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Liability for Damage Caused by Space Objects: The Interplay between International and National Law

Summary: 1. Premise: the international liability regime – 2. State liability for damage caused by private operators and the role of national laws – 3. The alternative role of domestic liability regimes – 4. Problems relating to the compensation of private claims – 5. Questions related to redress by the State in whose territory damage was sustained – 6. Solutions in case of in-orbit transfer of the space object.

1. *Premise: the international liability regime*

As known, international space law provides, through Article VII, Outer Space Treaty (OST), and the 1972 Liability Convention (LC), for a liability regime for damage caused by space objects which operates at the level of public international law, and not of domestic law, based on which the *launching State*[1] is liable towards a State which has suffered damage, or which is claiming on the part of physical or juridical persons who have suffered damage[2]. The approach is therefore different from the usual path followed by international conventions dealing with other kinds of dangerous activities (such as, among others, damage caused by aircraft on the surface of the earth[3]), whereby States parties are requested to implement a domestic liability regime of operator's liability. On the contrary, the space liability regime does not require implementation in domestic legislation[4],

[1] The concept will be developed in paragraph 2, below.

[2] There is extensive literature on the topic. For a brief survey and further references, see M. Pedrazzi, *Outer Space, Liability for Damage*, in *Max Planck Encyclopedia of Public International Law*, 2008, www.mpil.de.

[3] See the *Convention on damage caused by foreign aircraft to third parties on the surface*, opened for signature in Rome on 7 October 1952, in 310 *UNTS* 1958, p. 182.

[4] See R.L. Spencer, Jr., *International Space Law: A Basis for National Regulation*, in R.S. Jakhu (ed.), *National Regulation of Space Activities*, Dordrecht, 2010, p. 1, p. 9.

subject to a *caveat* that I will develop further on, as the launching State is liable in any case.

Nonetheless, this regime may interfere with domestic legislation at various levels, and domestic legislation in connection with such liability, although not necessary, is all the same advisable. The purpose of this contribution is to briefly consider some of these aspects, without any claim of completeness.

2. *State liability for damage caused by private operators and the role of national laws*

To start dealing with the interplay between international and national law, it is necessary, however, to say something about the scope of the international liability regime, in particular in relation to private operators of space objects. In fact, there is no doubt that the State is liable not only for damage caused by its space objects, but also for damage caused by private space objects.

The LC (Art. II and following) identifies the launching State as the State liable for damage caused by a space object. The launching State is defined in Art. I(c) based on four alternative criteria:

i) the State which launches;

ii) the State which procures the launching;

iii) the State from whose territory the launching takes place;

iv) the State from whose facility the launching takes place.

The same classification was already used in Art. VII, OST, although there the expression 'launching State' did not appear[5]. Provided that each of these criteria may be relevant and that, taken altogether, they may lead in certain cases to identify multiple launching States, there is one criterion that is overtly paramount when we consider private space activities: the State from whose territory the space object is launched. It is paramount because the great majority of space objects are launched from the territory of a State, and in many cases this is also the State to which the object, and the operator, are most connected. This means that, based on the territorial

[5] See A. Kerrest and L.J. Smith, *Article VII*, in S. Hobe, B. Schmidt-Tedd, K.-U. Schrogl (eds.), *Cologne Commentary on Space Law*, vol. 1, *Outer Space Treaty*, Cologne, 2009, p. 126, p. 136 and ff. The 1968 *Astronaut Agreement* would use the term 'launching authority'.

criterion, in case of damage, for the great majority of private space objects at least one State would be liable.

But we need to consider whether a State would be liable according to other criteria: the answer to this question is necessary to solve cases of launches from the high seas, from international airspace or from the International Space Station (ISS), but also to identify other possible launching, and liable, States apart from the territorial State. Well, in the specific cases of launch from a ship or aircraft, these could be considered as facilities belonging to their national State (i.e. the State in which they are registered). Alternatively, the territorial State from which the aircraft's take-off has taken place could be considered as the State from which the launching has taken place. More importantly, according to some, the national State of the person or company undertaking the launch could be qualified as the *State procuring the launch*, especially in the case in which that State, in compliance with Article VI, OST, had licensed the activity in question[6].

In my view, and in the view of most commentators, the effect of Article VI, OST, is to *attribute* private space activities to the national State: therefore, if a private operator launches a space object, from wherever the launch takes place, the operator's national State qualifies as the *State which launches* the space object. Which means that not only the territorial State, but also the national State are automatically *launching States*. This is certainly true for the States parties to the OST. Now, we need to consider that the great majority of States active in space, or whose nationals are active in space, are parties to the OST. Personally, I would consider that the main OST provisions, including Article VI, have entered the field of customary international law[7]. Therefore, the above conclusion would be valid for all States.

There remains one case to be considered: that of a private entity *procuring the launch* of a space object. Applying the same concepts indicated before, I would consider that also in this case the national State is procuring the launch, as the private operator's activity would be attributed to the national State. One has to verify what national laws provide in these cases. The French law provides, for example, that authorization is needed by:

> "Any natural person having French nationality or juridical person whose headquarters are located in France, whether it is an operator or not, intending to procure the launching of a space object or any

[6] See, among others, T. Masson-Zwaan, M. Hofmann, *Introduction to Space Law*, 4th ed., Alphen aan den Rijn, 2019, p. 27.

[7] See, among others, B.B.Y. Keskin, *Tracking the Evolution of Customary Rules in International Space Law*, in *Journal of Space Law*, 2022, p. 180 and ff., p. 194.

> French operator intending to command such an object during its journey in outer space"[8].

Obviously, the provision of authorisation in compliance with Article VI OST does not necessarily imply that France considers itself as the *launching State* in these cases, and therefore does not necessarily amount to acceptance of liability for damage caused by the authorised activity. Nonetheless, it is a signal that the State is conscious that it might be called to respond, in a way or another, including liability for damage. The truth is that one must be very cautious in inferring from national law either the interpretation of a treaty, which could contribute to a subsequent practice capable of influencing interpretation at the international level (see Article 31.3(b), Vienna Convention on the Law of Treaties), and even more, practice and *opinio juris* possibly contributing to the formation of customary international law. The fact that a State legislates on the appropriation of celestial bodies' resources may be a good indication that it considers such appropriation as internationally lawful (or wishes to promote its lawfulness); but the fact of providing authorisation for a certain activity could just signify the will to control that activity, while it does not necessarily imply that the State considers to be bound to issue such an authorisation or that it considers that it would be liable for any damage caused by that activity.

Now, while the co-existence of multiple launching and liable States can only be solved by means of an international agreement among them (due to joint and several liability, under Article V LC, solved will mean that each of A, B and C may be called to pay, but that the one who pays may be granted the right to claim reimbursement of either a part or the whole from the others)[9], it is in the interest of the launching State of private

[8] Loi n° 2008-518 du 3 juin 2008 relative aux opérations spatiales, Article 2 : « Doit préalablement obtenir une autorisation délivrée par l'autorité administrative : … 3° Toute personne physique possédant la nationalité française ou personne morale ayant son siège en France, qu'elle soit ou non opérateur, qui entend faire procéder au lacement d'un objet spatial ou tout opérateur français qui entend assurer la maîtrise d'un tel objet ou d'un groupe d'objets spatiaux coordonnés pendant son séjour dans l'espace extra-atmosphérique ». The unofficial English translation is taken from the *Journal of Space Law*, 2008, p. 453 and ff. The original version here reproduced is the result of later amendments.

[9] See L.J. Smith, A. Kerrest, *Article V (Joint Launch/Joint and Several Liability)*, in S. Hobe, B. Schmidt-Tedd, K.-U. Schrogl (eds.), *Cologne Commentary on Space Law*, vol. II, *Rescue Agreement, Liability Convention, Registration Convention, Moon Agreement*, Cologne, 2013, p. 141 and ff., p. 145 and f.; A. Kerrest, *The Concept of the 'Launching State' in Commercial Launch Ventures*, in J. Wouters, P. De Man, R. Hansen (eds.), *Commercial Uses of Space and Space Tourism. Legal and Policy Aspects*, Cheltenham (UK), 2017, p. 3 and ff., p. 6.

space objects to provide in its domestic legislation for the possibility for the State to obtain the recovery of the burden of compensation paid, at least in part, from the private operator. Here, in fact, the State faces two competing interests: that of avoiding financial losses due to the action of a private party, and that of supporting private space industries. The two diverging interests may be composed by imposing a cap to the amount of money that may be recovered from the private company, and at the same time an obligation of insurance, up to the cap's limit. The State, in the end, will keep its loss as far as the amount of compensation exceeding the cap is concerned (exceptions may be provided in case of violations of the provisions of the law committed by the private party: in this sense, the Belgian law, Articles 15 § 4, 16 § 2, 19 § 3[10]; French law, Article 14, in case of wilful misconduct). Such kind of provisions are included in most national laws[11]. One should also recall the recommendation contained in the 2013 resolution of the General Assembly of the United Nations containing "Recommendations on national legislation relevant to the peaceful exploration and use of outer space"[12]:

> "7. States could consider ways of seeking recourse from operators or owners of space objects if their liability for damage under the United Nations treaties on outer space has become engaged; in order to ensure appropriate coverage for damage claims, States could introduce insurance requirements and indemnification procedures, as appropriate".

A national legislation is required to deal with all these aspects.

3. *The alternative role of domestic liability regimes*

One has to notice, furthermore, that international liability, as devised by the OST and the LC, is not exclusive. According to Article XI.2 LC:

> "Nothing in this Convention shall prevent a State, or natural or juridical persons it might represent, from pursuing a claim in the

[10] Law of 17 September 2005 on the Activities of Launching, Flight Operation or Guidance of Space Objects, consolidated text as revised by the Law of 1 December 2013. The English translation is available at https://www.belspo.be/belspo/space/doc/belaw/Loi_en.pdf.

[11] See A. Kerrest, *The Concept of the 'Launching State'*, fn. 9 above, p. 13 and ff.

[12] UNGA Res. 68/74 of 11 December 2013.

> courts or administrative tribunals or agencies of a launching State. A State shall not, however, be entitled to present a claim under this Convention in respect of the same damage for which a claim is being pursued in the courts or administrative tribunals or agencies of a launching State or under another international agreement which is binding on the States concerned".

This norm has two implications: first, that it is possible for the State to provide for a domestic system of operator's liability; second, that the choice of the domestic claim excludes the other, or, in other words, *electa una via non datur recursus ad alteram*. To specify better, the introduction of the international claim (for which no prior exhaustion of domestic remedies is required) will not prevent from starting a claim before a national court, unless such a preclusion is contemplated by national law. But the introduction of the national claim will obstruct the way for the international claim: in practical terms, that will be once and for all, as, considering the normal times of domestic justice and the fact that, under Article X LC, the international claim "may be presented to a launching State not later than one year following the date of the occurrence of the damage or the identification of the launching State which is liable", it is highly unlikely that the national proceedings will be concluded before this deadline[13].

As to the nature and characters of the domestic liability, it may fall under the general regime of tort liability, or under a specific regime regulating liability for damage caused by space objects.

One has to add that the international regime excludes damage caused by the space object to nationals of the launching State and foreign nationals participating in the operation of the space object, or present in the immediate vicinity of a planned launching or recovery area as the result of an invitation by the launching State (Article VII LC). Passenger liability is equally excluded. These typologies of damage need to be covered by national law.

One should also notice that, in transnational situations, such as those that fall under the international space liability regime, the national court will have to verify whether it has jurisdiction based on the applicable rules of international civil procedure, and the national law called to rule the case will be determined by the applicable conflict of laws rules[14].

[13] See A. Kerrest, *The Concept of the 'Launching State'*, fn. 9 above, p. 10.

[14] For further considerations, see L.J. Smith and A. Kerrest, *Article XI (Relation to National Jurisdiction)*, in S. Hobe, B. Schmidt-Tedd, K.-U. Schrogl (eds.), *Cologne Commentary on Space Law*, vol. II, p. 166 and ff., p. 168 and f.

4. *Problems relating to the compensation of private claims*

I would claim that a further level of implementation *is* required by the OST and LC: as, in the case of damage suffered by natural or juridical persons, compensation is meant to cover *their* damage, and not the damage suffered by the State introducing the claim (as it would be according to the traditional doctrine of diplomatic protection), national provisions are necessary, either *ad hoc* or already present or implicit in the domestic legal system, to guarantee that when the State claims and obtains compensation on behalf of such persons, this compensation will effectively reach the victims[15].

5. *Questions related to redress by the State in whose territory damage was sustained*

National laws may, further, provide for redress to citizens or foreigners suffering damage caused by foreign space objects, even in the absence of a successful international claim on the part of the State. This is, in part, the case of the Italian legislation. Italy is one of the few important space powers still lacking a proper national space law, however it has adopted a few sparse norms. The one relevant here is contained in Law No. 23 of 25 January 1983, based on which the Italian State will compensate Italian victims of damage caused by a space object launched by a foreign launching State, not only in the case in which the Italian State has obtained compensation from the launching State, but also in case the Italian State has not claimed compensation, unless this has been obtained either by the State in whose territory the damage has been sustained or by the State of the victims' personal residence, based on Article VIII.2 and 3 LC, or it has claimed but not obtained compensation. On the contrary, foreign victims may obtain compensation from the Italian State in the last two instances

[15] See, by contrast, the mere recommendation contained in Article 19(c) of the *Draft Articles on Diplomatic Protection* approved by the International Law Commission (ILC) in 2006, whereby a State entitled to exercise diplomatic protection "should … transfer to the injured person any compensation obtained for the injury from the responsible State subject to any reasonable deductions" (ILC, Report of the 58th session, UN Doc. A/61/10, in *Yearbook of the International Law Commission*, 2006, vol. II, Part Two). The State entitled to present to the launching State a claim for compensation on behalf of the victims is identified by Article VIII, LC, on which see L.J. Smith and A. Kerrest, *Article VIII (Eligibility of Claimant States)*, *ibid*., p. 154 and ff.

only if the Italian State has claimed and obtained compensation from the launching State. I will not consider here the possible problematic aspects of discrimination inherent in such legislation, in particular in light of EU law.

6. *Solutions in case of in-orbit transfer of the space object*

A further problem which may arise, and may affect the liability issue, is the transfer of property and control of a space object in orbit. No doubt that the national State of the transferee, if different from the national State of the transferor, will become the/a responsible State based on Article VI OST[16]. The liability aspect is more complicated, because the transferee's national State is not necessarily a launching State: unless the object were transferred onto its national space registry, which, could be argued, would render it automatically a launching State, as, according to Article II of the Registration Convention (RC), the obligation to register falls on the launching State. Although, in this case, the State of registry would not correspond to any of the criteria qualifying a launching State. However, the RC does not provide for re-registration of a space object[17]. But we could consider the case of a space object whose property is transferred *before* registration has taken place, and that is then registered directly by the new owner's national State.

In any event, the previous launching State, which will remain a launching State, may include relevant provisions in its national law, such as the one introduced by Belgium in Article 13 § 5 of its national law:

> "When the transferee operator is not established in Belgium, the Minister may refuse the authorisation in the absence of a specific agreement with the home State of the third party in question and which indemnifies the Belgian State against any recourse against it under its international liabilities or claims for damages".

These are, therefore, some of the problems that shall, or should, or may be addressed in deciding whether and how to legislate at the national level. They do not address all issues: one that I have left apart, but which is quite relevant, is that relating to product liability, which, absent international rules, is entirely left to national legislation.

[16] See M. Gerhard, *Article VI*, in S. Hobe, B. Schmidt-Tedd, K.-U. Schrogl (eds.), *Cologne Commentary on Space Law*, vol. 1, p. 103 and ff., p. 124 and f.

[17] See A. Kerrest, *The Concept of the 'Launching State'*, fn. 9 above, p. 6.