second means that the practice stems from a belief of legal obligation. This definition helps to immediately underline the importance, in establishing the legal *status* of the Principles, of the conduct of States, international organizations, and private entities acting under the States' control and supervision according to international space law. In this regard, it can be argued that the practice of States seems to have confirmed the general aspects of the legal regime set forth in 1963 by the Principles.

While the adoption of an instrument not binding *per se* was seen as a first step towards a new legal regime for outer space, the time seemed mature for entering into multilateral treaties for clarifying and to progressively develop the rules to be applied to space activities. The LSC become the most appropriate forum for reaching consensus on the major issues involved and transforming such consensus on mandatory norms of international law.

These were the origins 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, generally called the Outer Space Treaty.[19] The LSC represented evidence of the commitment of States to the principle that international cooperation and the rule of law should always govern the exploration and peaceful uses of outer space.

The Outer Space Treaty became one of the outstanding lawmaking treaties of contemporary international law as a whole. It significantly contributed to the progressive development and codification in the meaning of Article 13 of the UN Charter.[20] By

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[19] Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies, Jan. 27, 1967, 18 U.S.T. 2410, 610 U.N.T.S. 205 (entered into force on Oct. 10, 1967) [hereinafter Outer Space Treaty].

[20] U.N. CHARTER, *supra* note 5, at art. 13.

> 1. The General Assembly shall initiate studies and make recommendations for the purpose of:
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> a. promoting international co-operation in the political field and encouraging the progressive development of international law and its codification;
>
> b. promoting international co-operation in the economic, social, cultural, educational, and health fields, and assisting in the realization of human

the Outer Space Treaty, an attempt was made at finding a balanced compromise between the common interests of all nations, the aims of humankind as a whole, and the interests of individual States as members of the world community and traditional subjects of international law. It was agreed that "[t]he exploration and use of outer space, including the Moon and other celestial bodies, shall be carried out for the benefit and in the interests of all countries, irrespective of their degree of economic or scientific development, and shall be the province of all mankind."[21]

The Outer Space Treaty establishes significant principles such as freedom in the exploration and use of outer space; freedom of scientific investigation in outer space; and, international cooperation in scientific investigation. The principle of non-appropriation,[22] relates to outer space as a whole, no exception having been admitted, and therefore no part of outer space, including the Moon or any other celestial body, can be exempted from the impact of this principle. It is indeed clear that space belongs to the category of *res communes omnium*, free for exploration and use by all States without discrimination of any kind, on a basis of equality and in accordance with international law.

The Outer Space Treaty also codified the principle of the denuclearisation of outer space, requiring States Parties "not to place in orbit around the earth any objects carrying nuclear weapons or any other kind of weapons of mass destruction, install such weapons on celestial bodies..." It also codified the principle of using the Moon and other celestial bodies exclusively for peaceful purposes.[23]

A special significance must be attached to the principle that State Parties "shall bare international responsibility for na-

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rights and fundamental freedoms for all without distinction as to race, sex, language, or religion.

2. The further responsibilities, functions and powers of the General Assembly with respect to matters mentioned in paragraph 1 (b) above are set forth in Chapters IX and X.

Id.

[21] Outer Space Treaty, *supra* note 19, at art. I.

[22] *Id.* at art. II.

[23] *Id.* at art. IV.

tional activities in outer space...whether such activities are carried on by governmental agencies or by non-governmental entities", and for "assuring that national activities are carried out in conformity with the provisions" of the Treaty.[24] This principle goes farther than the rules of general international law relating to State responsibility in the traditional sense. It is inappropriate, indeed, to interpret this notion by exclusive reference to the concept of responsibility of States for internationally wrongful acts, as it is addressed in the process of codification by the International Law Commission (ILC) of the United Nations. The ILC adopted, on second reading in 2001, the Draft Articles on the Responsibility of States. The Commission seeks to formulate, by way of codification and progressive development, the basic rules of international law concerning the responsibility of States for their wrongful acts.[25] Here, the emphasis is on the secondary rules of State responsibility, namely, the general conditions under international law for which States are responsible for wrongful actions or omissions and the legal consequences that flow from them.

Such interpretation appears too narrow, because the scope of Article VI would be only to include private activities that are carried out for governmental agencies and this would not be new. This inclusion also occurs under certain conditions at general international law. In fact, according to the customary rules on international responsibility for wrongful acts, States do not respond for private conduct, except for having neglected to take all reasonable measures to prevent private offensive acts from being committed or for having instructed or controlled private actions. Concerning the conduct directed or controlled by a State the ILC Draft establishes that "The conduct of a person or group of persons shall be considered an act of a State under international law if the person or group of persons is in fact acting

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[24] *Id.* at art. VI.

[25] International Law Commission, *Report on the Work of its Fifty-Third Session*, G.A. A56/10, at 29-365 (23 April - 1 June and 2 July - 10 August 2001).

on the instructions of, or under the control of, that State in carrying out the conduct."[26]

International responsibility, or better accountability according to Article VI, encompasses all the legal consequences of national activities in outer space, as provided for by international space law. It covers not only the obligation of reparation in case of violations of international obligations by public or private entities, but also the obligation to compensate for damage according to the special regime set forth in the Outer Space Treaty.[27] This is detailed in the Convention on International Liability for Damage Caused by Space Objects,[28] which depicts a victim-oriented discipline of absolute responsibility/strict liability for damages caused by space objects on the surface of the Earth or to aircraft in flight.[29] This responsibility – continues Article VI – pertains to assuring that national activities are carried out in conformity with the provisions set forth in the Outer Space Treaty. There is indeed a further consequence arising from the accountability provided for by Article VI, namely the recourse by a State to take legislative action at the national level in order to answer for private space activities and their legal consequences for which the State is internationally responsible. The general legal framework set up by the Outer Space Treaty has been complemented by four other treaties, all negotiated within the LSC, and following a method of a progressive elaboration of appropriate space law instruments.[30] In addition to the Regis-

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[26] Responsibility of States for Internationally Wrongful Acts, *id.* at art 8, p. 45 (draft text adopted by the International Law Commission at its fifty-third session. *See also* Luigi Condorelli, *La réparation des dommages catastrophiques causés par les activités spatiales*, LA REPARATION DES DOMMAGES CATASTROPHIQUES 270 (Bruxelles, 1990).

[27] Outer Space Treaty, *supra* note 19, at art. VII.

[28] Convention on the International Liability for Damage Caused by Space Objects, opened for signature Mar. 29, 19172, 24 U.S.T. 2389, 961 U.N.T.S 187 [hereinafter Liability Convention].

[29] *See* Armel Kerrest, *The Liability Convention and Liability for Space Activities*, *in* WORKSHOP ON CAPACITY BUILDING IN SPACE LAW, PROCEEDINGS ON CAPACITY BUILDING IN SPACE LAW, ST/SPACE/14, 27-32 (2003). *See also* MARCO PEDRAZZI, DANNI CAUSATI DA ATTIVITÀ SPAZIALI E RESPONSABILITÀ INTERNAZIONALE 259-267 (Milan, 1996).

[30] *See* Vladimir Kopal, *Introduction to the United Nations Treaties and Principles on Outer Space*, *in* WORKSHOP ON CAPACITY BUILDING IN SPACE LAW, PROCEEDINGS ON CAPACITY BUILDING IN SPACE LAW, ST/SPACE/14, 11-25 (2003).

tration Convention[31] and the Liability Convention[32] mentioned above, they also include the Agreement on the Rescue of Astronauts, the Return of Astronauts and the Return of Objects Launched into Outer Space;[33] and, the Agreement Governing the Activities of States on the Moon and Other Celestial Bodies.[34] Under the legal framework of these treaties, space exploration by nations, international organizations and private entities has flourished. As a result, space technology and services might better contribute to economic growth and improvements in the quality of life around the world.

However, it must be said that the world remains far from general acceptance of the United Nations space law instruments. Many non space faring States have not yet accepted the key treaties, including some members of COPUOS. This is the reason why one of the main functions of the LSC is broadening the universal acceptance of the core space law treaties, inviting States to consider the reasons why their ratification and implementation should be considered highly beneficial. At the same time, the LSC should also encourage States that have accepted these conventions to look at the sufficiency of their national laws to implement them.

The Moon Treaty is a case apart. It has been accepted but by 10 States, failing to collect wider support. Notwithstanding that, like the other United Nations space treaties, it was adopted in the UN General Assembly by consensus. There are many reasons for the hesitation shown by a great number States to adhere to the Moon Treaty, but the most evident is perhaps the contradiction between the legal qualification of outer space, including the Moon and other celestial bodies, as *res communis omnium* under the Outer Space Treaty and the

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[31] Registration Convention, *supra* note 14.

[32] Liability Convention, *supra* note 28.

[33] Agreement on the Rescue of Astronauts, the Return of Astronauts and the Return of Objects Launched into Outer Space, Apr. 22, 1968, U.N. GAOR, 22nd Sess., Supp. No. 16, at 5, U.N. Doc. A/6716 (1968), 19 U.S.T. 7570, 1968 U.S.T. LEXIS 584 [hereinafter Rescue Agreement].

[34] Agreement Governing the Activities of States on the Moon and Other Celestial Bodies, Dec. 18, 1979, U.N. GAOR, 34th Sess., Supp. No. 46, at 77, U.N. Doc. A/34/46 (1980), 18 I.L.M. 1434 [hereinafter Moon Treaty].

legal regime of the Moon and its resources provided for by the Moon Treaty. The latter utilizes the concept of common heritage of humankind, which in principle excludes any other type of exploitation but collective through an international authority.[35] The notion of the common heritage of humankind has been adopted in the United Nations Convention on the Law of the Sea[36] for qualifying the sea bed and ocean floor and subsoil thereof beyond national jurisdiction and for setting up the International Sea Bed Authority, the body through which States Parties organise and control the activities concerned with seabed minerals.[37] The Moon Agreement requires also the exploitation of the natural resources of the Moon to be governed by a future "international legal regime,"[38] and its full establishment has been postponed until "such exploitation is about to become feasible."[39]

In this sense, it is a matter of fact that at the end of the 1970s the LSC concluded its law-making era with one of the most controversial legal regime of all international space law.

III. THE SECOND PHASE: THE SOFT LAW PRINCIPLES

Though the elaboration of further United Nations space treaties was discontinued after 1979, the work of the LSC in the progressive development of the juridical regime of outer space was not interrupted. The five main United Nations treaties exhausted the basic issues on which States would consent to undertake international legal obligations. During the following period, sets of United Nations Principles adopted by the General Assembly became a suitable form for regulating some special categories of space activities for which the international community was not yet prepared to negotiate legally binding instruments.[40]

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[35] See KEMAL BASLAR, THE CONCEPT OF THE COMMON HERITAGE OF MANKIND IN INTERNATIONAL LAW (The Hague-Boston, London, 1998).

[36] United Nations Convention on the Law of the Sea, Dec. 10, 1982, 1833 U.N.T.S. 3 (entered into force Nov. 16, 1994).

[37] R.R. CHURCHILL & A.V. LOWE, THE LAW OF THE SEA, 236-253 (Manchester, 2002).

[38] Moon Treaty, *supra* note 34, at art. 11(5).

[39] *Id.*

[40] STEPHEN GOROVE, DEVELOPMENTS IN SPACE LAW. ISSUES AND POLICIES 293-302 (Dordrecht, Boston, London, 1991).

A new phase began, which witnessed the adoption of declarations of principles as the viable solution to regulate more specific issues, such as the use of artificial satellites for international direct television broadcasting, remote sensing, and the use of nuclear power sources in outer space.[41] In this sense, the intention of the drafters of the Principles was exactly to adopt mere declarations not binding *per se*.[42]

During this period, four sets of Principles were negotiated by the LSC and then approved, through the main Committee, by the General Assembly of the United Nations. They are the Principles Governing the Use by States of Artificial Earth Satellites for International Direct Television Broadcasting;[43] the Principles Relating to Remote Sensing of the Earth from Outer Space;[44] the Principles Relevant to the Use of Nuclear Power Sources in Outer Space[45] and 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.[46]

As regards the legal *status* of these Principles, although being merely recommendations, they can pave the way for the consolidation of customary rules of international law. In this perspective, the decisive element comes from the practice of States prior to, concomitant with, and following the United Na-

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[41] *See* United Nations, Office for Outer Space Affairs, *United Nations Treaties and Principles on Outer Space: Text and Status of Treaties and Principles Governing the Activities of States in the Exploration and Use of Outer Space*, A/AC.105/572/rev. 3 (2000).

[42] See Vladimir Kopal, *The Role of the United Nations Declarations of Principles in the Progressive Development of Space Law*, 16 J. SPACE L. 5-20 (1988).

[43] Principles Governing the Use by States of Artificial Earth Satellites for International Direct Television Broadcasting, Dec. 10, 1982, UN Doc. A/Res/37/92. G.A. Res. 37/92, U.N. GAOR, 37th Sess., Supp. No. 51, at 98, U.N. Doc. A/37/51 [hereinafter DBS Principles].

[44] Principles Relating to Remote Sensing of the Earth from Outer Space, Dec. 3, 1986, U.N. GAOR, 41st Sess., Supp. No. 53, at 115, U.N. Doc. A/41/53 (1986) [hereinafter Remote Sensing Principles].

[45] Principles Relevant to the Use of Nuclear Power Sources in Outer Space, Dec. 14, 1992, U.N. Doc. A/Res/47/68 [hereinafter NPS Principles].

[46] 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, Dec. 13, 1996, U.N. Doc. A/Res/51/122 [hereinafter Benefit Principles].

tions recommendation process. Therefore, some of them seem more firmly established in law, like the freedom of Earth's observation from space, while others seem to be less consolidated, and still in the process of gaining complete legal relevance.

If we look for instance at Remote Sensing Principles, they seem to be a successful achievement in which a fair compromise was found between the interests of the sensing States and the needs of the sensed States, including most of the developing countries.[47]

At the time of their adoption, the Remote Sensing Principles did not prohibit activities that had been going on for a long time. On the contrary, they accepted the fact that sensing States were committed to the view that their activity required no consent, including no preliminary consent from sensed States. Therefore, the Remote Sensing Principles merely codified well-established conduct of States prior to 1986 and the General Assembly Resolution created no new law, but simply gave greater legitimacy to the already existing practices.

Additionally, practice seems to have confirmed the general and main aspects of the legal regime set forth in 1986. United States legislation has incorporated the principle of non-discriminatory access in both the Land Remote Sensing Commercialization Act of 1984 and the Land Remote Sensing Policy Act of 1992.[48] Other countries have followed this general tendency. The official policies of the European Space Agency (ESA) concerning ERS/ENVISAT distribution of data, respectively of 1994 and 1998, are unequivocal. The provision of data to users is regulated as follows: "ERS/ENVISAT primary data shall be available in an open and non-discriminatory way, in line with the UN Principles on remote sensing."[49]

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[47] Sergio Marchisio, *The 1986 United Nations Principles on Remote Sensing: A Critical Assessment*, *in* II SCRITTI IN ONORE DI GAETANO ARANGIO-RUIZ 1311-1340 (Naples, 2004).

[48] *See* Joanne Irene Gabrynowicz., *Defining Data Availability for Commercial Remote Sensing Systems under United States Federal Law*, 23 ANNALS OF AIR AND SPACE LAW 95 – 96 (1998).

[49] Marco Ferrazzani, *The European Distribution System (ERS)*, *in* DROIT, TELEDETECTION ET ENVIRONNEMENT 115 (Strasbourg, Actes Du Colloque International: Le Droit Face Aux Tecniques De Teledetection Par Satellite Au Service Du Developement, June 2-4, 1993).

Similar clauses have been included in multilateral agreements concluded by national space agencies, *inter se*, the Co-operation Agreement concerning the Vegetation program on SPOT 4, signed by the French *Centre National d'Etudes Spatiales* (CNES), the European Commission, the Italian Space Agency (ASI), the Belgian Federal Office for Scientific, Technical and Cultural Affairs (OSTC) and the Swedish National Space Board (SNSB) on 25 May 1994, and the following agreement of 1997-98 concerning the exploitation phase of the same program. The preambles to both agreements contain explicit recognition of the "Principles governing the exploration and use of outer space defined by the United Nations treaties and the principles adopted by the General Assembly relating to the remote sensing of the Earth from space."[50]

On the one hand, a cursory look at the practice of States and international organizations shows a situation in which the core tenets of the Remote Sensing Principles have maintained their importance, even in an emerging commercialized remote sensing system of services.[51] Indeed, they appear relevant to the expansion of those very services, and have been consistently reaffirmed. The basic international regime of remote sensing is recognized and must be preserved, promoting the broadest possible use of data.

On the other hand, it is true that some of the most prominent issues connected to recent and ongoing developments in the field of remote sensing, mainly societal demands and technological developments, are not fully regulated by the UN code on remote sensing.[52] The Remote Sensing Principles do not provide clear and specific regulations for new issues, such as the focus on global systems, access to data by sensed States and the

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[50] The Co-operation Agreement Concerning the Vegetation program on SPOT 4, signed May 25, 1994, and the subsequent agreement of 1997-98, were provided by the Italian Space Agency to the author and are on file with the author.

[51] PROCEEDINGS OF THE FIRST INTERNATIONAL CONFERENCE ON THE STATE OF REMOTE SENSING, (Joanne Irene Gabrynowicz ed., University of Mississippi School of Law, 2002).

[52] Joanne Irene Gabrynowicz, *Expanding Global Remote Sensing Services: Three Fundamental Considerations. Discussion Paper*, in PROCEEDINGS OF THE WORKSHOP ON SPACE LAW IN THE TWENTY-FIRST CENTURY 99 (International Institute of Space Law & United Nations Office for Outer Space Affairs, New York, 2000).

legal protection of data, which is increasingly necessary to promote the costly investments required by remote sensing activities and the expansion of the related market. Nor do they provide an adequate discipline as regards the production, use and treatment of highly sophisticated and detailed imagery, especially in relation to their potential implications for national security and individual privacy.[53]

As it has been pointed out, the UN Principles took the form of a General Assembly resolution and not, as was hoped by some States, a treaty, with the result that the principles, instead of being intended to constitute conventional rules legally binding as such upon those that accepted them, are merely guidelines. However, the compromise enshrined in the principles was intended by the drafters to serve as a first step in a law-making process that would eventually conclude in a formal treaty. In this regard, the practice of States seems to have confirmed the general and main aspects of the legal regime set forth in 1986 by the Principles and that some of them seem more firmly established in international customary law, while others seem to be less consolidated.[54]

Apart from that, there are two main reasons why the transposition of the Remote Sensing Principles into a binding treaty has never been concretely discussed, despite repeated proposals to the LSC for such discussion. First, the LSC is not in a law-making phase: that era of its activity ended at the beginning of the 1980s, and there currently is no political will to enter into new agreements. Rather, the current goal is to broaden the acceptance of the treaties in force or to better define issues relating to them. Secondly, although the Remote Sensing Principles were adopted by *consensus*, the agreement reached stemmed from several compromises, and not from a uniformity of views. Therefore, there are risks in starting discussions about incorporating the Remote Sensing Principles into a new treaty.

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[53] *See* JOHN C. BAKER ET AL., COMMERCIAL OBSERVATION SATELLITES. AT THE LEADING EDGE OF GLOBAL TRANSPARENCY (Rand Corporation, Arlington, 2001).

[54] *See* Sergio Marchisio, *Remote Sensing for Sustainable Development in International Law*, *in* AN OUTLOOK ON OUTER SPACE LAW IN THE COMING 30 YEARS 335-350 (Gabriel Lafferranderie, Dordrecht, Boston, London, 1997).

There is of course another option and this is to re-open a debate on a more limited issue, namely the desirability of reviewing the Remote Sensing Principles. This option has the merit of not questioning the soft-law character of the Principles. Probably, a third option could be presented, concerning the analysis of the current practices of both sensing and sensed States in a more limited perspective, with a view to assess how the key statements contained in the Remote Sensing Principles have been implemented and identifying the obstacles that hamper their full application. These options are currently before the LSC for future potential action in this field.

The NPS Principles was but a limited achievement in space legislation. Some innovative elements were brought into the regulation of these activities, such as the storing NPS objects in sufficiently high orbits after the operational part of their missions ends and providing for a safety assessment and notification of re-entry. The NPS Principles, however, must apply, only to "nuclear power sources devoted to the generation of electric power on board space objects for non-propulsive purposes, which have characteristics generally comparable to those of systems used and missions performed at the time of the adoption of the Principles".[55]

Therefore, the NPS Principles are not applicable to the NPS serving other purposes, including nuclear propulsion for long-distance flights into interplanetary space and to the celestial bodies of our solar system. The expected reopening of the NPS Principles, which was promised to be effected no later than two years after their adoption,[56] has been delayed several times.

The final document of this series, the Benefit Principles, mostly reflects the existing practice of international space cooperation and does not include new regulatory principles.

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[55] NPS Principles, *supra* note 45, at Preamble,

[56] *Id.* at Principle 11.

IV. THE THIRD PHASE AND FURTHER POSSIBLE DEVELOPMENTS WITHIN COPUOS

It is commonly understood that the current phase of the UNCOPUOS LSC is mainly devoted to the assessment of the existing legal regimes and undoubtedly oriented towards the formulation of non-binding documents that are based upon the rights and obligations as provided by the treaties already in force. Such trend is of a broader character in the United Nations system. After the Third United Nations Conference on the Exploration and Peaceful Uses of Outer Space (UNISPACE III),[57] some objectives for further development of legal matters to be initiated through the LSC were agreed upon. A more flexible agenda-structure in the LSC Subcommittee, as well as in the STS, was adopted. At the same time, however, it was reaffirmed that the structure did not allow the LSC to elaborate any proposals for the revision of existing legal norms or to provide authoritative interpretations to the space treaties. On the contrary, the new input for the LSC was limited to carry out the analysis of problems and shortcomings with respect to the application of existing rules of space law.

In this perspective, the LSC has moved toward the assessment of several regular items of relevance, beginning with the *status* and application of the five United Nations treaties on outer space. The review of the implementation of the treaties has confirmed that several obstacles hamper their universal acceptance especially by non-space-faring States and has certainly contributed to the further increase of ratifications.

Among regular items, for years the LSC has had in its agenda the issue of the definition and delimitation of "outer space". But attempts to adopt a legally binding delimitation between airspace and outer space, or at least to agree on a recommended interpretation of these notions, have failed. The attempts at bringing new light to consideration of these issues by studying the legal aspects of aerospace objects and sub-orbital

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[57] For information on the Third United Nations Conference on the Exploration and Peaceful Uses of Outer Space (UNISPACE III) (Vienna, July 19-30, 1999), *see* http://www.oosa.unvienna.org/unisp-3/index.html (last visited June 13, 2005).

flights, which was undertaken in COPUOS' LSC in recent years, have not led thus far to any generally accepted conclusions.

Under the scope of the same item, definition and delimitation of outer space, the LSC has also been occupied for years by discussions on the legal status of the Geostationary Satellite Orbit (GSO). In this vein, I would like to mention the importance of the agreement reached in 2000 within the LSC on some aspects concerning the use of the geostationary orbit and making reference to the ITU rules.[58] In my opinion, this agreement evidenced the tacit abandonment by the equatorial States of their previous claims of sovereignty over the GSO.

Another important initiative concerned the draft UNIDROIT[59] Protocol on Space Assets to the 2001 Cape Town Convention on International Interests in Mobile Equipment,[60] introduced within the LSC at the request of Italy. In fact, from the beginning space law has been mostly involved with international and national law of a public nature (treaties, customary international law, national legislation). But the commercialisation of space activities has progressively led to a new dimension characterised by the emergence of private law regimes applicable to the relations among State actors and private entities or private entities *inter se*. The involvement of private law regulations (civil law, contracts) has also had consequences from the perspective of private international law, for the determination of the applicable law to a certain space activity, or to an element of it, and to the corresponding legal relations between the parties. At the same time, international practice shows a tendency toward the harmonisation or unification of civil law regimes

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[58] Some Aspects Concerning the Use of the Geostationary Orbit. April 2000, paper adopted by the COPUOS Legal Subcommittee, U.N. Doc. A/AC.105/738, at Annex III.

[59] UNIDROIT is the acronym for International Institute for the Unification of Private Law, an intergovernmental organization based in Rome which aims at the unification of private law among member States. On the 2001 Cape Town Convention, *see* ROY GOODE, OFFICIAL COMMENTARY ON THE CONVENTION ON INTERNATIONAL INTERESTS IN MOBILE EQUIPMENT AND PROTOCOL THERETO ON MATTERS SPECIFIC TO AIRCRAFT EQUIPMENT (International Institute for the Unification of Private Law, Rome, 2002).

[60] Convention on International Interests in Mobile Equipment, Nov. 16, 2001, *available at* http://www.unidroit.org/english/conventions/mobile-equipment/mobile-equipment.pdf (last visited July 18, 2005).

among States in order to facilitate private relations in space activities.

The Protocol is in fact concerned with private law issues. It will also be, as the Convention is, an instrument of public international law. However, it is more a tool for establishing a set of *uniform* rules for the protection of private investments in space activities of a transnational character (that is, rules of identical content within the internal legal systems of the States Parties), rather than as an instrument of private international law. It aims to redress the situation under which the legal regimes of many countries do not at provide enforceable and protective systems for the creation, perfection, prioritization and enforcement of security interests, mortgages and hypothecs over space equipment, such as satellites, and their component parts, such as transponders. In order to facilitate the financing of space assets that were manufactured, transported and ultimately located outside the jurisdiction of a country, there is a need for clear rules governing the granting of security where the collateral is located and where the borrower has its place of business. The Protocol intends to fill the gap originated by the lack of such clear rules that makes satellite financing more difficult and more expensive for satellite operators to secure.[61]

In order to achieve its aims, the Protocol provides (together with the Cape Town Convention, which will apply only if not derogated by the *lex specialis* contained in the Protocol) uniform rules to cover the period right through from the start of manufacturing to launch and thereafter. The underlying principles of this international instrument are indeed the agreements covered by the Protocol, the requirements for creating an international interests, the connection factors (private international law), the priorities of registered interests and the basic remedies provided for (possession or control, sell or lease of the object, income or profits from use of it) and the procedures established by the applicable law for the institution of proceedings before the courts to exercise remedies.

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[61] Sergio Marchisio, *Le protocole spatial d'Unidroit*, 12 GEO-OBSERVATEUR 30-34 (Sept. 2002).

The LSC has been involved with the Protocol dealing with two main issues: the relation between the Protocol and space law, and the possibility for the United Nations to act as the Supervisory Authority of the Registration system. The consideration of the first set of problems by the LSC focussed on the consistency of this regime of private law with the basic tenets of international space law. In this perspective, it opened for discussion on the most critical issues, such as the definition of space assets, liability, jurisdiction, limitations on transfers of controlled space assets and public law regulations regarding operating space objects, namely the public services regimes. At the same time, the LSC has considered the registrar and the supervisory authority from an institutional point of view, taking into account the process of negotiation currently going on for the identification of the most appropriate supervisory authority and the most viable system of registration for international interests in space assets. For the time being, however, no *consensus* could be reached among LSC member States on the appropriateness of the United Nations, through the Office for Outer Space Affairs, to act as the supervisory authority for the Protocol.

Another issue on the agenda of the LSC that has been considered in recent years was the "Application of the concept of the 'launching State'". The purpose of this work was to clarify all aspects of the "launching State" concept as contained in the Liability and the Registration Conventions, and as applied by States and international organizations, in the light of new and expected practices in space activities.

In 2004, during the first year of my chairmanship, a draft resolution on the application of the concept of the "launching State" was adopted by the LSC and finally approved.[62] The resolution reminds that it did not constitute an authoritative interpretation of, or proposed amendments to, the Liability and Registration Conventions. It mainly recommends that States consider enacting national legislation on authorization and supervision of space activities by private entities and the conclusion of agreements with respect to joint-launches.

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[62] Application of the Concept of the "Launching State", G.A. Res. 59/155 (Dec. 10, 2004).

From 2004, under a new three-year-work plan, the LSC is now considering the practice of States and international organizations in registering space objects, a sensitive issue, and characterized by a practice that shows the existence of certain *lacunae iuris* in the Registration Convention, mainly due to the commercial uses of outer space as well as to the privatisation of space activities.[63] The assessment of current practice by States reveals strong disparities regarding information concerning the territory of launch, the basic orbital parameters and the general function of a spacecraft. Moreover, practice shows that there are still several unregistered space objects or registered by more than one State. The debate is now open on how to fill these gaps and to obtain a more uniform application of the Registration Convention, the main aim of which, it must be recalled, is to help the identification of space objects and of the launching State.

Apart from that, the LSC is now looking for its *raison d'etre* in the new Millennium. This tendency is evidenced by the difficulty among member States to reach agreement on new issues to be considered: protection of the space environment; space debris; space tourism; a comprehensive convention on space law; commercialization of space activities; property rights for extracted resources of the Moon and other celestial bodies; the so-called militarization of space; intellectual property rights in space; the development of an international convention based on the Remote Sensing Principles; updating those Principles and to develop rules for the situations resulting from technological innovations and commercial application. In this perspective, I think we must consider that re-opening a new law-making phase of the LSC seems hardly feasible.

There are two main reasons, in my opinion, why the elaboration of new binding treaties has never been accepted, despite repeated proposals for such discussions. First, the existing treaties stemmed from several compromises, and not from a uniformity of views. Therefore, there are risks in starting discus-

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[63] Stephan Hobe et.al., *Current Issues in the Registration of Space Objects, in* PROJECT 2001 PLUS GLOBAL AND EUROPEAN CHALLENGES FOR AIR AND SPACE LAW AT THE EDGE OF THE 21ST CENTURY, PROCEEDINGS OF THE WORKSHOP 20-21 (Jan. 2005).

sions about new treaties, as this may re-open the debate on the already agreed upon issues. Only exceptional events could lead the LSC to reconsider its role as law-maker in the current phase of its evolution.

Secondly, the soft-law seems better able to accommodate the ongoing evolution in the field of technology. As the experience of specialised institutions shows, a real drive in this sense can come by technical norms. Specialised agencies have truly contributed, and continue to do so, to the evolution of law, by means of regulatory standards and recommended practices. Some of them have binding effectiveness, others have to be implemented by States through domestic acts. Probably the LSC should consider its possible role in the elaboration of technical norms on space matters.[64] The idea of drafting by both COPUOS sub-committees on an ordinary functional basis of international recommendations and standards is certainly fascinating, but would require profound changes from the institutional point of view.

In conclusion, the activity of the LSC has been of fundamental importance for space law. It has been the cradle where the basic principles and concepts of space law have been created and enshrined in the general founding treaties. The role of the LSC is certainly not over. It continues to form the most suitable environment to promote the assessment of existing space law and, potentially, the development of new norms by virtue of its universality and overall competence.

In its work the LSC should always reflect the goals and priorities pursued by the entire United Nations system. It should highlight the legal implications of those space activities that support sustainable development for all.

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[64] See Nasindiri Jasentulyana, *Strengthening International Space Law: the Role of the United Nations, in International Organisatons and Space Law: Their Role and Contributions*, 3 PROC. ECSL COLLOQUIUM 87-95 (Noordwijk, 1999).

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Jamie Rutland[**]

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