

THE DRAFT OF THE INTERNATIONAL LAW ASSOCIATION FOR A CONVENTION ON SPACE DEBRIS

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1. Introductory Remark

When Professor Lubos Perek, the Co-Chairman of the 1995 Oslo IISL Session on Space Debris, invited me to present a report on the Draft of the International Law Association (ILA) for a Convention on Space Debris, I agreed with pleasure. Legal Aspects of space debris have been one of the primary subjects of our work both at the Institute of Air and Space Law at the University of Cologne as well as of the ILA Space Law Committee in recent years. Indeed, especially in a long term perspective, space debris may be considered as one of the most important subjects of scientific and practical space activities presently and in the future, because if no satisfactory solution for the growing space debris is found, a major part of future space activities may be endangered or prevented. This is confirmed by the results of a number of individual and group research projects of scientific and technical experts in the recent past, of which only the Report of the ESA Space Debris Working Group¹ and the publication "Orbital Debris - A Technical Assessment" of the Committee on Space Debris of the United States National Research Council² may be mentioned. And it is a clear

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indication of the general concern regarding space debris that the United Nations Committee on the Peaceful Uses of Outer Space (COPUOS) has, starting in 1994, placed this topic on the agenda of its Technical Sub-Committee and is discussing the issue as well in its Main Committee as happened last during the COPUOS Session in Vienna in June 1995.

2. Space Debris as a Subject of Law

In these circumstances it is not at all surprising but a mere necessity that also the legal aspects of space debris have already for a number of years been discussed and studied by lawyers in various countries and international circles. However, this took some time. I still recall very well that, having been asked in 1983 to speak, at the United Nations in New York, on "Space Law at the Turn of the Century", when I indicated that environmental aspects of activities in outer space should be a major concern for lawyers, governments, and the United Nations, the reaction was quite hesitant. But soon the subject of space debris was taken up in various publications and IISL papers. And when, in 1988, we organized the first interdisciplinary international colloquium on "Environmental Aspects of Activities in Outer Space - State of the Law and Measures of Protection" in Cologne, a well based and very valuable exchange could already take place between the participants of scientific, technical, and legal background as can be seen from the publication of the proceedings of that meeting³.

Since then, the subject of space debris and environmental aspects of space activities in general has been dealt with in a great number of further publications as well as IISL papers parallel to the specific work of the ILA Space Law Committee focusing on the question of a possible international instrument regarding that matter which I will discuss later.

Nevertheless, still much room will have to be covered in work regarding the legal aspects of space debris. The best illustration thereof is the fact that opinions still vary in COPUOS as to whether the subject should be placed on the agenda not only of the Technical Sub-Committee, but also of the Legal Sub-Committee.

3. The ILA and Its Space Law Committee

For the benefit of those who are less acquainted with the institutions working in the field of public international law in general it may be useful to recall very shortly some basic information regarding the International Law Association: The ILA was founded as long ago as 1873 and has, ever since, been a non-governmental international organization of academics and practitioners in the field of international law. The ILA has national branches in all parts of the world, and its headquarters in London. Its work is presented and formalized at biannual conferences held in various places worldwide. The last conference was held in Buenos Aires and the next conference will be in August 1996 in Helsinki. Between these conferences the work is mainly carried out by Committees which are established for the various fields of public and private international law.

One of these Committees is the ILA Space Law Committee, which I have the honour to chair. Its Rapporteur is Professor Maureen Williams of Argenti-

na, who is co-chairing this Oslo Session of the IISL, and other members are distinguished specialists of space law, many of whom participate in IISL, in COPUOS and its Legal Sub-Committee⁴.

4. Preparatory Work Leading to the Buenos Aires Draft

Starting with a respective decision at the ILA Conference in Seoul in 1986, the ILA Space Law Committee has been doing research and exchanging information and views and finally preparing drafts regarding the protection of the environment from damage caused by space activities, particularly space debris. In doing so, the legal experts in the ILA Space Law Committee have had the benefit of support from three eminent scientific consultants, Professors Lubos Perek (Czech Republic), who is a Co-Chairman of this Oslo IISL Session, Dieter Rex (Germany), and Humberto Ricciardi (Argentina). Landmarks were particularly: a regional seminar of the ILA in Buenos Aires in December 1987; the international colloquium at the Institute of Air and Space Law in Cologne in May 1988 with an emphasis on interdisciplinary sides of the question which I mentioned before; discussions and a further mandate at the ILA Conference in Warsaw in August 1988; a meeting in Asunción del Paraguay in October 1988; a report to the 1990 ILA Conference in Australia which resulted in a mandate to the Space Law Committee to start work on the elaboration of relevant principles; after the preparation of three drafts a report to the 1992 Cairo Conference of the ILA which resulted in a mandate to now prepare a final text of a draft international instrument.

After this long and extensive preparation, since 1992 three drafts had been elaborated, circulated and discussed at various stages by the ILA Space Law Committee and its three scientific con-

sultants, and the final text with the title "International Instrument on the Protection of the Environment from Damage Caused by Space Debris" was submitted, with an extensive commentary by the Rapporteur Professor Maureen Williams, to the 66th Conference of the International Law Association in Buenos Aires in August 1994.

5. The Buenos Aires ILA Resolution of 1994

On the basis of this extensive Report including a commentary by the Rapporteur and the presentation of the various detailed views that had been expressed during the various stages of elaboration, a further discussion took place at the meeting in Buenos Aires. Professor Maureen Williams has recently published a detailed article on various

procedural and substantive aspects that were dealt with both in the report and in that discussion in the last issue of the Journal of Space Law⁵ and it is, therefore, not necessary to enter into a repetition and further discussion of these details in this paper. Attention must be focused on the final title of the Instrument as well as on questions related to definitions, responsibility and liability, obligations incumbent on states and international organizations involved in space activities, and on dispute settlement. The meeting in Buenos Aires came to the conclusion that no further changes were required to the Draft Instrument as presented for the conference. On the basis of the discussion in that meeting, the Buenos Aires ILA Conference in which around 300 delegates presenting 37 branches all over the world participated, passed the following resolution :

"Resolution Nr. 5 Space Law

The 66th Conference of the International Law Association held in Buenos Aires, Argentina, 14 to 20 August 1994:

OBSERVING THAT:

- scientists, technicians, and practitioners in the exploration and use of outer space have been expressing a growing concern regarding the risks caused by space debris, in particular for space activities and in general for the environment in outer space and on the earth;
- many publications and meetings both of governmental organisations such as the European Space Agency and of scientific bodies such as the International Astronautical Federation and the International Academy of Astronautics have considered in detail the risks involved as well as possible options for reducing those risks;
- the United Nations Committee on the Peaceful Uses of Outer Space (COPUOS) has expressly recognised, in the words of its Chairman, "that the time has come for this body to fulfil its responsibility to the international community by beginning formal discussions on what steps should be taken to address this growing problem";
- the Scientific Subcommittee of COPUOS has for the first time placed the issue of space debris on its agenda, and held discussions on it in 1994;
- consensus could not yet be reached to place the issue on the agenda of the Legal Subcommittee of COPUOS, although many governments and the ILA, as an observer participating in COPUOS sessions, have so suggested;

RECOGNISING THAT, at least in the medium and long term, adequate protection from the risks of space debris can only be assured if appropriate technical measures are complemented and reinforced by an appropriate international instrument;

RECALLING THAT the International Law Association has for 8 years been involved in the study of legal aspects of space debris, including through:

- reports of the Committee to and resolutions of the Conferences at Seoul (1986), Warsaw (1988), Queensland (1990) and Cairo (1992);
- specific meetings on legal aspects of space debris organised in Buenos Aires in 1987 and in Asunción del Paraguay in 1988;
- an interdisciplinary meeting of scientists, technicians and lawyers in Cologne in 1988, which resulted in a comprehensive book on the subject;

- exchanges from 1986 within the Committee and with its scientific consultants, leading to the elaboration of relevant principles and later to an international instrument;

ADOPTS the ILA Buenos Aires International Instrument on the Protection of the Environment from Damage Caused by Space Debris;

REQUESTS the Secretary-General to communicate the International Instrument, together with the Report of the Committee, to COPUOS and to other appropriate governmental and non-governmental institutions for further consideration and action;

REQUESTS the Committee to continue to examine developments in this field and to promote the International Instrument, and the adoption of rules of international law regarding space debris;

OBSERVING FURTHER THAT, during the last decade, the growing volume of space activities and in particular of commercial space activities, as well as the growing participation of non-governmental entities and private enterprises in space activities, have given the issue of dispute settlement regarding space activities a new framework and a new relevance;

REQUESTS the Committee to reexamine the 1984 ILA Draft Convention on the Settlement of Space Law Disputes to determine whether developments since 1984 require any changes, or the elaboration of a new instrument, and also to examine in that context what further steps should be taken to promote the peaceful settlement of disputes regarding space activities."

In view of this ILA Resolution, when closing the Conference, the President of Argentina, Dr. Carlos S. Menem, placed special emphasis on the need to protect the environment and expressed satisfaction on the adoption of the Buenos Aires International Instrument on Space Debris.

6. The ILA Draft Convention on Space Debris

In view of the limited space available for this paper, an extensive introduction and commentary to the text of the ILA Draft Instrument as it was accepted by the above mentioned Resolution cannot be given here. For further details, reference must be made to the various reports of the ILA Space Law Committee to the ILA Conferences up to 1994 as they are published in the respective ILA Conference Reports⁶ and, most recently, to the Report by Professor Maureen Williams in the last Journal of Space Law⁷.

However, a few aspects which were particularly the object of extended discussions both in the preparatory and in the final stage of the elaboration and adoption of the ILA Draft Instrument, may at least perhaps be mentioned:

The original title of the working draft (International Instrument on the Protec-

tion of the Environment from Damage Caused by Space Activities) was changed to the final title "International Instrument on the Protection of the Environment from Damage Caused by Space Debris" in order to highlight the particular importance of the issue of space debris.

Very different opinions were raised during the various stages of discussion regarding the terms and definitions used in the Instrument, particularly regarding "space debris", "contamination", and "pollution".

Regarding the scope of the Instrument, the original suggestion to restrict its applicability to LEO and GEO was changed - also in line with various presentations made to the First European Conference on Space Debris at Darmstadt (Germany) in April 1993 - and consequently definitions of these orbits were not necessary and were deleted from the final text.

A certain difference of opinion could be noticed regarding the question whether it was necessary or at least opportune to include provisions regarding responsibility and liability in the text. Everybody realized the difficulties of determining and proving which state is responsible and liable due to the difficulties in identifying the launching

state regarding many pieces of space debris. But a great majority of those participating felt that, nevertheless, it would be preferable to include rules on responsibility and liability, and that also in other fields of law difficulties of evidence and proof were not considered as sufficient to exclude a ruling on responsibility and liability. As a practical matter it was also added that in later negotiations either in COPUOS or in other circles on turning the draft into an effective instrument of international law between states, it would be far easier to leave out or amend any such rules if necessary than to add new ones.

The obligations included in the Draft that states must cooperate, prevent, inform, consult, and negotiate in good faith to deal with the risks of space debris was generally considered important in spite of the fact that, even with the wording included in the Draft, these remain rather general obligations which might well lead to difficulties in concrete application.

The mandate of the Cairo ILA Conference had already included as a fundamental aspect to deal with methods of dispute settlement within the framework of this international

Instrument, including provisions on compulsory third party settlement. This was generally accepted in the exchanges and discussions. Some participating members, including Professors Kopal, Chowdhury, and Seyersted, were in favour of a most stringent system, while the Draft provides that the State Parties to the Instrument may declare at any time that they choose any of the non-binding or binding dispute settlement procedures included in the Annex to the Draft Instrument or that they exclude in part or in full its application. Even though, from a merely legal perspective, a more stringent system might seem preferable, the majority felt that, if the main objective of the Buenos Aires Instrument was to get the widest possible support from as many states as possible, it seemed sensible to begin at a low level of compulsion. Indeed, experience with other legal instruments shows that a number of states is still not ready to subject themselves to a binding third party settlement procedure, and if one wants to include them in such an instrument on space debris, one has to grant them an option for a non-binding procedure.

With these few advance commentaries, the full text of the ILA Draft Instrument is given hereafter :

"BUENOS AIRES INTERNATIONAL INSTRUMENT ON THE PROTECTION OF THE ENVIRONMENT
FROM DAMAGE CAUSED BY SPACE DEBRIS

Article 1: Definitions

For the purposes of this Instrument:

- (a) "Contamination/pollution" means a human modification of the environment by the introduction of undesirable elements or by the undesirable use of those elements.
- (b) "Contamination/pollution" will be considered as synonyms and are inclusive of all harmful elements other than space debris.
- (c) "Space debris" means man-made objects in outer space, other than active or otherwise useful satellites, when no change can reasonably be expected in these conditions in the foreseeable future.

Space debris may result, inter alia, from:

- Routine space operations including spent stages of rockets and space vehicles, and hardware released during normal manoeuvres.

- Orbital explosions and satellite breakups, whether intentional or accidental.
 - Collision-generated debris.
 - Particles and other forms of pollution ejected, for example, by solid rocket exhaust.
 - Abandoned satellites.
- (d) "Environment". for the purposes of this Instrument, includes both the outer space and earth environments within or beyond national jurisdiction.
- (e) "Damage" means loss of life, personal injury or other impairment of health, or loss of or damage to property of States or of persons, natural or juridical, or property of international intergovernmental organisations, or any adverse modification of the environment of areas within or beyond national jurisdiction or control.

Article 2: Scope of Application

The instrument shall be applicable to space debris which causes or is likely to cause direct or indirect, instant or delayed damage to the environment, or to persons or objects.

Article 3: The General Obligation to Cooperate

1. States and international organisations parties to this Instrument shall cooperate directly, and/or through the pertinent international organisations, to protect the environment and implement this Instrument effectively.
2. States and international organisations parties to this Instrument shall take all appropriate measures to prevent, reduce, and control any damage or significant risk arising from activities under their jurisdiction or control which are likely to produce debris.

Article 4: Obligations to Prevent, Inform, Consult, and Negotiate in Good Faith

States and international organisations parties to this Instrument have, in addition to the duties set forth in Article 3, the following obligations:

- (a) To cooperate in the prevention of damage to the environment and make every effort to avoid situations that may lead to disputes.
- (b) To cooperate, in accordance with their national laws and practices, in promoting the development and exchange of technology to prevent, reduce, and control space debris.
- (c) To encourage and facilitate the flow and exchange of information of a scientific, technical, economic, legal, and commercial nature relevant to this Instrument.
- (d) To hold consultations when a State, group of States or international organisation parties to this Instrument have reasons to believe that activities carried out under their jurisdiction or control, or planned to be carried out, produce space debris that is likely to cause damage to the environment, or to persons or objects, or significant risk thereto.

Any State or international organisation party to this Instrument may request to hold consultations when it has reasons to believe that the activity of another State or international organisation party to this Instrument produces space debris that is likely to cause damage to the environment. Refusal to hold consultations, or the breaking up of such without justification, shall be interpreted as bad faith.

- (e) To negotiate in good faith which means, *inter alia*, not only to hold consultations or talks but also to pursue them with a view of reaching a solution.
- (f) To give special attention, when promoting these activities, to the needs of developing countries.

Article 5: Compatibility with Other Agreements

The rules laid down in this Instrument shall not be considered incompatible with the provisions of other international agreements concerning activities in outer space.

Article 6: Responsibility and Liability (general rule)

The rules laid down in this Instrument concerning responsibility and liability apply to damage caused by space debris in the space environment and, in the absence of other international agreements on the matter, to damage caused to the earth environment.

Article 7: International Responsibility

The State or international organisation, party to this Instrument, that launches or procures the launching of a space object shall bear international responsibility for assuring that national activities are carried out in conformity with the provisions of this Instrument, the 1967 Space Treaty, and the 1972 Liability Convention.

Article 8: International Liability

Each State or international organisation party to this Instrument that launches or procures the launching of a space object is internationally liable for damage arising therefrom to another State, persons or objects, or international organisation party to this Instrument as a consequence of space debris produced by any such object.

Article 9: Dispute Settlement

1. Disputes concerning the interpretation or application of this Instrument shall be subject to consultation at the request of any of the parties to the dispute with a view to reaching a prompt and amicable settlement.
2. Failing this, if the parties to the dispute have not agreed on a means of peaceful settlement within twelve months of the request for consultation, the dispute shall be referred, at the request of any party thereto, to arbitration or adjudication. In such case, the ILA Draft Convention on the Settlement of Space Law Disputes, which is appended as an Annex to this Instrument, shall be applicable, unless a party to this Instrument has excluded such application, in full or in part, by a declaration as provided in paragraph 3 of this Article.
3. Each Party to this Instrument, when signing, ratifying, accepting, approving or acceding thereto, or formally confirming its acceptance, or at any time thereafter, may declare that it chooses any of the non-binding or binding settlement procedures envisaged in the Annex to this Instrument, or that it excludes in part or in full the application of the Annex.
4. In these procedures it shall be possible, whenever appropriate, to prescribe interim measures binding on the parties in order to preserve rights or to prevent serious damage to the environment, or persons or objects. These measures shall be implemented by the parties without delay.

Article 10: Signature

1. This Instrument shall be open for signature by all States and international organisations at the United Nations Headquarters in New York. Any State or international organisation which does not sign this Instrument before its entry into force may accede to it at any time.
2. This Instrument shall be subject to ratification or formal confirmation by signatory States and international organisations. Instruments of ratification, instruments of accession and of formal confirmation shall be deposited with the Secretary-General of the United Nations.
3. The Secretary-General of the United Nations shall promptly inform all signatory and acceding States and international organisations of the date of each signature, the date of deposit of each instrument of ratification and of accession and the date of each formal confirmation of the present instrument, the date of its entry into force, and other notices.

Article 11: Entry into Force

1. This Instrument shall enter into force among States and international organisations which have deposited instruments of ratification or formal confirmation thirty days after the deposit of the fifth instrument with the Secretary-General of the United Nations.
2. For States and international organisations whose instruments of ratification or accession, or of formal confirmation, are deposited subsequent to the entry into force of this Instrument, it shall enter into force on the date of the deposit of their instruments of ratification, accession, or formal confirmation.

Article 12: Amendments

Any party to this Instrument may propose amendments to the Instrument. Amendments shall enter into force for each party to the Instrument accepting the amendment upon their acceptance by a majority of the parties to the Instrument and thereafter, for each remaining party to the Instrument, on the date of acceptance by it.

Article 13: Reservations

No reservations may be made to this Instrument except as provided in Article 9.

Article 14: Review Clause

Ten years after the entry into force of this Instrument the question of the review of the Instrument shall be included in the provisional agenda of the United Nations General Assembly in order to consider, in the light of past application of the Instrument, whether it requires revision. However, at any time after the Instrument has been in force for five years, the Secretary-General of the United Nations, as depositary, shall at the request of one third of the parties to the Instrument and with the concurrence of the majority of the parties, convene a conference of the parties to review the Instrument.

Article 15: Withdrawal

Any party to the Instrument may give notice of its withdrawal from the Instrument one year after its entry into force by written notification to the Secretary-General of the United Nations. Such withdrawal will take effect one year from the date of receipt of this notification.

Article 16: Authentic Text

The original of this Instrument, of which the Arabic, Chinese, English, French, Russian, and Spanish texts are equally authentic, shall be deposited with the Secretary-General of the United Nations, who shall send certified copies thereof to all signatory and acceding States and international organisations.

In witness thereof, the undersigned, being duly authorised by their governments, have signed this Instrument, opened for signature at the United Nations Headquarters in New York, on ...

NOTE: The Annex on Dispute Settlement is appended in conformity with Article 9, 2.(the text of this Annex is not included here, but is published in: Report of the Sixty-First Conference of the ILA in Paris 1984, p. 334 seq.)"

Footnotes

1. Space Debris, The Report of the ESA Space Debris Working Group, ESA publication esa-SP-1109 (November 1988).
Prof. K.-H. Böckstiegel (Germany) (Chair)
Prof. Maureen Williams (Argentina) (Rapporteur)
Prof. B. Bakotic (Croatia)
Maître M. Bourély (France)
Prof. B. Cheng (UK)
Prof. C.Q. Christol (USA)
Prof. A. Cocca (Argentina)
Mr. Ph. J. Dann, Esq. (UK)
Prof. J. Dutheil de la Rochère (France)
Prof. D. Goedhuis (Netherlands)
Ms Alexis L-Y. Goh (Australia/ New Zealand)
2. Orbital Debris, A Technical Assessment, Committee on Space Debris, Aeronautica and Space Engineering Board, Commission on Engineering and Technical Systems, National Research Council, National Academy Press, Washington, D.C., 1995.
Prof. S. Gorove (USA)
Judge G. Guillaume (France)
Dr. S. F. A. Hassan (Pakistan)
Dr. N. Jasentuliyana (HQ)
Judge Sir R. Jennings (UK)
Dr. E. Konstantinov (Bulgaria)
Prof. V. Kopal (Czech Republic)
3. K.-H. Böckstiegel (ed.), Environmental Aspects of Activities in Outer Space - State of the Law and Measures of Protections, Proceedings of an International Colloquium, Cologne, May 16-19, 1988, Cologne 1990.
Prof. U. Leanza (Italy)
4. Members of the ILA Space Law Committee are:
Prof. I. Detter de Lupis

Frankopan (Sweden)
Prof. P. Malanczuk (The Netherlands)
Prof. M. G. Marcoff (Switzerland)
Prof. N. M. Matte QC (Canada)
Prof. J. M. Mössner (Germany)
Mr. Justice R. S. Pathak (India)
Prof. P. de la Pradelle (France)
Mr. J. Reiskind (Canada)
Prof. G. Rysiak (Poland)
Prof. F. Seyersted (Norway)
Prof. H. Taubenfeld (USA)
Prof. G. P. Zhukov (Russia)

5. M. Williams, The ILA Finalizes its International Instrument on Space Debris in Buenos Aires, August 1994, in: Journal of Space Law 1995, p. 47 seq.
6. International Law Association, Reports of the conferences: Cairo (1992) p. 142 seq.; Broadbeach, Queensland, Australia (1990) p. 154 seq.; Warsaw (1988) p. 287 seq.
7. See footnote 5 above.