

SPACE LAW IN THE 21ST CENTURY: THE OUTER SPACE TREATIES REVISITED

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ABSTRACT

The 21st century will present new and unique challenges. The fundamental charter of space law, the Outer Space Treaty, entered into force more than 35 years ago, and was drafted under vastly different geopolitical and economic circumstances than exist today. Thus, it must be determined whether the Outer Space Treaty, as well as the additional international agreements derived therefrom, drafted in the last century, are adequate for the needs and requirements of the current era. Several organizations recently have sought to examine this issue, the results of which are compared and discussed in this article.

INTRODUCTION

The evolving commercial uses of space present both opportunities and

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challenges for the international legal community. The law of outer space was developed during the cold war, when the superpowers were the primary actors in outer space, and national security and international prestige often were included among the reasons for the conduct of scientific missions. It must be determined whether the existing space law régime is sufficient to effectively regulate present and foreseeable commercial uses of space, or whether modifications to the law are necessary to promote the orderly use of outer space by private enterprise.

The space treaties and other international instruments recently have been the subject of review by different organizations in the context of the emerging role of the private sector in space. Specifically, the International Law Association, the American Astronautical Society, and the Project 2001 - *Legal Framework for the Commercial Use of Outer Space*, have conducted studies of these questions and issued reports and recommendations.¹ This paper compares

1. It is important to note that the conclusions of studies such as those under consideration herein often are developed by subcommittees or subgroups, utilizing a process which seeks consensus. However, given this division or fractionalization,

certain of the primary findings and conclusions of these studies.

Project 2001

Project 2001 was a joint research initiative by the Institute of Air and Space Law of the University of Cologne, and the German Aerospace Center (DLR). The purpose of the study was to examine the current status of space law, and to identify regulatory needs *vis-a-vis* the private sector. The Project was conducted through six working groups which focused on two questions: "firstly, the general impact of increased private activity with regard to the framework of existing international space law and, secondly, the actual process of privatization as well as development of trends and model structures used in privatization and commercialisation policies by governments."²

participants in one subgroup may or may not be acquainted fully with the deliberations and conclusions of another subgroup, even if the conclusions of all subgroups are included within a report or conference proceedings. Thus, notwithstanding a broad expression of consensus, specific findings and recommendations expressed by the studies may not necessarily reflect the opinions of all of the participants.

2. Reif, 'Project 2001': *Conclusions and Recommendations of the "Working Group on Privatization" With Regard to Issues of International Space Law*, in PROCEEDINGS OF THE 44TH COLLOQUIUM ON THE LAW OF OUTER SPACE 3 - 4 (2002). The six working groups were divided into the following areas: Launch and Associated Services, Remote Sensing, Telecommunication, Space Stations, Privatisation, and National Space Legislation. *Id.* at 3.

American Astronautical Society

In December, 2001, the American Astronautical Society (AAS) conducted a workshop entitled *International Legal Regimes Governing Space Activities*. The aim of the workshop was to examine the manner in which domestic laws of states reflect the international obligations set forth in the major space treaties. This workshop encompassed four working groups examining: "The Treaties," "Balancing Competing Interests," "Space Law Gaps and Barriers," and "The Role of the Private Sector." Due to the nature of the subject, commercial uses took center stage in the discussions.³

International Law Association

In 2002, the International Law Association (ILA) adopted a resolution which, *inter alia*, endorsed the Final Report of its Space Law Committee,⁴ which, over a period of two years, had "elaborate[d] concrete proposals regarding possible amendments of, as well as possible supplements to, the UN space law instruments in view of commercial space activities." The work of the Space Law Committee was facilitated by four Special Rapporteurs, each examining a different treaty.⁵ The Committee adopted the view that it was preferable to supplement the existing treaties with "principles and guidelines, codes of conduct or UNGA Resolutions" rather than to seek amendments to international

3. AMERICAN ASTRONAUTICAL SOCIETY, FINAL REPORT WORKSHOP ON INTERNATIONAL LEGAL REGIMES GOVERNING SPACE ACTIVITIES (2001).

4. INTERNATIONAL LAW ASSOCIATION, REPORT OF THE 70TH CONFERENCE 13-16, 864 (2002).

5. The Special Rapporteurs were Stephan Hobe, Maureen Williams, Vladimir Kopal, and Frans von der Dunk.

agreements already in force.⁶ Nevertheless, specific amendments to the Moon Agreement⁷ were considered.

COMMERCIALIZATION AND THE OUTER SPACE TREATY

The absence of clear definitions of terms utilized in the space treaties long has been the subject of debate, and not surprisingly became a focus of the discussions in the context of commercialization. Specifically, issues arise concerning which state is the "appropriate state" for purposes of the authorization and continuing supervision obligations set forth in article VI of the Outer Space Treaty.⁸ In addition, there is the lack of clarity as to what may constitute the "launching state" pursuant to article VII of the Outer Space Treaty,⁹ and article I(c) of the Liability Convention.⁹

6. ILA Report, *supra* note 4, at 193-94.

7. Agreement Governing the Activities of States on the Moon and Other Celestial Bodies, *entered into force* July 11, 1984, 1363 U.N.T.S. 3, *text reproduced in UNITED NATIONS TREATIES AND PRINCIPLES ON OUTER SPACE* 27 (2000), and 18 I.L.M. 1434 (1979) [hereinafter referred to as the "Moon Agreement"].

8. Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies, *opened for signature* January 27, 1967, 18 U.S.T. 2410, T.I.A.S. No. 6347, 610 U.N.T.S. 205, *text reproduced in UNITED NATIONS TREATIES AND PRINCIPLES ON OUTER SPACE* 3 (2000) [hereinafter referred to as the "Outer Space Treaty"].

9. Convention on International Liability for Damage Caused by Space Objects, *opened for signature* March 29, 1972, 24 U.S.T. 2389, T.I.A.S. No. 7762, 961

With regard to the definition of the "launching state", the AAS noted that despite substantial uncertainty and differing interpretations of that term, among others, liability can be determined "through bilateral and multilateral agreements."¹⁰ Project 2001 observed that the "launching state issue" was central, but that efforts toward clarification were unsuccessful. The ILA concluded that amendments to the definitions provided by the Liability Convention were not advisable at this time, but suggested that states consider making the dispute resolution procedures binding, and that it may be appropriate to consider a separate agreement concerning damages caused by space debris.¹¹ Thus, while general agreement exists that the term "launching state" is unclear, an acceptable definition has proven to be elusive.

Where a basis exists for more than one state to be considered as the "appropriate state" for purposes of authorization and continuing supervision of a commercial space mission, it is clear that there can be overlapping assertions of state control. The Project 2001 study concluded that "clarification should be provided on a case by case basis by agreement among the very states involved."¹² As a matter of fostering the role of the private sector in the commercial uses of space, Project 2001 strongly recommended that states enact national laws to implement the international obligations of authorization

U.N.T.S. 187, *text reproduced in UNITED NATIONS TREATIES AND PRINCIPLES ON OUTER SPACE* 13 (2000) [hereinafter referred to as the "Liability Convention"].

10. AAS Report, *supra* note 3, at 7.

11. ILA Report, *supra* note 4, at 13-14, 199.

12. Reif, *supra* note 2, at 5.

and continuing jurisdiction of non-governmental entities.¹³

Project 2001 noted that the enactment of national laws would impose certain regulatory burdens on the private sector in obtaining licenses to conduct activities in space, and that over-regulation should be avoided. It further was noted that especially within Europe, projects often are conducted on a multinational basis. It therefore was recommended that national laws should be harmonized with a “co-ordinated procedure” for the exercise of national laws regulating space activities,¹⁴ which could extend to full reciprocity with a “one stop procedure” where a license granted by one state would be recognized by other states.¹⁵

Project 2001 also encouraged the “formulation of substantive international technical requirements and safety standards for space operations” to further streamline the regulatory licensing process.¹⁶ It was noted that such international requirements and standards could be drafted under the auspices of the Scientific and Technical Subcommittee of UNCOPUOS, and could establish parameters for determining the existence of

fault, where required, pursuant to the Liability Convention.¹⁷

The ILA Space Law Committee expressed its recommendation that states should “enact national legislation concerning authorization and continuing supervision of space activities carried out by non-governmental entities. . . ,”¹⁸ but unlike Project 2001, the ILA did not call for harmonization of the regulatory regimes. The AAS adopted a different approach, and recognized that the Outer Space Treaty does not mandate any specific licensing regime, but rather lets states tailor their national systems consistent with the Treaty obligations.¹⁹ The AAS recognized that a certain level of consistency between licensing regimes is desirable, and therefore endorsed as a best practice that “States should conclude, in appropriate circumstances, agreements concerning recognition and acceptance of the authorization granted for space activities by other launching States.”²⁰

The Outer Space Treaty does not obligate states parties to establish any specific licensing regime, but allows for each state to determine the level and extent of regulations.²¹ The harmonization of regulatory regimes, beyond minimum standards and requirements, may be beneficial for regions, such as Europe, or other combinations of states which regularly have missions that transcend the borders of the members of the group. The

13. *Id.*

14. *Id.* at 6.

15. Makiol, *Project 2001: Final Results of the Working Group Launch and Associated Services*, in PROCEEDINGS OF THE 44TH COLLOQUIUM ON THE LAW OF OUTER SPACE 21, 23 (2002); *see also* Schmidt-Tedd, *Project 2001: Recommendations and Results Concerning the Process of Privatisation and Issues of Economic Law*, in PROCEEDINGS OF THE 44TH COLLOQUIUM ON THE LAW OF OUTER SPACE 14, 15 (2002).

16. Reif, *supra* note 2, at 8.

17. *Id.*

18. ILA Report, *supra* note 4, at 196.

19. AAS Report, *supra* note 3, at 6.

20. *Id.* at 14.

21. *See generally* F.G. VON DER DUNK, PRIVATE ENTERPRISE AND PUBLIC INTEREST IN THE EUROPEAN SPACESCPE (1998).

implementation of such uniformity is a matter to be determined by the states involved on a case by case basis.

The creation of a uniform licensing regime on a global scale might avoid the potential problem of flags of convenience, but also would fail to take into account security or other specific concerns of states. In addition, the concern over flags of convenience may be overstated, as at present, all private launch service providers have a genuine link with one or more major space active countries, each of which could be expected to assert the right, and be held to the obligation, to license any launch activities. Moreover, the regulation of licenses ultimately is intertwined with the issue of international liability of states for damages caused by their non-governmental entities. As noted by the AAS, "primary state liability promotes responsible state legal regimes."²² Therefore, states can be expected to be reluctant to agree to detailed harmonized standards in the first instance, or to continue to maintain such standards as part of the domestic licensing regime where it may conflict with a perceived national need. Nevertheless, there is widespread agreement that states should be encouraged to ratify the Outer Space Treaty, and to adopt an appropriate licensing regime in accordance with article VI.²³

The development of uniform international technical requirements and safety standards would provide numerous benefits, both in terms of easing regulatory burdens and in facilitating a finding of fault for liability purposes, as noted by Project 2001. Additional benefits from such uniformity include the enhancement of safety in

activities, as well as the promotion of more efficient and cost-effective techniques and procedures in designing and operating space missions. Nevertheless, these international standards and requirements should establish only minimum baseline requirements, and should not dictate commercial decisions which do not have a public policy component. That is, the potential exists for the establishment of preferences by means of regulations which extend beyond policy concerns and infringe on the exercise of free market forces. Such infringement can only be exasperated by the institutionalization of a harmonized regulatory regime. Moreover, whether imposed by one state or by a number of states by parallel regimes, the over-regulation of the private sector will have a debilitating effect on space commerce.²⁴

The ILA Space Law Committee took the position that the Outer Space Treaty, while flexible in its provisions, should be updated as it was not drafted with commercial implications of space activities in mind. However, in view of the general perspective that the treaties should be supplemented but not formally amended, the Committee approved a Proposed Protocol to the Outer Space Treaty as set forth in Figure 1.²⁵

The AAS noted that the "international regime recognizes the legitimacy of both governmental and non-governmental activities in space. . . ," but expressed doubt as to whether the right to conduct commercial activities was recognized.²⁶ The additions proposed to article 1, paragraph 3, by the ILA Space Law Committee, make it clear that the Outer Space Treaty is applicable to

22. AAS Report, *supra* note 3, at 7.

23. See Reif, *supra* note 2, at 5; Makiol, *supra* note 15, at 23; AAS Report, *supra* note 3, at 9; ILA Report, *supra* note 4, at 196.

24. See Schmidt-Tedd, *supra* note 15, at 15; Reif, *supra* note 2, at 8.

25. ILA Report, *supra* note 4, at 195-96

26. AAS Report, *supra* note 3, at 19.

commercial uses of space. The proposed revisions to paragraph 2 of article 1, are substantially similar to paragraph 1 of 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 the Developing Countries*,²⁷ with the addition of the reference to "commercial" uses of outer space. The reference to commercial uses in paragraph 1 of the proposal implies that in its absence, commercial uses are not subject to the Outer Space Treaty. However, except for purely scientific ventures, it is difficult to envision the conduct of a space activity by a non-governmental entity which would not have some commercial component. Furthermore, ever since Telstar in the early 1960's, the practice of states has been to recognize, permit, authorize and supervise commercial uses of outer space.

The proposed ILA Space Law Committee addition to article VI urges states to adopt a national regime for authorization and continuing supervision of their private entities, as discussed above. The proposed addition to article VIII, however, appears merely to reiterate the obligations of states to register nationally and internationally objects launched into outer space as required by the Registration Convention.²⁸ The ILA Special

27. *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 the Developing Countries*, December 13, 1996, UNITED NATIONS TREATIES AND PRINCIPLES ON OUTER SPACE 56 (2000).

28. *Convention on Registration of Objects Launched into Outer Space*, opened for signature January 14, 1975, 28 U.S.T. 695, T.I.A.S. No. 8480, 1023 U.N.T.S. 15, text reproduced in UNITED NATIONS TREATIES AND PRINCIPLES ON OUTER SPACE 22 (2000)

Rapporteur discussed that the Registration Convention could be improved by requiring more detailed information, and the uniformity of national registries,²⁹ but neither of these matters are addressed by the proposed addition. Furthermore, it would appear that any protocol or supplemental instrument on this issue should be addressed also to the Registration Convention so as to prevent the possibility of overlapping but inconsistent obligations.³⁰ Of course, states should be encouraged to ratify both treaties.

The final ILA Space Law Committee proposed addition to the Outer Space Treaty similarly may be somewhat misplaced, as it encourages states to adopt binding dispute settlement mechanisms. Although this proposal may be specifically directed toward commercial uses of space, it is nevertheless a proper subject for consideration *vis-a-vis* the Liability Convention. Clearly, states have primary international liability pursuant to the Liability Convention, whether incurred as a result of the activities of governmental or non-governmental entities. In addition, states can and do adopt procedures to limit the risk of loss by regulatory requirements, such as cross-waivers of liability, or the mandating of insurance coverage. States could require licensees to accept binding dispute settlement procedures, including the Claims Commission or other means conducted pursuant to the Liability Convention. The difficulty with this approach, however, is that states have not yet themselves agreed that the mechanisms set forth in the Liability Convention shall be binding, which was noted by both Project 2001 and the ILA Space Law Committee as a

[hereinafter referred to as the "Registration Convention"].

29. ILA Report, *supra* note 4, at 200; see also AAS Report, *supra* note 3, at 8.

30. ILA Report, *supra* note 4, at 198.

major issue inhibiting commercial uses of space.³¹

COMMERCIALIZATION AND THE MOON AGREEMENT

By far the most controversial subject concerns the status of commercial uses of the Moon. Project 2001 observed that a cooperative discussion of the actual ways and means of exploitation, together with the actual benefits, may be of assistance. Accordingly, it was recommended that the parties to the Outer Space Treaty open negotiations to consider "the fact that such exploitation might be undertaken by private parties."³² The ILA Space Law Committee Special Rapporteur, on the other hand, took the position that the Moon Agreement should either be "improved" or "discarded."³³ Accordingly, in an effort to improve the instrument, a series of amendments was proposed by the Special Rapporteur, as set forth in Figure 2.³⁴ This was a departure from the perspective that the space treaties should be supplemented rather than amended, but the Moon Agreement has received very limited acceptance since it was opened for signature in 1979.

The amendments proposed by the Special Rapporteur delete the reference to "natural resources in place" in article 11.3, and expressly declare that there is no moratorium on the commercial use of lunar resources by private entities, thus ending

31. See Reif, *supra* note 2, at 9; ILA Report, *supra* note 4, at 199.

32. Reif, *supra* note 2, at 8.

33. ILA Report, *supra* note 4, at 201.

34. *Id.* at 203-04 (bracketed material supplied by the Space Law Committee General Rapporteur).

any uncertainty which otherwise may exist. In addition, the proposed amendments provide what are stated to be "more realistic rules" regarding the international regime of paragraph 11.5. The Special Rapporteur also recommended the deletion of paragraph 18 relating to the ten year review of the treaty, and the renumbering the subsequent provisions.

The proposed amendments are drafted from the perspective of promoting the commercial exploitation of the Moon, and are designed to blunt the major obstacles which have prevented widespread acceptance of the Moon Agreement. One of the most substantial obstacles has been the uncertainty surrounding the reference to the concept of the "common heritage of mankind." The proposed amendments delete the phrase and replace it with the "province of all mankind." This modification employs terminology which is consistent with and included in the Outer Space Treaty,³⁵ and presumably would not invite the same opposition that accompanied the common heritage of mankind. This proposed change, predictably, sparked considerable controversy, and a divergence of views emerged during the Space Law Committee discussions. Various alternatives to the terminology were suggested, including the "common concern of all mankind," "common concern of all lives," "common interests," and "for the universal benefit of all mankind."³⁶ A consensus of opinion failed to materialize, and a compromise resolution was adopted as follows:

4. Regarding the 1979 Moon Agreement:

35. *Id.* at 202, 226.

36. *Id.* at 224-27.

Considering further that the common heritage of mankind concept has developed today as also allowing the commercial uses of outer space for the benefit of mankind, and that certain adjustments are suggested to article XI of this Agreement concerning the international régime to be set up for the exploitation of moon resources, which will make it more realistic in today's international scenario,"³⁷

The amendments proposed by the ILA Space Law Committee Special Rapporteur are an ambitious attempt to resurrect the Moon Agreement. Many of the proposed revisions clearly are advantageous for the commercial exploitation of the Moon, but some of the revisions may encounter difficulties in obtaining the hoped-for widespread acceptance. For example, the proposed amendments introduce new terms which are of uncertain meaning. Included in this category are the concepts of commercial use causing "serious harm" or "substantial risk" to future exploitation and use. In the context of competing commercial ventures, serious harm and substantial risk can be fluid and expansive concepts.

The Moon Agreement is not the only international instrument to incorporate the concept of the common heritage of mankind, as the phrase is expressly set forth in the Law of the Sea Convention.³⁸ Just like the

37. *Id.* at 14 (quoting from resolution adopted by the ILA approving the Report of the Space Law Committee).

38. Convention on the Law of the Sea, part XI, art. 136, *opened for signature* December 10, 1982, U.N. Doc.

Moon Agreement, the LOS Convention initially was met with considerable opposition, and received only limited acceptance by the industrialized world. In an attempt to reinvigorate the LOS Convention, significant amendments were approved in 1994,³⁹ which introduced market forces into the regulation of ocean resources. As a result, both the industrialized and the developing nations reconsidered the objections to the LOS, and accepted the revised regime to govern the exploitation of deep seabed resources.⁴⁰ Thus, the inclusion of the principle of the concept of common heritage of mankind has been proven to not be fatal to the acceptance of an international instrument.

The governing authority under the 1994 Agreement is to be composed of representatives of the major consumers of minerals, the largest investors in deep seabed mining, the major land-based producers of minerals, the developing countries, and an overall equitable geographic distribution of states. This will help to ensure both broad based

A/CONF.62/122 (1982), *reprinted in* UNITED NATIONS, OFFICIAL TEXT OF THE UNITED NATIONS CONVENTION ON THE LAW OF THE SEA WITH ANNEXES AND INDEX, U.N. Sales No. E.83.V.5 (1983)[hereinafter referred to as the "LOS Convention"].

39. G.A. Res. 48/263 (July 28, 1994)[hereinafter referred to as the "1994 Agreement"].

40. *See generally*, Dept. of State, Council on Ocean Law, U.S. Commentary on the LOS Convention Including the 1994 Amendments, <http://lcweb2.loc.gov/law/GLINV1/GLIN.html>; Browne, *Congressional Research Service Issue Brief for Congress*, (June 6, 1997), *text available through* Committee for National Institute for the Environment, www.cnie.org/nle/leg-9.html.

representation, as well as to provide the industrialized nations with influence which is commensurate with their interests. Significantly, the 1994 LOS amendments provided for a small bureaucratic structure, and removed any requirement for mandatory transfer of technology in the development of ocean resources.

The Special Rapporteur's proposed amendments to the Moon Agreement articulate minimum attributes of the international regime that states parties undertake to establish pursuant to article 11. The first two attributes concern the establishment of national licensing procedures, and the creation of guidelines for such licensing. The next two attributes relate to the establishment of monitoring and registration procedures for licensed activities. However, the proposal also calls for the imposition of "reasonable registration fees," the definition of which is left for future determination.

The Special Rapporteur's proposed amendment requiring the creation of a procedure for both States Parties or their non-governmental entities to have "reasonable means to ascertain that their rights and interests are duly respected" is potentially expansive. In this regard, reference should be made to articles 2 and 15.1 of the Moon Agreement. Article 2 provides that activities on the Moon shall be conducted in accordance with international law, while article 15.1 stipulates that States Parties have a right of visitation to facilities, stations, and installations on the Moon to assure themselves "that the activities of other States Parties in the exploration and use of the Moon are compatible with the provisions of this Agreement."

The 1994 Agreement serves the common heritage of mankind principle by providing for equality of opportunity rather than the forced sharing of revenues or other

form of tribute or taxation.⁴¹ The emphasis on equality of opportunity is consistent with the view "that the common heritage principle fully comports with private economic activity in accordance with market principles."⁴² The proposed ILA Space Law Committee amendments, however, do not appear to provide the same emphasis on market forces, and therefore may continue to encounter significant resistance, even if the phrase "common heritage of mankind" was to be deleted from the Moon Agreement.

CONCLUSION

The emergence of the commercial space age has engendered attention and discussion with respect to the adequacy *vel non* of the *corpus juris spatialis*. The recent studies of Project 2001, the AAS, and the ILA, have recognized that the outer space treaties were drafted to allow substantial flexibility. These studies differ, however, in their conclusions as to whether amendments or supplements to one or more of the treaties are desirable. Treaty amendments may present problems of conflicts between pre- and post- amendment regimes, as well as differences in ratifications. Thus, it must be determined whether the result is worth the

41. See Sterns and Tennen, *Institutional Approaches to Managing Space Resources*, in PROCEEDINGS OF THE 41ST COLLOQUIUM ON THE LAW OF OUTER SPACE 33 (1999).

42. U.S. Senate, 103rd Cong., 2nd Sess., UNITED NATIONS CONVENTION ON THE LAW OF THE SEA, WITH ANNEXES, AND THE AGREEMENT RELATING TO THE IMPLEMENTATION OF PART XI OF THE UNITED NATIONS CONVENTION ON THE LAW OF THE SEA, WITH ANNEX, Treaty Document 103-39, at 61 (1994).

effort, or whether the desired results can be achieved by a different means.⁴³

Issues which will require continued study and debate relate to definitions of key treaty terminology; the adoption and possible harmonization or reciprocity arrangements of national licensing regimes; and the implications of the concept of the common heritage of mankind. In addition, issues concerning debris, the lack of binding international dispute resolution procedures, and the form of regulation to be imposed for the commercial use of lunar and other extraterrestrial resources, will impact on the pace of commercialization of space. The AAS recently announced plans for a follow-up workshop, and the ILA and Project 2001 continue to critically examine space law. Such proceedings, together with those of other organizations, including the IISL, and UNIDROIT, will continue to refine the rights and obligations of the private sector in space.

43. See ILA Report, *supra* note 4, at 198.

CONSIDERING the merits of the Outer Space Treaty in providing guidance for space activities since 1967,

NOTING the growth in recent years, of the commercial uses of outer space by states, international organizations and private enterprises,

NOTING FURTHER the change within the international economic order since the adoption of the WTO Agreement, and the GATS and TRIPS Agreements, as well as the entry into force of the Law of the Sea Convention and the 1994 Agreement on the Implementation of Part XI of that Convention,

HAVING IN MIND the 1996 UNGA 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 the Developing Countries,

The Contracting Parties have adopted the following *Protocol on Commercial Space Activities* to give more precise meaning to the principle embodied in Articles I.3, VI and VII [sic] of the 1967 Outer Space Treaty.

Article 1 (Addition to Article I, para. 3 OST)

1. States Parties hereby agree that the use of outer space and celestial bodies is inclusive of all commercial uses.

2. States Parties are free to define the way in which they shall implement the principle of international cooperation. All commercial uses of outer space and celestial bodies shall be carried out for the benefit and in the interests of all states, irrespective of their degree of economic or scientific development and shall be the province of all mankind. Particular account shall be taken of the needs of developing countries.

Article 2 (Addition to Article VI OST)

States Parties undertake to enact national legislation concerning authorization and continuing supervision of space activities carried out by non-governmental entities.

Article 3 (Addition to Article VIII OST)

States Parties are under the obligation to register any object launched into outer space both on their national registries and on the international register maintained by the Secretary -General of the United Nations in accordance with the Convention on the Registration of Objects Launched into Outer Space.

Article 4 (New rules concerning the peaceful settlement of disputes)

States Parties undertake to adopt an international legal instrument on the peaceful settlement of disputes which should include provisions for binding mechanisms. In this sense, the 1998 ILA Convention on the Settlement of Disputes related to Space Activities is referred to as a model.

Figure 1

1. Amendment of Article 4.1

The exploration and use of the moon, *including commercial exploitation and use*, shall be the province of all mankind and shall be carried out for the benefit and interest of all countries, irrespective of their degree of economic or scientific development. *Commercial exploitation and use are, however, only allowable [permissible] in conformity with the provisions of Article 11.* Due regard shall be paid to the interests of present and future generations as well as the need to promote higher standards of living and conditions of economic and social progress and development in accordance with the Charter of the United Nations.

2. Amendments of Article 11.1

The moon and its natural resources are the *province of mankind [the common concern of all mankind]*, which finds its expression in the provision of this Agreement and in particular paragraph 5 of this Article.

3. Amendments to Article 11.2

The moon is not subject to national appropriation by any claim of sovereignty, by means of use or occupation, or by any other means. *This shall not preclude any commercial exploitation or use so long as in conformity with the provisions of this article, other articles of this Agreement or any legal régime regarding commercial exploitation and use to be established on the basis of this Agreement.*

4. Amendment to Article 11.3

Neither the surface nor the subsurface of the moon, nor any part thereof shall become the property of any State, international intergovernmental or non-governmental organisation, national organisation or non-governmental entity or of any natural person. The placement of personnel, space vehicles, equipment, facilities, stations and installations on or below the surface of the moon, including structures connected with its surface or subsurface, shall not create a right of ownership over the surface or subsurface of the moon or any areas thereof. The foregoing provisions are without prejudice to the international régime referred to in paragraph 5 of this Article.

5. Amendment to Article 11.5

States Parties to this Agreement hereby undertake to establish an international régime, including appropriate procedures, to govern the exploitation of the natural resources of the moon, *including commercial exploitation by non-governmental entities. Such international régime should include, as minimum*

- the duty of establishing a licensing obligation by means of national law [legislation] for every State Party whose non-governmental entities are interested in undertaking relevant activities;
- guidelines for the licensing requirements to be imposed;
- the duty of establishing a transparent, fair, and comprehensive monitoring system in respect of activities thus licensed;
- a procedure for international registration of activities on the moon licensed in accordance with this régime, including payment of a reasonable registration fee to the international authority charged with such registration; and
- a procedure for providing other States Parties involved, or their non-governmental entities involved, with reasonable means to ascertain that their rights and interests are duly respected.

In the absence of such a régime, commercial exploitation and use of the moon will be permitted on condition that no commercial exploitation or use of the moon should cause serious harm to the interests of other States Parties, including their economic interests, no substantial risk should affect future exploitation and use, and the moon's environment should not be put substantially at risk. *Likewise, such commercial exploitation and use will continue to be subject to the provisions of this Agreement, including the general principles of paragraph 7.*

6. Amendment to Article 11.7

The main purposes of the international régime to be established shall include:

- (a) The orderly and safe development of the natural resources of the moon;
- (b) The rational management of those resources;
- (c) The expansion of opportunities in the use of those resources.
- (d) *this provision is suppressed in Dr. von der Dunk's proposal (emphasis supplied).*

Figure 2