This article from International Institute of Space Law is published by Eleven international publishing and made available to anonieme bezoeker

Remarks on the Responsibility and Liability for Damages Caused by Private Activity in Outer Space.

Armel Kerrest
Professor of International Law
Faculty of Law, University of Western Brittany.
Centre de Droit et d'Economie de la Mer (CEDEM)
IISL ECSL *

Abstract:

The question of liability for damages caused specifically by spacecraft is well documented. The victims are relatively well protected by article The Outer Space Treaty and the Liability Convention. However, nowadays, the main issues of debate concern potential damages of other kinds caused by general space activities and not only by possible "traffic accidents".

Whilst the launching State is absolutely liable for damages caused by space objects, the issue of liability and responsibility for other damage is still unclear under the Outer Space Treaty.(1967). The definition of direct damage is found in OST article VII. The OST establishes international responsibility of the "appropriate State" which bears international responsibility for national activities in outer space. The interpretation of this disposition is still open for debate.

Unlike liability under article VII, responsibility under article VI is a common international responsibility. There must be present damage, and a violation of international law in the sense of there being a wrongful act of the State concerned. Thus, the main issue is the extent of the States' control obligation over private activities under international law.

The other question which is a major issue, is the interpretation of the words: "national activities in outer space". What about activities partly conducted in space and partly on earth which is the case in nearly every space activity?If a wide meaning is applied, it will impose an obligation to control, and responsibility for such activities on the State. (Cf. article III OST). Bearing in mind the current extent of private activities in outer space, such an interpretation would have dramatic consequences.

The question of proving the extent of the international rule remains unanswered, as are questions relating to the lack of a judicial control in these circumstances.

Introduction

The new trend towards a privatisation of space activities is a major challenge to space law. Even if, at the time of the outer space treaty (1967) and of the Liability Convention (1972),[1] private activities were considered and

* Email: Armel.Kerrest@univ-brest.fr

Copyright © 1997 by Armel Kerrest.
Published by the American Institute of Aeronautics and Astronautics, Inc. With permission. Released to AIAA to publish in all froms.

[1] 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, 610 U.N.T.S. 205 18 UST. 2410 (1967) 6 ILM 386 (hereinafter referred to as OST).
Convention on International Liability for Damage Caused by Space Objects Oct 9 1973 961

This article from International Institute of Space Law is published by Eleven international publishing and made available to anonieme bezoeker

authorised, they were rare. Nowadays, we may see an explosion in the number of projects initiated by private companies: Private telecommunication satellites (television and telephone), but also others which were probably unimaginable only a few years ago such as private launches[2], and even private mining of asteroids.[3].

With the rise of private activities in the international domain, questions of the control of such activity arise, especially relating to issues of liability and responsibility. The situation on the high sea is not very encouraging as it is very difficult to control such activities. The solution is, of course, international legislation through co-operation. Given the structure of international society, this process is a very long and difficult one which has involves issues relating to the sacrosanct principle of sovereignty of states. Another possible solution is to limit the extend of the international domain by giving certain sovereign rights over those zones. This approach was used for issues relating to the conservation and utilisation of natural living resources of the sea (creation of the EEZ). In outer space we are now at the crossroads. We can choose between a state of anarchy and the maintenance of a special control exercised by states over space activities.

U.N.T.S. 2389 (hereinafter referred to as "Liability Convention")

2. The Sea Launch project (See our " The Sea Launch project, Launching spacecraft from the sea and the Outer Space Treaty : this colloquium at 1997 Turin IISL 3.15) and more generally: A. Kerrest "The Launch of Spacecraft from the Sea" in: "An Outlook on Outer Space Law in the Coming Thirty Years". Lafferranderie et Crowther edit. (Kluwer 1997).

3 See New Scientist editorial: A giant leap for lawyers: the race is on to grab a piece of celestial body and the article of Kurt Kleiner on the same subject on p.18 September 20, 1997.

Preliminary remark: Liability and Responsibility

Like some other languages, French uses only a word for both these notions: "responsabilité". For a French speaking lawyer, it is very interesting, if difficult, to analyse the distinction made in English between these two principles. In fact the French word "Responsabilité" has two meanings. When the little Prince of Antoine de Saint Exupery writes that he is "responsable de sa rose" (responsible for his rose), it does not only mean that the Prince is liable but that he is responsible i.e. that he has to take care of his rose.

If we examine the English use of both words, the distinction is less clear. In the specialised fields of international domains, space law and the law of the sea, this distinction seems to be used in a way which may please a Cartesian reason. Professor Stephen Gorove is one of the rare authors who deal with this distinction in a way appropriate to space law:

> *"It should be stressed that in the field of international space law two closely connected terms have been used: "liability" and "responsibility". Neither of these terms has been defined in space law but the term "liability" has been used to set the launching state's liability for damage caused by space objects, whereas the word "responsibility" has been used to mandate international responsibility by the appropriate State party for national activities in outer space.*
>
> *Even from this brief reference to the use of the two terms, it appears that in connection with "liabilities" we are dealing with legal consequences (mostly in terms of damages) arising from a particular behaviour. In contrast, it seems that when we speak of "responsibilities", we are dealing primarily with obligations imposed on people and institutions who are supposed*

This article from International Institute of Space Law is published by Eleven international publishing and made available to anonieme bezoeker

to carry out certain activities or are accountable in given situations, though not necessarily in the form of compensation for damages. Thus to some extent the two concepts are interrelated. Normally, liability deals with compensation for damages resulting from loss of life, personal injury loss or damages to property, whereas responsibility may not always include compensation for damages but could include criminal accountability. [4]

In the Law of the Sea Convention[5] this distinction is also made but the French word is not the same, the terms "the state has the responsibility are translated by : "l'Etat doit contrôler". In the OST both terms are used. Basically, responsibility is connected with the obligation to control and thus with a fault or a wrongful or unlawful act. Liability may be a consequence of a fault but may also be related to an act without any fault, it is then "objective liability" i.e. strict or absolute liability. On the other hand, an claim relating to responsibility must be based on a fault or breach of the law. In the case of "objective liability" there is no fault, and even no wrongful act; it is a liability imposed without any sense of moral culpability. For reasons, mainly relating to the wish to offer protection to a possible victim, it has been decided to make somebody liable in compensation irrespective of their own actions. The choice of the liable entity depends on its efficiency to provide compensation, to avoid damage or even on the possible profit generated by the activity. If the owner of a oil tanker is held liable by the Brussels convention (1969)[6] it is both because he is supposed to be able to pay or to take insurance cover and because he is responsible for the good maintenance of the ship.

We have to keep this in mind when we turn to space activities. Just like the owner of the ship, the launching state may very well have nothing to do with the control of the satellite. In such cases, the need to protect the victims is paramount. It is very useful in case of ultra-hazardous activities where the damage may be huge and where, given the technical complexity of the processes, it is extremely difficult to find and prove fault.

Both liability and responsibility are of course interrelated. Being responsible will, in the main, impose a duty to compensate the victim who has suffered damage due to a lack of control or mismanagement. On the other hand, a person who is liable will certainly wish to control the activity in question to be sure of avoid incurring heavy losses.

I The liability of private actors in outer space.

Private companies are not subjects of international law and, as such, they cannot be parties to cases before international tribunals or courts. Only states and, in some cases International Organisations, are granted such status. A possible solution is to bring legal action on a national level. There, municipal law applies which can in certain instances incorporate international law. This does not seem to be the case with the OST which has no direct effect on citizens. When there is a national space law, it may establish strict or absolute liability on operators as a burden to private actors acting in outer space, and insurance may be compulsory. In this case, liability does not derive from the liability

4 S. Gorove, «Liability in Space Law: An Overview» dans *Developments in Space Law – Utrecht Studies in Air and Space Law*,-Dordrecht, Martinus Nijhoff, 1991 at pp. 224-225.

5 United Nations Convention on the Law of the Sea open for signature on 10 December 1982 in Montego Bay Jamaica (hereinafter referred to as "Montego Bay Convention")

6 International Convention on Civil Liability for Oil Pollution Damage Brussels 1969 (in force 19 June 1975) (9 ILM 45) hereinafter referred to as "Brussels Convention")

This article from International Institute of Space Law is published by Eleven international publishing and made available to anonieme bezoeker

convention which does not apply to private persons, but from national space law itself.

In the Liability convention, only the launching state is taken into consideration. This state may very well transfer the burden of the liability to private companies or to insurance. It may also, to ease insurance, put a ceiling on the liability. This is the case for French Guyana Kourou launches. The private companies acting there, like Arianespace, are liable and must take out insurance to a certain level (here 400 Mfr). If the damage is higher than such a level, France must assume the extra cost without any ceiling in accordance with the liability convention.

If there is no special national space law, no lex specialis, the lex generalis applies. Most of the time it will be ordinary liability i.e. fault liability with all the difficulties already mentioned. In some cases the municipal law uses strict liability in case of ultrahazardous activities. All this depends on the municipal law. It would be a very difficult task for the victim to obtain compensation. Because of the nature of space activity, the risk is really international. The victims have to deal with the variety in the law, the different tribunals, the difficulty of obtaining compensation from a judge, and the issues of legal costs. Moreover it may be necessary to indulge in some "forum shopping". By choosing a nationality, the private company can choose the most favourable liability law.

II The absolute liability of states.

The principle of liability

Even if the provisions of OST and of the Liability convention are not quite clear as far as private activity is concerned, it may be pointed out that the states are responsible and liable for any space activity of entities under their control. The OST, article VII and the Liability Convention put that burden on the "launching state". It is an absolute liability which does not include any moral consideration. The only point to consider is the damage on the one hand and the activity on the other hand.

Because of our Judeo-Christian philosophical background, we are very much linking liability to a fault even if this fault is only to conduct a ultra hazardous activity. We do not readily accept liability being imposed on someone who is not directly involved in the activity.

We have to remind ourselves of the very basis of the rule. At the beginning of the space era, states acting in outer space wanted to obtain a freedom of "navigation" and in general a freedom of use in a place which was often claimed as a part of state territory. States "sovereignty expanded "ad infinitum". To avoid any criticism and to make this change acceptable for the benefit of two states only, they decided to guarantee compensation to third party victims of space activity through an absolute liability rule. As is always the case for liability without fault, imputation had to be decided. Given their special role in launching objects into outer space, the launching states where chosen as liable states. This choice is the best for many reasons. A launch in outer space is impossible to hide, those states were very powerful, rich, and, as such, able to compensate for any possible damage. Moreover, the burden is shared with the other states taking part in the launch, especially the states which procure the launch.

Thus an important distinction was made between the actors of space adventure on the one side, and terrestrial third parties, potential victims, on the other. This distinction is still made today: absolute liability protects "innocent" victims. In the case of other space actors, a fault has to be proven.

The extend of the liability

The liability convention states that : *"A launching State shall be absolutely liable to pay compensation for damage caused by its space object on the surface of the earth or to aircraft flight".*

This article from International Institute of Space Law is published by Eleven international publishing and made available to anonieme bezoeker

The definition of "space object" is often discussed. In some cases this discussion takes place with a view to lowering liability. In fact, the word "object" is the widest possible. It includes any kind of "objects", whatever their size, whatever their capacity to move by themselves etc. The term itself is so wide that we have to define : "man launched space object".

The main issue is much more the causal relation, the interpretation of "by" (damage *by* the space object). The liability in the case of direct damaging contact is obvious. But it must be highlighted that no text limits liability to the fall to earth of the space object. It is difficult to imagine possible damages which have not yet have taken place. The damage may be caused by the space object without its falling to earth. Let us imagine certain situations: a spacecraft equipped with mirrors to illuminate a town, goes out of control and illuminates a telescope for some months making any research impossible. Damage may also be caused by data from a remote sensing satellite. Other damage may occur following improper work by a GPS satellite used for Air Navigation Control. Given the lack of judicial decisions on these issues, it is very difficult to speak with certainty as to whether there is a sufficient causal link between the activity in question and the damage incurred. Some of these problems may be considered not as direct but as indirect damage.

Taking into consideration the very basis of space liability, it seems possible to make a distinction between damage caused to third parties and damage caused to people participating in the space activity. In the case of a failure in the GPS, the aircraft company using this system is participating in the activity which includes the space activity. No absolute liability should be involved and the issue must be resolved by reference to the contract. As for the victims in the aircraft itself, they may be considered as third parties but the damage should perhaps not be considered as a direct damage. On the other hand, the scientists working at the above mentioned observatory whose activity is disturbed, are third parties. They suffered a direct damage by a space object.

III The responsibility of states for space activities.

The "national activities"

If the damage cannot be considered as being directly caused "by" a space object, but by the space activity or by an activity partly using outer space, the victims are not left without any possible action. Responsibility of the state must be taken into consideration. The OST article VI states : " *States Parties to the Treaty shall bear international responsibility for national activities in outer space...whether such activities are carried on by governmental agencies or by non-governmental entities*". This is a unique provision in international law. In general international law, states are only responsible for their own activities. In the case of private activity, a state is only responsible if it fails to control such activities. In the well known US-Canada Trail Smelter case[7], the Arbitral Tribunal decided that Canada was responsible for a lack of efficient control of the smelter's activity. Canada was not responsible for the pollution as such. On the other hand, the OST article VI provides that the state is internationally responsible for any activity in outer space, either for a state activity conducted by its own agencies or for any private company which may be considered as a "national space activity"; in fact an activity conducted by a company enjoying the nationality of that state. The appropriate state is not only responsible for a lack of control, as would be the case without the OST provisions, but it is also responsible for any national activity taking

[7] US-Canada Trail Smelter Case 11 March 1941 Arbitral Award 3 U.N.R.I.A.A. 1911

This article from International Institute of Space Law is published by Eleven international publishing and made available to anonieme bezoeker

place in outer space, such activity being considered as its own activity. This is much more onerous. The obligation of authorisation and control which is provided for in the same article is only a definition as to the obligation of the state. It does not modify the principle of assimilation of private activities with public ones. The consequences of this are rather important : in the case of a violation by the private entity of any international regulation or principle, the state should be responsible without having the possibility to avoid liability by proving ignorance of such a violation, nor even by showing it had made its best effort to control the activity.

This action and thus this violation are considered as its own.

The existence of a fault.

International responsibility is not absolute liability, by nature responsibility is linked with fault. Concerning states, we prefer to use a notion free from any moral background: the breach of the law. Thus the extend of states' responsibility is a matter to be decided by the applicable law. The law to be taken into consideration is international law as a whole as defined in article 38 of the statute of the ICJ, not forgetting principles of international law and of space law, including for instance principles of peaceful use, non appropriation and benefit of all people.

The appropriate responsible state

Responsibility is no more directed to the launching state like it is for liability. Responsibility as seen before is much more linked with issues relating to control. It must take into consideration the real control behind the operation. The responsible state is the "appropriate state", a very vague provision which is connected with the notion of "national activity". The state is responsible for any national activity in outer space. The question is then to define "national activities". Are they only activities conducted by nationals ?

If we take into consideration national space laws, we can see that they apply very broadly. The US Commercial Space Launch Act refers obviously to activities conducted on or from the territory of the United States. It refers also not only to citizens of the United States but also to foreign companies controlled by US citizens. This seems to indicate that "national space activities" are to be considered broadly.

Conclusion: remarks *De lege ferenda*

The Achilles' heel of this system is that it is wholly state oriented. Both responsibility and liability are imputable to a state. It is often an advantage as far as technical and financial capacity are required. But concerning the question of the settlement of dispute, it may be more interesting for the victims to be able to sue a private company before a national judge. The international settlement of disputes is a political issue. The State of the victim who has suffered loss brings its own action and is free to act. The liable or responsible state can, in fact, use its sovereignty to jeopardise the solution of the dispute refusing the control of any international judge.

In a country where a comprehensive national space law is in force, which is only the case in the United States, it will be possible to act before a national judge on the basis of this national law. This action may be pursued against the state or against the company depending on the national rules. Every country conducting space activity should enact a national space law dealing with liability, responsibility and control. The US Commercial Space Launch Act may serve as a useful pattern. An international convention unifying

8 Luigi Condorelli: *La réparation des dommages catastrophiques causés par les activités spatiales"* in Travaux des journées d'études juridiques Jean Dabin Brulant Bruxelles 1990 ff 263-292

This article from International Institute of Space Law is published by Eleven international publishing and made available to anonieme bezoeker

the main rules relating to liability for damage caused by private entities should be used to avoid too much diversity in levels of protection offered against an activity which is by nature very international.

Above all, it is necessary to maintain the present system and its burden of absolute liability and responsibility on states. It will act as an ultimate safety net. We need only look to the US CSLA to see how useful it is. The main aim of this law is to regulate the relations between the US Government and the licensed private entity, taking always into consideration the international obligations of the state on the one hand and the utility for the US of a private activity in outer space on the other.

There are certainly room for improvements on the question of settlement of disputes; an international body should be designated as the appropriate forum and, at the very least, decisions of the Claims Commission provided for in article XIV of the liability convention should be made compulsory. Such action was not acceptable at the time of the cold war, but the time is now appropriate for change.

To schematise the issue of compensation for damage caused by space activities:

I *On a national level (private entity):*

- **1 The Law**: National, either special or general.
- **2 The liability:** Either fault, strict or absolute liability as determined by the national law - possible obligation of insurance, possible ceiling.
- **3 The judge** : National.
- **4 The damage**: Any damage caused by any activity, (either "caused by the space object"» or by any activity) (either on Earth or in space).

II *On an international level: Liability under OST article VII or liability convention (states)*:

- **1 The Law**: OST or Liability Convention as lex specialis.
- **2 The liability:** Absolute liability without any ceiling for damage on earth, fault for damage "elsewhere than on the surface of the earth".
- **3 The judge:** "Claims Commission" and generally International settlement of dispute, no compulsory judge.
- **4 The damage:** Only the damage "caused by the space object".

III *On an international level: international responsibility (states):*

- **1 The Law:** General international law.
- **2 The liability:** International responsibility for breach of the international law, restitutio in integrum or adequate compensation.
- **3 The judge:** International settlement of dispute, no compulsory judge.
- **4 The damage:** Any damage caused by any activity, (either "caused by the space object" or by the activity) (either on Earth or in space).