental, have resulted in massive debris fallout, giving impetus to proposals for debris removal procedures. Related legal questions border on, issues of registration, jurisdiction and control of space objects on the one hand, to rules of delict and tort for harmful consequences arising from extra-hazardous activities. Consequently, the UNCOPUOS Scientific and Technical Subcommittee established the Working Group on the Long-term Sustainability of Outer Space Activities, to support the preparation of a report on the long-term sustainability of outer space activities, the examination of measures that could enhance the long-term sustainability of such activities and the preparation of an appropriate set of voluntary best-practice guidelines focused on practical and prudent measures that could be implemented in a timely manner to enhance the long-term sustainability of outer space activities. We will recall, based on the understanding that approval of voluntary guidelines would increase mutual understanding on acceptable activities in space and thus enhance stability in space-related matters and decrease the likelihood of friction and conflict, the General Assembly in its resolution 62/217⁴⁷, endorsed the Space Debris Mitigation Guidelines of the Committee and agreed that the voluntary guidelines for the mitigation of space debris reflected the existing practices as developed by a number of national and international organizations, and invited States to implement those guidelines through relevant national mechanisms.

Another proposal to address the mitigation of space debris was detailed in the European Union's (EU) Revised Draft *International Code of Conduct* (version

45 A. Cassese, note 10 at page 222.

46 Note 6, COPUOS S&TSC LTS WG ToR, at paragraph 2.

47 UNGA Res. 62/217 International Cooperation in the Peaceful Uses of Outer Space, paragraph 26. *Official Records of the General Assembly, Sixty-second Session, Supplement No. 20 (A/62/20)*, paragraphs 117 and 118 and annex.

of 5 June 2012) at Part II (Safety, Security and Sustainability of Outer Space Activities) Section 4 (Measures on Space Operations and Mitigation of Space Debris) which stated, *inter alia* at Paragraph 4.2, that:

“...The Subscribing States commit, in conducting outer space activities, to: refrain from any action which brings about, directly or indirectly, damage, or destruction, of space objects unless such 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, and where such exceptional action is necessary, that it 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 proposal of the aforementioned EU Code of Conduct contrasts with the view of the Russian Federation, that:

“...any potential rules of conduct for space activities and/or guidelines on the long-term sustainability of space activities, as well as confidence-building measures in general, should be in full conformity with international law, with the stipulation that a State’s responsibilities should extend only to the space objects of its registry, unless otherwise agreed by the said State and any other State, and should not, by any means, imply the possibility of exerting arbitrary impact on the space object of another State.”⁴⁸

A revised EU proposal concerning Measures on Space Operations and Space Debris Mitigation, is now detailed in 16th September 2013, version of the *Draft International Code of Conduct for Outer Space Activities*.

It is contended⁴⁹ that whilst the UNCOPUOS Space Debris Guidelines constitute an important step towards the mitigation of space debris, they remain

48 UN Doc. A/67/20, Report of the Committee on the Peaceful Uses of Outer Space General Assembly *Official Records Sixty-seventh Session Supplement No. 20*, paragraph 51, at page 9.

49 See UN Doc. A/AC.105/C.2/L.283 (Review of the legal aspects of the Space Debris Mitigation Guidelines of the Committee on the Peaceful Uses of Outer Space, with a view to transforming the Guidelines into a set of principles to be adopted by the General Assembly - Working paper submitted by the Czech Republic). Cf UN Doc. A/AC.105/C.2/2012/CRP.11 (Responses to the set of Questions provided by the Chair of the Working Group on the Status and Application of the Five United Nations Treaties on Outer Space) Responses received from Belgium, at paragraph 2, with regards to question 2.1. “*Could the notion of “fault”, as featured in Articles III and IV of the 1972 United Nations Liability Convention, be used for sanctioning the non-compliance by a State with the Principles adopted by the UNGA or its subordinate bodies and related to space activities, such as the Resolution on Principles relating to the Use of Nuclear Power Sources in Outer Space (47/68) or the UNCOPUOS*

advisory technical standards to be implemented by States and international organizations on a voluntary basis through their own practices and procedures. Furthermore, the Guidelines are not legally binding under international law, they do not establish any legal duty to comply with them, and their violation would not generate any legal responsibility and / or liability in the event of damage caused by such misconduct. There is merit in the view that binding guidelines for mitigation of space debris would facilitate the process of establishing fault under the Liability Convention, albeit noting that an aspect of the liability regime applicable to outer space activities is an exception to the general reluctance of States towards rules imposing strict liability for damage caused by a space object on the surface of the earth or to aircraft in flight. It should also be noted that there are laws and practices from which immediate and reliable analogies can be drawn, such as those concerning the civil responsibility of States for breaches of international law and appropriate remedies, with specific reference to regimes on liability deriving from other environmental agreements and international law principles⁵⁰, given that they inspire and illustrate the benefits of adopting binding rules of conduct concerning outer space activities, against which legal obligations can be established to take appropriate measures preventing harm, perhaps by reference or inclusion of such binding rules of conduct in national legislation.⁵¹

IV. International Co-Operation, Peace and Security

As was noted hereinbefore, States are expected to carry out activities in the exploration and use of outer space in the interest of maintaining international peace and security and promoting international co-operation and understanding. At the heart of the treaty frequently referred to on matters concerning the maintenance of peace and security of outer space, are namely the pre-ambular provisions, including Articles I, II, III and IV of the 1967 Outer Space Treaty.⁵²

Guidelines relating to the Mitigation of Space Debris?” UN Doc.

A/AC.105/C.2/2012/CRP.10 (Set of Questions provided by the Chair of the Working Group on the Status and Application of the Five United Nations Treaties on Outer Space).

- 50 See note 25 supra. Principle 2 of the 1992 *Rio Declaration on Environment and Development* which is supported by a long line of judicial authority. See also Principle 15 of the said Rio Declaration, to the effect that: “*In order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.*”
- 51 See for instance, Article 10, Annex VI (Liability arising from Environmental Emergencies) *Protocol on Environmental Protection to the Antarctic Treaty* 30 ILM 145.
- 52 See General Assembly Resolution 1962 (XVIII) and General Assembly Resolutions 1721 (XVI). See also General Assembly Resolution 1884 (XVIII) (Question of

In this regard, 4 (four) principal issues arise, for consideration as they concern namely, *peaceful uses* of outer space, *arms control*, the right to *self-defence* in outer space, and the *peaceful settlement of disputes*.

It is expected that activities in outer space shall be conducted for *peaceful purposes*, and though certain specific prohibitions apply to the moon and celestial bodies, a universally accepted definition of the term peaceful purposes does not exist at this time, given that the term could be construed to mean non-aggressive or even non-military.⁵³ Although the term peaceful purposes, can be found in various multilateral instruments⁵⁴, an appraisal of these multilateral instruments reveals that the term peaceful purposes is interpreted or construed separately and uniquely distinct from one instrument to another. Thus, it would seem that this term which features in the Outer Space Treaty and Moon Agreement as well as preambular provisions of both the Liability and Registration Convention's, constitutes a convenient alternative to the more familiar use of the terms "demilitarization" and "neutralization" as is traditional in arms and armament affairs. Be that as it may, it should be kept in mind that by default, instruments and mechanisms devised to control arms or enable disarmament are intrinsically political by nature and driven by security policy as to whether the production or possession of certain armaments be limited, in order to achieve the desired military-technical balance of power.

Regarding *arms control* measures, it is debatable whether the interpretation and effect of some of the 1967 Outer Space Treaty's concepts and provisions go beyond express prohibition on the placement of nuclear weapons and weapons of mass destruction in Earth orbit and outer space, as well as certain military activities on celestial bodies including the moon. Noting that the 1976 Conven-

General and Complete Disarmament). Resolution 1884 (XVIII) is reproduced in the Outer Space Treaty's Article IV.

53 See A.G. Koroma, *The Development of International Law and the Peaceful Uses of Outer Space*, (2011) Proceedings of the 54th Colloquium on the Law of Outer Space, at pages 6 to 10.

54 Antarctic Treaty 402 United Nations, *Treaty Series*, 71; Treaty for the Prohibition of Nuclear Weapons in Latin America and the Caribbean 634 United Nations, *Treaty Series*, 326; Treaty on the Non-Proliferation of Nuclear Weapons 729 United Nations, *Treaty Series*, 161; Treaty on the Prohibition of the Emplacement of Nuclear Weapons and other Weapons of Mass Destruction on the Seabed and the Ocean Floor 955 United Nations, *Treaty Series*, 115; Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological and Toxic Weapons and Their Destruction 1015 United Nations, *Treaty Series*, 163; Convention on the Prohibition of Military or any other Hostile Use of Environmental Modification Techniques 16 ILM 90; United Nations Convention on the Law of the Sea 1833 United Nations, *Treaty Series*, 3; South Pacific Nuclear Free Zone Treaty 1445 United Nations, *Treaty Series*, 177; Protocol on Environmental Protection to the Antarctic Treaty 30 ILM 145; Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on Their Destruction 1974 United Nations, *Treaty Series*, 45.

tion on Registration of Objects Launched into Outer Space obliges its Parties, launching States, to register objects launched into Earth orbit and beyond and also inform the Secretary-General of the UN with specific details. It is also noteworthy that prior to the 1967 Outer Space Treaty's entry into force, the UNGA; Resolution 1148 (XII) (*Regulation, limitation and balanced reduction of all armed forces and all armaments; conclusion of an international convention (treaty) on the reduction on armaments and the prohibition of atomic, hydrogen and other weapons of mass destruction*) and Resolution 1884 (XVIII) on the *Question of General and Complete Disarmament*. These Resolutions were clearly focused on arms control and disarmament. Furthermore, since 1981 the United Nations General Assembly has adopted a resolution annually, requesting that States refrain from actions contrary to the peaceful use of outer space and calling for negotiations within the United Nations Conference on Disarmament on a multilateral agreement pertaining to the Prevention of an Arms Race in Outer Space. Voting patterns have demonstrated near-unanimous support for this resolution.

Additional instruments⁵⁵ have been adopted to strengthen the aforementioned treaties and resolutions. An illustration of the current state of affairs is evidenced by recent events in the Korean peninsula, following which the United Nations Security Council, adopted Resolution 2087 (2013).⁵⁶ Resolution 2087 (2013), amongst other things, condemns the DPRK's launch of 12 December 2012, which used ballistic missile technology and was in violation of resolutions 1718 (2006) and 1874 (2009); demands that the DPRK not proceed with any further launches using ballistic missile technology, and comply with resolutions 1718 (2006) and 1874 (2009) by suspending all activities related to its ballistic missile programme and in this context re-establish its pre-existing commitments to a moratorium on missile launches. And, further demands that the DPRK immediately comply fully with its obligations under resolutions 1718 (2006) and 1874 (2009), including that it: abandon all nuclear weapons and existing nuclear programmes in a complete, verifiable and irreversible manner; immediately cease all related activities; and not conduct any further launches that use ballistic missile technology, nuclear test or any further provocation.

It is of note that resolution 2087 (2013) in its preambular provisions, also recognizes... "the freedom of all States to explore and use outer space in accordance with international law, including restrictions imposed by relevant Security Council resolutions." Whilst the DPRK would appear to have exercised its freedom to explore and use outer space, given that it proceeded to register⁵⁷ a satellite in accordance with the Registration Convention, to which it is a party,

55 UNGA Res. 59/91 *Hague Code of Conduct against Ballistic Missile Proliferation*, and UN Doc. A/57/724.

56 S/RES/2087 (2013) Adopted by the Security Council at its 6904th meeting, on 22 January 2013.

57 UN Doc. ST/SG/SER.E/662. Note verbale dated 22 January 2013 from the Permanent Mission of the Democratic People's Republic of Korea to the United Nations (Vienna) addressed to the Secretary-General; with Registration information for

the means by which the satellite was placed into orbit brings to fore a Principle, amongst others, set forth in the Hague Code of Conduct⁵⁸, to the effect “that Space Launch Vehicle programmes should not be used to conceal Ballistic Missile programmes”, and which in this instance is subject to restrictions imposed by a number of United Nations Security Council Resolutions. It is submitted that in the interest of maintaining peace and security, alongside the Registration Convention, are existing procedures providing guidance for registration⁵⁹ of space objects with possibilities for the exchange of pre-launch notifications on ballistic missile and space launch vehicle launches and test flights. It is in this regard that additional steps, by the practice of States, ought to be taken towards complying with their obligations in order to establish norms of behavior which would strengthen the provisions of the Registration Convention as well as other voluntary non-legally binding instruments.

In general, the current legal regime would seem to play a significant role in the demilitarisation or prevention of an arms race in outer space, albeit there is a perceived need to consolidate and reinforce that regime in order to enhance its effectiveness. As it is plain to see, international discussions have been unable to reach agreement on a mechanism which would appropriately or at least comprehensively address demilitarisation or arms control in outer space. This may be due on the one hand to the reluctance of some States to enter into legally binding instruments which could restrict the freedom to use outer space for any purpose, including defense. On the other hand, it may also be due to the perception that adequate parameters for a legally binding instrument are yet to be defined. This comes with the underlying concern of how a technical means of verification would function. This paradox of what appears as unfinished work of the 1967 Outer Space Treaty, it is stated, lies “in the juxtaposition of the right of safe passage of space objects for peaceful purposes with the right of self-defense in the Outer Space Treaty and the UN Charter, informed by the technological prowess that now permits conventional weapons to successfully engage objects in outer space”.⁶⁰

On the *use of force* and *self defense* in outer space, it has been argued⁶¹ that neither Article 2 nor Article 51 of the Charter of the United Nations as a whole limit or destroy the fundamental right of a State to defend itself by force against imminent attack or danger threatening its existence. The real question therefore being not legal, but rather one of scientific progress, military strategy, and national policy. Thus if a State determines that the conditions are present justify-

KWANGMYONGSONG 3-2 Furnished in Conformity with the Convention on Registration of Objects Launched into Outer Space.

58 Note 55.

59 Id. And see also UNGA Res. 62/101 *Recommendations on enhancing the practice of States and international intergovernmental organizations in registering space objects.*

60 June 2009 Canadian working paper CD /1865 - *The Merits of Certain Draft Transparency and Confidence-Building Measures and Treaty Proposals for Space Security.*

61 J. C. Cooper, *Self Defense in Outer Space and the United Nations*, in Vlasic, *Explorations in Aerospace Law*, (1968) at pages 419-422.

ing the action, and if effective means are available, action can be taken in self defense on land, at sea, in the air or in outer space. This it is believed stems from the right of self defense inherent in every sovereign State and implicit in every treaty. Likewise the right to take action of a defensive nature has been linked to the doctrine of national sovereignty. This it has also been argued⁶² is based on the fact that the supposed upward delimitation of territorial sovereignty does not imply that activities which threaten peace and security are to be permitted in outer space, nor does it mean that a State would not be free to take legitimate self-defense measures in outer space. In other words, the extent for territorial sovereignty is not a criterion for such matters. A more conservative view⁶³ on the right to right to use of force and self-defense in outer space would assume that there is undoubtedly a right to use force to counteract an attack by a State which sends rockets or military vehicles through space in the course of an attack from terrestrial bases. So also an attack from bases on celestial bodies or space stations, directed against the corpus of a State, may be forcibly repulsed by measures against the source of attack. However, even if the main features of this legal regime (as provided for in Article 51 of the UN Charter, which should be taken with Article 2 paragraph 4) be accepted, certain points require further consideration. These points have been noted⁶⁴ as including firstly the argument that Article 51 of the Charter is not an exclusive definition of self-defense as permitted within the Charter, and the "inherent right" as defined in the pre-Charter, customary law, still exists. And secondly the notion that use of force in self-defense is lawful only in reaction to an actual use of force, thus ruling out anticipatory action and emphasizing objective criteria in the form of the initiation of the use of force. In all, it can be said that, at this time, testing conventional weapons, and, or missiles remains lawful in outer space as it is lawful on the high seas and in the superjacent airspace, added to the long-standing recognition of space technology either in the form of weapons, surveillance, or support systems being possible catalysts for an arms race.

Given that space activities are international in character and essence and as more users enter the space environment, it is increasingly important to promote and strengthen *international cooperation* in the peaceful uses of outer space. The role of international organizations and other entities in the space field continues to be essential in promoting space activities at the national, regional, and interregional levels. Regional cooperative mechanisms have a specific role in providing platforms to enhance coordination and cooperation between spacefaring nations and emerging space nations, and also to establish partnerships between users and providers of space-based services. The General

62 Johnson, *Remarks*, Proceedings of the American Society of International Law (1961) at page 167, cited in C. Q. Christol, *The International Law of Outer Space* (1966) at page, 166; See also, I. Brownlie, note 10 at page 264 '[...] *there may be a customary rule that satellites in orbit cannot be interfered with unless interference is justified in terms of the law concerning individual or collective self-defence*'.

63 See I. Brownlie, note 3, at pages 20 to 23.

64 *Id.*

Assembly, in its resolution 66/71, emphasizes that regional and interregional cooperation in the field of space activities is essential to strengthen the peaceful uses of outer space, as well as assist States in the development of their space capabilities and also contribute to the achievement of the goals of the United Nations Millennium Declaration. In this regard, the Legal Subcommittee at its 51st Session in 2012, agreed to include on its agenda: “*Review of the international mechanisms for cooperation in the peaceful exploration and use of outer space*”, proposed by China, Ecuador, Japan, Peru, Saudi Arabia and the United States of America, as an item under a five-year work plan. The results of this effort, based on the Committee and its Legal Subcommittee’s tradition of decision making by consensus, shall identify legal issues commonly addressed in existing agreements relevant to international space cooperation, based upon submissions by member States, additional research and consultation with member States. It is submitted that the United Nations will no doubt continue to play a vital role as a forum in which all States are represented and in respect of which the Committee and its Legal Subcommittee remain pivotal, given their pioneering and longstanding efforts at furthering international co-operation in the peaceful exploration and use of outer space by consensus. It is therefore critical in this respect to enhance the role of COPUOS established in 1959 (by General Assembly resolution 1472 (XIV)) to review the scope of international cooperation in peaceful uses of outer space, to devise programmes in this field to be undertaken under United Nations auspices, to encourage continued research and the dissemination of information on outer space matters, and to study legal problems arising from the exploration of outer space.

With respect to the *peaceful settlement of disputes* arising from outer space activities, the main sources of procedures for settlement of disputes arising from outer space activities have traditionally been international principles and treaty provisions including the means set forth in the Charter of the United Nations and of international law in general. Such means or procedures available to States for the settlement of disputes are comprised of: Negotiation, Inquiry, Mediation, Conciliation, Arbitration, Judicial settlement, and Resort to regional arrangements or agencies or other peaceful means of the parties’ own choice.⁶⁵ For the purposes of space related activities, specific dispute settle-

65 See: Article 33 (1) *Charter of the United Nations*; Paragraph 5, UN General Assembly, *Declaration of Principles of International Law Concerning Friendly Relations and Co-operation Among States in Accordance with the Charter of the United Nations*, 24 October 1970; Paragraphs 3 and 10, UN General Assembly *Declaration on the Peaceful Settlement of International Disputes* (Manila Declaration) 15 November 1982. *United Nations Publication, Handbook on the Peaceful Settlement of Disputes Between States*, New York (1992) ISBN 92-1-133428.4. For an overview of dispute settlement mechanisms, see: I. Brownlie, *The Wang Tieya Lecture in Public International Law, The Peaceful Settlement of International Disputes*, Chinese Journal of International Law (2009), Vol. 8, No.2, at pages 267 – 283; J.G. Merrills, *International Dispute Settlement*, (2005) Fourth Edition, Cambridge University Press; Institute of International Public Law and International Relations of Thessaloniki, *Pacific*

ment provisions in international space law can be ascertained⁶⁶ in Articles IX⁶⁷ and XIII⁶⁸ of the Outer Space Treaty and specific provisions of the Liability Convention⁶⁹. With respect to principles and modalities governing the peaceful settlement of disputes, the aforementioned framework on international space law provide States with various mechanisms within the framework of the United Nations and in accordance with the Charter, to resolve, by peaceful means, problems which may arise in relation to the objective of, or in the application of, the provisions of the agreements and principles. In response to a perceived need for specialized dispute resolution mechanisms in the rapidly evolving field of outer space activities, it is noteworthy that on December 6, 2011, the Administrative Council of the Permanent Court of Arbitration (the "PCA") adopted the *PCA Optional Rules for the Arbitration of Disputes Relating to Outer Space Activities*, based on text developed by the International Bureau of the PCA, in conjunction with an Advisory Group⁷⁰ of leading experts in air and space law. It is pertinent in this regard, to stress that, an appraisal of the current mechanisms and procedures for settlement of disputes arising from outer space activities reveals the following particular characteristics. *First*, private enterprises do not have direct access to mechanisms for resolution of disputes in the current, and mainly public, international legal framework governing outer space activities. *Second*, decisions arising from mechanisms for the resolution of disputes in the current public international legal framework governing outer space activities are generally non-binding. *Third*, the right of States to exercise sovereign immunity could influence the initiation and conduct of proceedings by a tribunal constituted to arbitrate over disputes pertaining to outer space activities, including the enforcement of any awards. *Fourth*, the confidential and strategic nature of outer space activities could give rise to challenges associated with adducing evidence before a tribunal constituted to arbitrate over disputes arising from outer space activities. *Fifth*, given the relevance of mandatory laws

Settlement of Disputes (Diplomatic, Judicial, Political Etc) Thesaurus Acroasium, Volume XVII (1991).

66 See E. Galloway, *Which Method of Realization in Public International Law Can be Considered Most Desirable and Having the Greatest Chances of Realization*, in *Settlement of Space Law Disputes, Proceedings of An International Colloquium*, (ed.) K. Bocksteigel, Carl Heymanns Verlag, (1979) at pages 162 to 164. See: provisions of the Return and Rescue of Astronauts Agreement. Whilst this Agreement does not specifically detail any dispute settlement provisions, State parties to it and the Outer Space Treaty could depend on the latter to initiate consultations under the Outer Space Treaty's Articles IX and XIII. See also Articles XI, XIV, XV, XVIII, XI of the Moon Agreement.

67 Providing for appropriate consultations in cases involving potentially harmful interference with activities of States Parties.

68 Concerning practical questions resulting from space activities of international inter-governmental organizations.

69 See especially Articles VIII, IX, X, XI, XII, XVI, XIX, and XXII.

70 This author was a member of the Permanent Court of Arbitration - Advisory Group.

designed to protect the public interest, particularly in disputes between private entities and the State, an arbitration tribunal addressing a dispute over outer space activities could be faced with possible limitations on the arbitrators' and contractual parties' freedom to choose applicable laws. *Sixth*, there is an established trade (space sector) practice of liability cross-waivers. *Seventh*, the potential for debate on the scope of what constitutes outer space activities poses significant challenges for ascertaining the jurisdiction of a tribunal established to address a dispute pertaining to outer space activities. *Eighth*, the technical nature of outer space activities justifies the need for appropriate legal and scientific expertise in support of related arbitration proceedings. *Ninth*, because pre-dominant actors (i.e., States) involved in outer space related activities have consistently demonstrated a reluctance to engage in adversarial forms of dispute resolution, rules of procedure designed to govern the activities of an arbitration panel must be attractive so as to encourage their adoption and use by States. Summarily, on the other hand, the aforementioned Optional Rules which are voluntary and applicable only with the consent of Parties are open to States, inter-governmental organisations and non-governmental entities. Along with provisions on Confidentiality, amongst others, the Optional Rules can be modified by Parties, and offer the choice of appointing Arbitrators, in order to secure final and binding decisions leading to internationally recognised and enforceable awards.

V. Concluding Remarks

At present, international space law is comprised of treaties and custom, as well as other sources. But what are the prospects for further development? A bird's eye view of the contemporary landscape encompassing space law highlights a number of features which are capable of influencing future developments. See for instance the new agenda item to be considered from 2014 by the UNCOPUOS Legal Subcommittee, on *general exchange of information on non-legally binding United Nations instruments on outer space*, submitted by Japan and supported by Austria, Canada, France, Nigeria and the United States of America⁷¹ The objective and scope of which will, amongst others, facilitate exchange of views and sharing of information on *specific measures* taken by member States and international organizations in relation to non-legally binding United Nations instruments, such as declarations, principles, resolutions, guidelines and frameworks, that contribute to the exploration and use of outer space for peaceful purposes.

One can envisage the active promotion of adherence to and compliance with UN outer space treaties (including their interpretation and application) and other non-legally binding instruments such as Declarations, Principles, Resolutions, Guidelines and Frameworks. For as long as additional treaty type instruments are not adopted by States, the United Nations outer space treaties and

71 UN Doc. A/AC.105/L.288.

established customary rules will continue to serve as a framework from which subsequent instruments will emerge as part of a process of codification in the progressive development of international space law.

In the next semi-centennial period of space law making it is my conviction that, there would be an increased role of custom, noting that there are multiple sources of international obligation, besides treaties which should take into account customary international law, and that the critical step of implementing national space legislation by States will be driven by considerations beyond the involvement of non-governmental entities in outer space activities. This is envisaged alongside a more robust application of the legal principles stemming from the concept of sustainable development and environmental protection to outer space activities. Noting the obligatory nature of international co-operation as it applies to activities in outer space which will increasingly focus on the application of related benefits to mankind for the purposes of sustained social and economic development.

The aforementioned United Nations outer space treaties, provide the mechanism for States parties to consult one another and to cooperate in solving problems which may arise in relation to the objective of, or in the application of, the provision of the agreements, and that such consultations and cooperation may also be undertaken through appropriate international procedures within the framework of the United Nations and in accordance with the Charter. It is noteworthy that the United Nations General Assembly resolution 65/68 (Transparency and confidence-building measures in outer space activities) requested the establishment of a group of governmental experts to conduct a study, commencing in 2012, on outer space transparency and confidence-building measures.

Whilst stressing the priority of negotiating legally binding instruments on strengthening the international legal regime on outer space, there is no doubt that global and inclusive transparency and confidence building measures, arrived at through broad international consultations, could also be important complementary measures.

It is also noteworthy, that the COPUOS S&TSC LTS WG, will in accordance with its Terms of Reference, examine the long-term sustainability of outer space activities in the wider context of sustainable development on Earth, including the contribution to the achievement of the Millennium Development Goals, taking into account the concerns and interests of all countries, in particular those of developing countries, and consistent with the peaceful uses of outer space. It is expected that this effort will take into consideration current practices, operating procedures, technical standards and policies associated with the long-term sustainability of outer space activities, including, *inter alia*, the safe conduct of space activities throughout all the phases of the mission life cycle. Keeping in mind the fact that the Working Group will take as its legal framework the existing United Nations treaties and principles governing the activities of States in the exploration and use of outer space, in particular Article VI of the Outer Space Treaty.

In the interest of maintaining international peace and security, if indeed the continuing State practice in the field of exploration and use of outer space including military aspects, has led to the emergence of principles and rules of international space law that outer space is open and free for exploration and use by all States; that the sovereignty of States does not extend to outer space; that outer space is not subject to national appropriation; and States retain jurisdiction and control over space objects launched into outer space. To these should be added customary international rules to the effect that the use of outer space can only be for peaceful purposes in the interests of common security; that States have obligations pertaining to the avoidance of environmental interference including the obligation to inform and negotiate, alongside a prohibition on changes to the outer space environment which are manifestly superfluous over and beyond what is militarily necessary.

Finally, whilst dispute settlement scenarios in the space sector reveal a tendency for dispute avoidance alongside reluctance to employ adversarial dispute settlement mechanisms, but given the overall increase in outer space activities and rapid diversification of actors, it is appropriate to consider mechanisms for the inevitable settlement of disputes, noting that the primary option available to parties seeking a legally binding settlement lies between adjudication and arbitration. This can best be served in various ways by the recently adopted Permanent Court of Arbitration, 2011 *Optional Rules for Arbitration of Disputes Relating to Outer Space Activities*, regarding the jurisdictional and logistics framework, the constitution and composition of the tribunal, the applicable law and procedure, and the outcome of a binding award.