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THE 1972 LIABILITY CONVENTION

Enhancing Adherence and

Effective Application

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THE 1972 LIABILITY CONVENTION Enhancing Adherence and Effective Application

1. Introduction

The present Meeting of the Legal Subcommittee of UNCOPUOS has adopted a new item on the agenda: the "Review of the status of the five international treaties governing outer space", as proposed by the Government of the Republic of Mexico.[1] This item may well constitute a valuable contribution to the codification and further development of the international law pertinent to space activities.

The document proposes two major steps to be taken in order to achieve the widest and fullest adherence to the treaties concerned. Firstly, information should be collected with each state as to why it has, in pertinent cases, refrained from ratifying or signing specific treaties on outer space. Secondly, states are invited to express their views on ways to further the adherence to these space treaties.

The treaties between themselves have established within a relatively speaking short tune frame a legal framework for activities in space which is workable as well as rather comprehensive and coherent. Therefore, the effort to enhance the adherence to' and application of space law by means of the present proposal is to be applauded very much. At the same time, the aims which the proposal tries to achieve should for that reason be interpreted as broadly and generously as possible. This certainly applies to the Liability Convention of 1972.[2]

[1] See further document A/AC.105/C2/L.206/Rev.1, of 4 April 1997

[2] Convention on International Liability for Damage Caused by Space Objects (hereafter Liability Convention). London/Moscow/Washington, adopted 29 November 1971, opened for signature 29 March 1972, entered into force 1 September 1972; 10 ILM 965 (1971); 24 UST 2389; TIAS 7762; 961 UNTS 187.

2. The Liability Convention the status quo and current developments

Taking stocks of the present measure of adherence to the Liability Convention, according to the most recent information[3], currently there are 76 states which have ratified the Convention.[4] A further 25 states have signed the Convention. So, slightly over half of the world's states are presently bound at least to respects of the Liability Convention. That is not a bad score, especially if one keeps in mind that amongst them more or less all the space-faring countries nations are to be found.[5]

Moreover, the Liability Convention essentially is an elaboration of article VII of the Outer Space Treaty.[6] This means, that even states neither party nor signatory to the Liability Convention, while on the contrary having ratified or signed the Outer Space Treaty, are not allowed to simply ignore its legal contents. Such states would have to prove in any given case that the former Convention would not constitute an elaboration with customary legal force of the latter Treaty.[7]

The other problem is more specifically of a legal character. The privatization of space and space activities challenges the essence of international space law, as currently given shape mainly through the five treaties at issue. The historically determined and almost complete orientation of *the corpus juris spatialis internationalis* on states and state actors is put in the balance.

The Liability Convention warrants special attention from this dual perspective. As to space debris, legally speaking the problem is usually phrased in terms of liability for the damage caused by such debris. Regarding privatization, the mode of operation of the rules on liability in the case of private space ventures is of paramount importance for the safety of commercial operations in outer space.

3. The Liability Convention and space debris

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[3]See A/AC.105/C.2/L.206/Rev.1 of 4 April 1997, at 1.

[4]Signature without further ratification is generally conceived under international law to imply for the state in question at least the duty not to defeat object and purpose of such a treaty; in other words: not to clearly behave in contradiction with the general spirit and main aims of the treaty at issue. Cf. Art 18(a), Vienna Convention on the Law of Treaties, Vienna, done 23 May 1969, entered into force 27 January 1980; 8 ILM 679 (1969). Thus, some general obligations may be deduced even for such state under that treaty.

[5]Amongst those states which did neither sign nor ratify the convention, from this perspective Indonesia, Kazakhstan, Thailand, Tonga and Turkey may be deemed the most notable.

[6]Treaty on Principles Governing the Activities of States in the Expiration and Use of Outer Space. including the Moon und Other Celestial Bodies (hereafter Outer Space Treaty), London-Moscow-Washington, adopted 19 December 1966, opened for signature 27 January 1967, entered into force 10 October 1967; 6 ILM 386 (1967); 18 UST 2410; TIAS 6347; 610
UNIS 20S.

[7]The only directly important case of a state missing amongst the parties to the Outer Space Treaty. yet important from the perspective of the Liability Convention because of the Bajkonur launch base, concerns Kazakhstan. Amongst those further absent from the list of parties and signatories the most noteworthy examples in terms of interest in. and capacity for space activities are such states as Costa Rica, Croatia, the Democratic Republic of Korea and Portugal, as well as a number of other former constituent pans of the Soviet Union and Yugoslavia.

By and large those states themselves capable of causing space debris (however inadvertently) are already bound by the Liability Convention's provisions. Thus, the major task to achieve in this respect would be to enhance its effective application, rather than adherence as such Further adherence, to the extent considered essential' would anyway also hinge upon the perceived effectiveness of the Convention. Three major problems would call for a solution to achieve large steps forward on this issue.

3.1. The definition of space object.

The first problem relates to the definition of "space object" or "component parts" thereof, as it triggers the application of the Convention's liability rules. The question arises here to what extent space debris falls, or could fall within that definition. At the theoretical level, this problem has been discussed extensively. Usually, the debate turned around the (potential) functioning or functionality perceived by many to be inherent in the definition of "space object", which would thus exclude 'useless' space debris.[8]

Here, two different solutions could be envisaged. On the one hand, one could aim for an authoritative international interpretation that would include space debris as such in the definition of "space object" or, preferably, of "component part". This solution has the major advantage of informality while nevertheless making the Convention applicable in relevant cases.

In the alternative, a formal amendment might be required, when the first solution would be considered to run counter to logic and/or certain other provisions already dealing with space objects and their component parts. Such an amendment should essentially extend the present quasi-definition of "space object" as found in Article I(d) of the Convention. A space object should be redefined as including, where applicable, any part of it capable of causing damage. Of course, the practical problem of identification remains. Often, a certain piece of space debris can not be related to a specific space object. In such cases effective operation of the Liability Convention for the purpose of redeeming damage would in any case be precluded.

This problem as such lies outside the scope of the Liability Convention itself - and would be a matter either for the Registration Convention[9], or for non-legal instrumentalities.

3.2. *Unidentifiable space debris*

In the abstract law could perhaps be supportive to dealing with damage caused by those pieces of debris which cannot be retraced to a certain space object and thereby to a certain space launching state. Thus, the second major problem related to the Liability Convention poses itself as: *how* can the law enhance the solution of problems caused by unidentifiable space debris and the damage it causes? Two options might be worthy of consideration and discussion in this respect. Both would clearly require formal additions to the Liability Convention, most probably through additional protocols.

[8]See e.g. S. Gorove, *Issues Pertaining to the Legal Definition "Space Object"*, 2 Telecommunications & Space Journal (1995), 135 ff.

[9]Convention on Registration of Objects Launched Into Outer Space (hereafter Registration Convention), New, York, adopted 12 November 1974, opened for signature 14 January 1975, entered into force 15 September 1976; 14 ILM 43 (1975); 28 UST 695; TIAS 8480; 1023 ENTS 15.

Firstly, there would be the preventive option of establishing a worldwide monitoring entity, tracking debris not only in a more comprehensive fashion than is already the case, but also making these data available to all those potentially interested. It might well be that too often lack of information on certain launches, the discarding of satellites, and accidents or incidents in outer space is at the basis of the inability to track a certain piece of space debris causing damage.

As a matter of fact, some minds keen on the problem have already gone one large step further. Thus, the University of Arizona has set up a project not so much to create a global entity monitoring debris, and its coming into existence, but aiming to actually clean up outer space or at least some junkyard and graveyard orbits.[10] It will be obvious, however, that financial and other obstacles would preclude creation of such a space garbage collector for the near future.

Secondly, the option to establish an international guarantee fund has repeatedly entered the discussion. Many states know of such a construction nationally with regard to road transport: damage caused by unidentified and unidentifiable cars (read their owners and drivers) to innocent victims is compensated from such a fund Similarly, an international guarantee fund might compensate damage caused by unidentifiable space debris. The fund should be financed at least largely by the active space-faring community. One could think in this respect of an obligatory contribution to the guarantee fund for every individual launch in the form of a particular percentage of the launch cost.

3.3. The definition of "damage"

The third major problem related to the Liability Convention from the perspective of space debris concerns the definition of "damage". The general consensus is that the term "damage", as defined by Article I(a) of the Convention, is confined to physical damage to property and, in the case of humans themselves, mental damage."[11]

The mere pollution of the space environment, which is almost by definition the result of the coming into being of space debris, is not "damage" in such a sense that it triggers application of the Convention. It may be hard to substantiate any damage later on caused by the existence of such pollution to scientific or commercial activities. Yet, a way should probably be found to attach a direct and substantial price tag to creating such space debris, with the "fine" thus paid going into the guarantee fund alluded before. Obviously, this would be a solution for a distinct protocol to achieve.
Another aspect of the issue of "damage" as related to space debris may require a less formal solution. Including in the operative definition of damage. the indirect damage which commercial operations would offer from particular pieces of space debris would only need an authoritative interpretation, for example by way of an UNCOPUOS-guided Resolution. A similar solution could be found in including the damage which scientific activities suffer from space debris, in terms of the high costs it would take to

[10]See P. Stems & L. Tennen, *The Autonomous Space Processor for Orbital Debris (.ASPOD) Project and the Law of Outer Space: Preliminary Jurisprudential Observations.* in Proceedings of the Thirty-Eighth Colloquium on the Law of Outer Space (1996), 107-20.

[11]See P.L. Meredith & G.S. Robinson. Space Law: A Case Study for the Practitioner (1992), 62-4; C.Q. Christol, The Modem International Law of Outer Space (1982). 97-100: S. Gorove, Developments in Space Law (1991). 224 5. 242.

achieve the intended results, in the notion of damage as relevant under the Convention.

4. The Liability Convention and private space activities.

The present regime of international space law does not take private space activities into account in any detailed manner. International liability for space activities and their Juridical consequences therefore exclusively rests with the states. This holds good. apparently, also in cases where the activities under consideration are partly or even exclusively undertaken by private entities. In this case, one major problem stands out when it comes to effective adherence and application. It even precedes any discussion on the effectiveness of the dispute settlement system incorporated in the Convention and its application to cases of involvement of private entities. The gradual privatization of space activities necessitates a closer look at the attribution of liability as dealt with under the Convention.

4.1. *Liability at the international level*

It is true that the Liability Convention does provide for a clear, fourfold definition of the entities liable in case a space activity causes damage to another state or its entities. The definition operates through a focus on the launch of the space object which causes the damage under consideration. More importantly, in each case it is a particular state or number of states being made liable. Thus, the Convention qualifies cumulatively as liable states the state which launched the relevant space object, the state which procured that launch, the state whose facility was used for that launch, and finally the state whose territory was used for that launch.[12]

In this regard, the definition of 'procurement' is generally agreed upon as 'causing the launch to occur, which boils down in most cases to paying for it. Furthermore the (seemingly) clear definition of who is liable under what kind of liability and for which damage is further enhanced by provisions for example detailing the rules for cases where different states qualify as liable states.[13]

However, the operation of the Convention's regime in cases of private involvement is far from clear. What if no officials of a state or state agency are involved in the conduct of the relevant launch, but only employees of a private launch provider? Does this qualify the state whose nationals such employees are as the liable state? Or does it, in the alternative, make the state liable whose nationality the private entity has - which could very well be another state? Both such interpretations on the basis of nationality would invoke an equation of private activities and state activities as provided by Article VI of the Outer Space Treaty in the application of Article VII of the Outer Space Treaty and the Liability Convention.

Or should, under this criterion, *no* state be considered the liable one? Could the Liability Convention then nevertheless, as if applying by proxy, make the launching entity directly and privately liable? Similar problems may arise regarding private entities procuring launches, or offering their facilities for launch.

Only on the issue of territory, no private entity could juridically 'take the place' of a state. At least one state could always be pinpointed as the liable entity in case of damage. But even the criterion of territory will no longer serve as an absolute guarantee

[12]See Art. I(c), Liability Convention.

[13]See Art. IV. V. Liability Convention

that someone would be obliged to compensate damage in applicable cases.[14] The Sea Launch-project now well under way, is about to conduct the first launches from the high seas - outside any state's territory in a legal sense! - soon.[15]

4.2. Liability at the national level

Some states have already solved this problem on their own account and as far as relevant for themselves. Faced with the consequences of private space activities under this international liability regime, they enacted national laws specifically - dealing with space and space activities of private enterprise[16]. These laws generally include provisions for reimbursement by the private entity licensed under the national law of any compensation paid out by the states as a consequence of international liability claims.

The point is, however, that the framework for such national legislation is not properly defined on the international level. As a consequence, such national legislation threatens to preclude any uniform interpretation and application of the terms of the Liability Convention. Gaps and overlaps in terms of scope may appear, threatening the consistency and uniformity of the application of the international liability regime as a whole, and thereby its effective operation.

Moreover, in the absence of unequivocal and authoritative international guidance, the 'practice' of national space legislation effectively starts working the other way round as well. It may constitute opinio juris sive necesitatis of relevant states establishing customary legal character of certain interpretations.[17] Thus, a strong argument can be made for looking at national legislation for the purposes of determining the legally correct interpretation of international legal principles and notions.

It is true, that in all cases obligations to reimburse the state are applied to space objects launched by private entities from the respective territory. However, such obligations are only rarely made applicable as such to private entities who *launch* the space object in question, *procure such a launch* or *lend their facility* for such a launch, on the basis merely for example of that private entity having the nationality of that state.

Should one indeed read from this that it is possible that under the criteria of launch itself, procurement or facility no state might be found which qualifies as a liable entity, because it were private entities launching,

[14]Cf. A. Kerrest de Rozavel, *Launching spacecraft from the sea and the Outer Space Treaty: The Sea Launch Project,* paper presented at the Fortieth Colloquium on the Law of Outer Space, Turin, Oct. 1997 (to be published 1998), 6: "the territory of launch is, at the moment, a "lock" in the system. (...) In the territory criterion is left aside because of a launch from international domain, this lock is being abandoned".

[15]See e.g. A. Kerrest de Rozavel, *The Launch of Spacecraft from the Sea,* in Outlook on Space Law over the Next 30 Years (Eds. G. Lafferranderie & D. Crowther)(1997), 217 ff.

[16]This concerns the United States, Sweden, the United Kingdom, Russia and South Africa, and (to a certain extent) France *vis-a-vis* Arianespace. National (or in the case of France semi-international) legal measures have been taken by those states, *inter alia* providing for systems for licensing relevant private entities and dealing amongst others with the international liability of the licensing state for the activities of such licences.

[17]See e.g. I. Brounlie. Principles of Public International Law (3rd ed.) (1979). 4-12.

procuring and lending their facility for that launch? Then we might be in trouble if, indeed, the criterion of territory will turn out no longer to be the guarantee of finding at least one state liable.

Or should one continue to be dependent upon discretionary unilateral action, such as in the case of Sea Launch where the United States obliged Boeing Commercial Space Corporation to obtain a license under the United States Commercial Space Launch Act?[18]. While Boeing CSC may be the largest shareholder in the Sea Launch consortium, with its 40% share it is not the majority shareholder. Moreover, Sea Launch itself is registered in the Grand Cayman Islands and thus, legally speaking, a consortium with the nationality of the United Kingdom![19]

4.3. Linking international liability and national liability

Essentially, two options are open to solve these uncertainties. Firstly, a generally accepted and very broad definition of liable state would be accepted. It should include in the term "state" those private entities with the nationality of that state, for purposes of launching, procuring launches and lending facilities for launches. Secondly, an amendment creating direct private liability under international space law would prevent national authorities from applying, consciously or unconsciously, their own, far from harmonized interpretations by means of national law.[20] Solving this problem should be given high priority, before more and more states will find themselves confronted with the potential consequences of the ongoing privatization of space. They will then perceive a need to issue national regulation vis-a-vis private enterprise without any authoritative international guidance as to its scope and contents. The result may be not just gaps and overlaps, but 'flags of convenience', 'license shopping' and a growing disinterest in taking care of liability issues altogether.

5. Conclusion

The increase in private involvement in space

[18]Under Sec. 6(a)(3)(A), Commercial Space Launch Aa (Public Law 98-S7S, 98th Congress, H.R. 3942, 30 October 1984; 98 Stat. 3055, amended by Commercial Space Launch Act Amendments, Public Law 100~657. 100th Congress, H.R. 4399, 15 November 1988; 49 U.S.C. App. 261S; 102 Stat 3900). by being, in view of its 40% share controlled by Boeing CSC, Sea Launch comes within the scope of the definition of a United States corporate national.

[19]See e.g. the Case Concerning the Barcelona Traction Light and Power Company, Limited (Second Phase) (Belgium v Spain), 5 February 1970, I.CJ. Rep. 1970, 4, at 42.

[20]Cf. e.g. H.A. Wassenbergh, *Public Law Aspects of Private Space Activities and Space Transportation in the Future*, in Proceedings of the Thirty-Eighth Colloquium on the Law of Outer Space (1996), 247-8; H A Wassenbergh, A *Launch and a Space Transportation Law, separate from Outer Space Law?*, 21 Air & Space Law, (1996), 29-31, for ideas on a private liability system for space activities. Such public international law systems dealing with private liability, can be found for instance in the neighboring field of air law. See e.g Warsaw Convention for the Unification of Certain Rules Relating to International Transportation by Air, Warsaw, done 12 October 1929, entered into force 13 February 1933; 137 LNTS 11; dealing with private liability for damage sustained by passenger$ and cargo; and Rome Convention on Damage Caused by Foreign Aircraft to Third Parties on the Surface, Rome, done 7 October 1952, entered into force 4 February, 1958; 310 UNTS 181; providing for private liability for damage sustained by third parties on the ground. Cf. also P.N. Kooijmans, *State Succession and the 1929 Warsaw Convention: a Case Study*, in Air and Space law: De Lege Ferenda (Eds. T.L. Masson-Zwaan & P.M.J. Mendes de Leon) (1992), 130, on the Warsaw Convention as a "law-making treaty] the only aim of which is the unification of private law".

activities and the growing risks presented by space debris are the two major problems requiring priority treatment when it comes to the Liability Convention In these areas, particular and substantial success should and could be achieved in the enhancement of adherence to, and much more prominently, effective application of the Liability Convention.

Here, the essential choice is between formal amendment (in whatever form) or informal but authoritative harmonization of interpretations. In respect of the. Liability Convention generally speaking the informal approach seams to provide the best chance of furthering the professed aim.
Perhaps, from the practical and political point of view, the threats posed by largely uncontrolled space debris and largely uncontrolled privatization may not require a large measure of priority attention. But it is better to have a well-balanced elaboration of the Liability Convention in place before third party damage caused by space debris or by a privately launched space object actually occurs.

In the Netherlands there exists a saying - and there will be little doubt that many more countries know similar wisdom - that usually one starts filling up the drinking pit only after the calf has drowned. Metaphorically speaking, it would be a real pity if we would not start to fill up the pit now, at relatively little cost, and thereby save a calf or two.