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RESPONSIBILITY FOR SPACE ACTIVITIES ACCORDING TO INTERNATIONAL LAW

Agit Yogi Subandi[1]

Abstract

Space law, described as a "body of law" that regulates activities related to space. As with international law in general, space law uses legal bases, among others, a.l; international treaties, conventions, and resolutions issued by the general assembly of the United Nations to regulate these activities. Because this space activity carries a very large risk, such as failing to orbit the space vehicle at its orbital point, causing damage to the vicinity of the launch site. Based on that, what needs to be discussed in this paper is what is the concept of responsibility in space activities? And what is the definition of liability under international law? The existence of arrangements regarding this activity, it is shown that the responsibility is public and accountability is in the form of compensation.

Keywords: *Responsibility; Space; International law;*

I. INTRODUCTION

Space law developed in a cold war situation or what is known as the Cold War.[2] Some observers of space law, revealed that the space programs of countries in the early period were more directed to military and national security activities,[3] also research.[4] With the development of space technology which began with the launch of Sputnik I by the Soviet Union on October 4, 1957,[5] and successfully reached its orbit,[6] the General Assembly of the United Nations (UN) issued various resolutions, a.l; General Assembly Resolution 1962 (XVII) which was later adopted in 1963, which stipulates several legal principles which among other things stipulate that the use and exploration of outer space and celestial bodies can be carried out by any country fairly and in accordance with international law. In

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[2] Atip Latipulhayat, *Privatization of Space Law, Negotiating of Commercial and Benefit Sharing Issues in The Utilization of Outer Space*, disampaikan pada *The International Conference on Air and Space Law: The Commemoration of 50 Years Air and Space Law Studie,* Fakultas Hukum Universitas Padjadjaran, Luxton Hotel, 5-6 November 2014., p. 4.

[3] Julián Hermida, *Legal Basis For A National Space Legislation*, Dortrecht, Kluwer Academic Publishers, The Hague-London-Boston, 2004., p. xiii.

[4] Atip Latipulhayat, *Privatization of Space Law, ….Op.cit.* p. 4.

[5] See, E. Suherman, Aneka Masalah *Hukum Kedirgantaraan (Himpunan Makalah 1961-1995)*, CV. Penerbit Mandar Maju, Bandung, 2000, 302-357, p. 307.

[6] See, U.S. Departement of State Office of the Historian, *Sputnik 1957*, < https://history.state.gov/milestones/1953-1960/sputnik > 15 Februari 2021.

addition, space and celestial bodies cannot be made part of the territory or subject to the laws of any country.[7]

At a time when space activities are no longer temporary and are a separate sector of activity and develop continuously, a legal system is needed to regulate these activities. Moreover, those participating in spatial activities are no longer one or two countries and these activities are not only carried out in the space of one country or on the territory of other countries but have also revolved around the earth. Based on these reasons, it is deemed necessary to create a new branch of international law.[8]

Based on this, then, what will be discussed in this paper is about the concept of responsibility in space activities? And what is the definition of liability under international law? Because we understand that the mastery of technology by a country, will leave the impression that the country has developed. However, the effects of these developments, of course, must be followed by law, one of which is regarding legal responsibilities.

II. DISCUSSION

A. Space Activities

Before discussing what is stated in the answers to the questions that we will discuss earlier, we need to clarify first about the space activities. Space activities or in Indonesian are referred to as space activities.[9] This activity is a field within international law, such as the law of the sea, the law of the air, the law of war or the law of treaties. According to the United Nations Officer for Outer Space Affair (UNOOSA), Space law is described as a "body of law" that regulates space-related activities.[10] Likewise, according to the Encyclopdic Dictionary Of International Law, defines space law as the law that regulates activities in space.[11] According to Priyatna Abdurrasyid, Space Law is the law governing the vacuum ("Outer Space").[12] With this last understanding, we can see that space is distinguished from air space.

Diederiks-Vershoor, tries to provide details on the Scope of Space Law, a.l., the nature and area of space in space where the law of space is applied and applies, then the form of human activities regulated in that space; and Form of flight

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[7] Mochtar Kusumaatmadja & Etty R. Agoes, *Pengantar Hukum Internasional*, PT. Alumni, Bandung, 2012. P. 196-197.

[8] Boer Mauna, Hukum *Internasional: Pengertian, Peranan dan Fungsi dalam Era Dinamika Global*, PT. Alumni, Bandung, 2008., p. 439.

[9] This term can be seen in the Law of the Republic of Indonesia Number 21 of 2013 concerning Space.

[10] UNOOSA, Space Law, http://www.unoosa.org/oosa/en/ourwork/spacelaw/index.html

[11] Parry & Grant, *Encyclopædic Dictionary Of International Law*, Oxford University Press, New York, 2009.

[12] Priyatna Abdurrasyid, *Hukum Antariksa Nasional (Penempatan Urgensinya)*, Rajawali Pers, Jakarta, 1989., p. 6.

equipment (flight instrumentalities).[13] Such as aircraft in flight in air space and spacecraft for outer space which are related and regulated by Space Law, or in other words, all aviation equipment which is the object of space law.[14]

An interesting explanation from Francis and Larsen, regarding the law of space, according to him, this law is different from 'the law of contract' or 'the law of tort(s)/delict' in which the workings of the 'law' describe a series of concepts in a single phylum. The law of space, he argues, is more akin to 'family law' or 'environmental law', which consists of many different laws that are notated by reference to their agreed-upon materials rather than the development of a purely rational concept that makes it a single law.[15]

From this it can be concluded that space law is a law that regulates state activities aimed at and in space. But in essence, this space law is still concerned with the state as a legal subject. This can be seen from the legal instruments used, namely international treaties, conventions, and resolutions of the UN General Assembly. When viewed from practice, the state is the main holder in the regulation of space law, both international and national. Although in article VI OST Treaty, it is stipulated that non-governmental entities can also carry out these activities.

The subject of international law, in Mochtar kusumaatmadja's review, is divided into two, namely the full subject and the limited subject. The state is the holder of (all) rights and obligations in full,[16] while the limited ones can be exemplified as individuals (individuals).[17] Subjects of international law, as it is generally known, are: States, Holy See, International Red Cross, International Organizations, Individuals (Individuals), Rebels and Parties to the conflict (Belligerent).[18]

B. Regulation of Space Activities according to International Law

The regulation of space law, in terms of international law, is regulated in 5 sets of international conventions initiated by the United Nations, in this case the United Nation Committee on Peaceful Uses of Outer Space (UNCOPUOS),[19] the Conventions are a.l;[20] (1) The Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies (the "Outer Space Treaty" hereafter referred to as OST), 1967; (2) The

[13] See, Ibid. p. 5. In his book, it is explained that, In general, the aviation community divides flight equipment into 2 types, namely the so-called aircraft (aircraft) and spacecraft (spacecraft).

[14] Diederiks-Vershoor, *Persamaan dan Perbedaan antara Hukum Udara dan Hukum Ruang Angkasa (Khusus Dalam Bidang Hukum Perdata Internasional)*, Sinar Grafika, Jakarta, 1991. P. 7.

[15] Francis Lyall, Paul B. Larsen, *Space Law Treatise*, Ashgate Publishing Limited, England, 2009., p. 2.

[16] Mochtar Kusumaatmadja & Etty R. Agoes, *Op.cit.*, p. 96.

[17] *Ibid.,* p. 96.

[18] *Ibid.,* p. 95-112.

[19] UNOOSA, *Op.cit*

[20] *Ibid*.

Agreement on the Rescue of Astronauts, the Return of Astronauts and the Return of Objects Launched into Outer Space (the "Rescue Agreement" hereinafter written RA), 1968; (3) The Convention on International Liability for Damage Caused by Space Objects (the "Liability Convention" hereinafter referred to as LC), 1972; (4) The Convention on Registration of Objects Launched into Outer Space (the "Registration Convention" hereinafter written RC), 1976; and (5) The Agreement Governing the Activities of States on the Moon and Other Celestial Bodies (the "Moon Agreement" hereinafter written by MA), 1984.

C. Principles in Space Activities

1. Principles of the Common Heritage of All Mankind

From these rules, a principle emerged in carrying out this space activity. This principle is the Common Heritage of All Mankind (CHM). The term CHM in Bess M. Reijnen's analysis, means the right to use natural resources, in this case in space. And this means that it cannot be owned, be it by a person, a country, a conglomerate of a country. In short, the area referred to as CHM is an area that cannot be owned but can be used, and this principle is part of ius cogens.[21]

Scott J. Shackelford, explained also, that the CHM principle means that it does not allow the existence of private or public parties, every activity must represent the entire nation because, in this case space belongs to all mankind, all nations must be actively involved and then share the benefits of exploitation of the resources obtained from the shared heritage area, there is no weaponry in the common property area, and because space is the property of all mankind it must be preserved for future generations.[22]

This principle is established as an effort to balance public and private interests in international space law, which substantively stipulates that this activity is in the common heritage of all mankind.[23] The goal is that all countries can also enjoy this common heritage. As also written by Ricky J. Lee, that at that time, the cost of holding these activities was still relatively expensive, so that the space law in its formation allowed cooperation between countries as stipulated in the analysis of the launching state by several authors, namely that the launch could be held by more than one person. from one country (multiple launching states).[24]

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[21] Bess C.M. Reijnen, *The United Nations Space Treaties Analysed*, Editions Frontiers, France, 1992. p. 3.

[22] Scott J. Shackelford, *The Tragedy of the Common Heritage of Mankind*, Stanford Environmental Law Journal, Vol. 27:nnn, 2008, 101—157, p. 102.

[23] Gérardine Meishan Goh, *Dispute Settlement in International Space Law*, Martinus Nijhoff Publishers, Leiden-Boston, 2007. p. 157-158.

[24] See, Ricky J. Lee, *The Convention on International Liability For Damage Caused By Space Objects and The domestic Regulatory Responses to Its Implications,* Ricky J. Lee & associates, 2003. p. 178. See also, Articles I, LC 72.

That is, this principle is the basic principle in the use of space. No one can own space, because it is the Common heritage of mankind. And besides, because there are many interests in space, this principle is also a balance between public and private interests.

2. Principles of Benefit And In The Interests of All Countries

This principle is set out in article I of the 1967 OST. According to its provisions, space exploration, including the moon and other celestial bodies, "...shall be carried out for the benefit and in the interests of all countries, irrespective of their degree of economic or scientific development, and shall be the province of all mankind…". In the decree, there is a principle that countries must comply with in carrying out space activities. These principles are "benefit" and "the interests of all countries". According to Atip Latipulhayat, this clause talks about the benefits and interests of the country, not the state as the main actor in this space activity. So this article clarifies in general, that the main objective of this principle is its space activities that share profits, not for the country that carries out the activity, but for the whole country.[25] In short, "All states shall be entitled to the benefit of space exploration and use."[26]

D. Analysis of Article VI of the 1967 Outer Space Treaty

In the context of this research, as stipulated in article VI, OST 1967, it is determined that the State is internationally responsible for activities carried out by Governmental agencies and non-governmental entities. However, specifically for terms that refer to non-governmental entities, they must meet the authorization and continuing supervision stages of the appropriate state.[27] As the original said:

> *ARTICLE VI*
> *States Parties to the Treaty shall bear international responsibility for national activities in outer space, including the moon and other celestial bodies, whether such activities are carried on by governmental agencies or by non-governmental entities, and for assuring that national activities are carried out in conformity with the provisions set forth in the present Treaty. The activities of non-governmental entities in outer space, including the moon and other celestial bodies, shall require authorization and continuing supervision by the appropriate State Party to the Treaty. When activities are carried on in outer space, including the moon and other celestial bodies, by an international organization, responsibility for compliance with this Treaty shall be borne both*

[25] Atip Latipulhayat, *Op.cit.*, p. 5.
[26] See, Ibid., p. 38.
[27] See, Articles VI OST 1967.

by the international organization and by the States Parties to the Treaty participating in such organization.

There are several things that need to be elaborated further in this research. These are international responsibility, governmental agencies, non-governmental entities, authorization and continuing supervision, and appropriate state.

1. International Responsibility

The ILC issued a Draft Article on State Responsibility, and this draft only deals with general principles.[28] In the Draft Article, there are 3 parts, a.l.; the first part contains the basics of state responsibility or called The Internationally Wrongful Act of A State, the second part sets out the content and types of state responsibilities or Content Of The International Responsibility Of A State , the third part focuses on the implementation and resolution of disputes or called The Implementation Of The International Responsibility Of A State or as a provision regarding the consequences of state accountability and in the last part or section four stipulates general provisions or called General Provisions.[29]

In this case, the ILC draft distinguishes between primary and secondary rules.[30] According to the ILC, "primary rules are those the breach of which entails responsibility for an internationally wrongful act..." then "secondary rules are those which purport to determine the legal consequences of failure to fulfil obligations established by primary rules."[31] In short, the primary rule is an obligation (obligation) and the secondary rule is a legal consequence when a country fails to carry out the obligations imposed by the primary rule.

This Draft Article constitutes the rules of international law regarding state responsibility regarding the circumstances in which, and the principles by which, an aggrieved state becomes entitled to compensation for the loss it has suffered.[32] State responsibility arises as a result of the principle of equality and state sovereignty contained in international law and this principle then gives authority to a country whose rights have been violated to demand reparations.[33]

A country is said to be responsible in the event that the country violates international agreements, violates the territorial sovereignty of other countries,

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[28] Jawahir Thontowi & Pranoto Iskandar, *Hukum Internasional Kontemporer*, PT. Refika Aditama, Bandung, 2006., p. 197.

[29] United Nations, Responsibility *Of States For Internationally Wrongful Acts 2001*, United Nations, 2001 (ILC Draft Articles)

[30] See, Bess C.M. Reijnen, *Op.cit.*, p. 110.; See Also, H.L.A Hart, *Konsep Hukum (The Concept of Law)* terjemahan M. Khozim, Nusamedia, Bandung, 2013., p. 124-142.; lihat juga, United Nations, *Yearbook Of The International Law Commission 1979*, Volume II Part One, United Nations, New York, 1981., p. 27.

[31] See, Bess C.M. Reijnen, *Op.cit*. p. 110.

[32] J.G. Starke, *Pengantar Hukum Internasional (Edisi Kesepuluh) 1*, Penerbit Sinar Grafika, Jakarta, 2012. p. 391.

[33] Jawahir Thontowi & Pranoto Iskandar, *Op.cit.*, p. 193.

attacks other countries, injures diplomatic representatives of other countries, and even treats foreigners as arbitrarily.[34]

In the first part, on the "Responsibility of a State for its internationally wrongful acts" which is detailed in article 1, it states that: "Every internationally wrongful act of a State entails the international responsibility of that State."[35] The purpose of this article is that every wrongful act with an international dimension (internationally wrongful act) of a country automatically has consequences for accountability.[36] This article also provides an understanding that the State is the main subject in this draft article.[37]

Article 2, stipulates the Elements of an internationally wrongful act of a State, namely elements which stipulate that the state can be said to have acted wrongly when it committed 2 acts or omissions, e.g. (a) is attributable to the State under international law; and (b) constitutes a breach of an international obligation of the State.[38] The issue of attribution is basically a normative operation.[39] It is also relevant to mention that the State as a subject of international law is treated as a single entity and the sole subject of a provision attributable, regardless of which state organ is responsible according to its national law.[40] This is more because according to international law, the state is an abstract entity, because the state acts as represented by officials known by international law as diplomatic agents.[41]

Related to article 7 of the Vienna Convention on the Law and Treaties 1969 (VCLT 1969), which regulates full power, that is, anyone from a state official in making an international agreement must require full power from the state or the government of his country (Article 7 paragraph 1), and state officials who do not need full power of attorney (Article 7 paragraph 2), in short, concerning state officials when holding negotiations.[42] These organs, e,g. legislative, executive, judicial or other functions as long as it is still in a state organization or part of a territorial unit of a country[43] as stipulated in article 4 of the ILC Draft Article, which contains provisions regarding Conduct of organs of a State.[44]

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[34] Ibid. p. 194.

[35] United Nations Legislative Series, *Materials On The Responsibility Of States For Internationally Wrongful Acts (St/Leg/Ser B/25),* United Nations, New York, 2012., p. 7.

[36] Jawahir Thontowi & Pranoto Iskandar, *Op.cit.*, p. 198.

[37] Ibid., p. 195.

[38] Article 2, ILC Draft Articles.

[39] Elena Laura Álvarez Ortega, *The Attribution Of International Responsibility To A State For Conduct Of Private Individuals Within The Territory Of Another State*, Indret 1/2015**,** Barcelona, Enero 2015., p. 3.

[40] Ibid., p. 3.

[41] Jawahir Thontowi & Pranoto Iskandar, *Op.cit.*, p. 198.

[42] I Wayan Partiana, *Perjanjian Internasional Bagian I*, CV. Mandar Maju, Bandung, 2002., p. 57.

[43] Julián Hermida, *Op.cit.*, p. 4.

[44] Article 4, ILC Draft Articles.

The characterization of an act of a State as internationally wrongful is set out in article 3, which stipulates that, "…Such characterization is not affected by the characterization of the same act as lawful by internal law."[45] According to Reijnen, the topic of discussion of 'State Responsibility' initiated by ILC is intended in the area of environmental damage.[46] In the context of the responsibility in article VI, OST 1967, Bess M. Reijnen analyzes that the international responsibility of the state, in order to safeguard state actions that can cause environmental damage, so that the state is obliged to set its own legal standards in order to actions that can have global effects. However, in the context of space activities, the normal character of space activities or in Reijnen's terms, legally valid, still has the risk of environmental damage, both before the launch and after the launch itself.[47]

The risk of launching objects into space, the risk of failure and success, is still 50-50. As Verschoor writes, the harm caused by the spacecraft is too difficult to avoid, despite the utmost care that has been taken.[48] This is still dependent on technological tools that are continuously cultivated by the makers in order to reduce production and operating costs. Improvements continue to be made by various parties, but that does not mean it is not risky.

Based on this analysis, are countries that have carried out their obligations, as has been attributed to the 1967 OST, especially Article VI, which refers to the terms authorization and continuing supervision, still being held accountable internationally, even though these actions are carried out by non-governmental entities? Another expert opinion, namely Julián Hermida, who shows in his research, that in the context of article 2 and article 4 of the ILC Draft Articles, it is written that the state is not responsible for the actions of individuals or other private entities.[49] He gives examples of (i) the behavior of people or entities that exercise elements of government authority (author: Article 5), (ii) the behavior of organs placed in the hands of a State, if they act in the exercise of elements of government authority (Article 6), (iii) the action of an organ of a State or a person or body which is authorized to exercise elements of government authority if it acts in that capacity, even if it exceeds its authority or is contrary to the instructions (Article 7), (iv) the behavior of a person or group a person controlled by a State (Article 8), (v) the behavior of a person or group carried out without the presence or default of official authority (Article 9), (vi) the behavior of an insurgency movement that became a new government or which succeeded in establishing a new State (Article 9). 10), and (vii) behavior recognized and adopted by the State as its own (Article 11).[50]

[45] Article 3, ILC Draft Articles.
[46] See, Bess C.M. Reijnen, *Op.cit.*, p. 110.
[47] Ibid., p. 111.
[48] Diederiks-Vershoor, *Op.cit.* p. 40.
[49] See, Julián Hermida, *Op.cit.* p. 4. This opinion is based on ILC Draft articles.
[50] See, Ibid. p. 5.

Hermida also gives an example, except for cases related to space activities which are written by very specific norms relating to international space legal responsibilities to be tested, the state will not hold responsibility for damage caused by private persons however in limited cases are described in ILC Draft Articles.[51] In Gérardine Meishan Goh's analysis, usually the Direct Responsibility of a country is burdened only for actions directly carried out by the state, but on the contrary, in Article VI, OST 1967 the state is responsible for all space activities carried out by private parties (entities). non-governmental) under its jurisdiction.[52]

Implicitly, the author can capture that from the analysis of these experts, both cannot agree, in the context of article VI of the 1967 OST, that the state is internationally responsible for activities carried out by non-governmental entities. However, these two views differ from one another. Reijnen is more concerned with the technical reality of regulated objects, while Hermida is more concerned with the juridical mechanism and Meishan is more concerned with the principles of international law.

In this context, as well as Verschoor's previous opinion, the tendency of responsibility will still be directed to state liability,[53] even though these activities are carried out by non-governmental entities. The state remains responsible for the damage that occurs as a result of its space activities, even though the state has carried out obligations in accordance with what is attributable to the 1967 OST.

2. Governmental agencies and non-governmental entities

It has been mentioned earlier, that the State is responsible for the activities carried out by its government agencies and non-governmental entities. However, it is unfortunate, for more details in the 1972 LC, it does not set specific rules for non-governmental entities.[54] Non-governmental entities in outer space are defined as entities not established by and not acting on behalf of their respective governments.[55] In V. Kayser's research, non-governmental entities refer to private companies that operate launches, space-ports and communications satellites.[56] Governmental Agencies or non-Government Entities, are networks of national actors or national legal subjects (national actors) who can interact directly with each other and with international tribunals (international tribunals) to apply international rules.[57]

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[51] Ibid. p. 5.

[52] Gérardine Meishan Goh, *Op.cit*., p. 159.

[53] Diederiks-Vershoor, *Op.cit*. p. 50.

[54] Valérie Kayser, *Launching Space Objects: Issues Of Liability And Future Prospects*, Kluwer Academic Publishers, New York, Boston, Dordrecht, London, Moscow, 2004. p. 41.

[55] Bess C.M. Reijnen, *Op.cit*., p. 113.

[56] Valérie Kayser, *Op.cit*. p. 40.

[57] Alex Mills, *The Confluence Of Public And Private International Law*, New York, Cambridge University Press, 2009. p. 91.

According to Julian Hermida, non-governmental entities are private firms and individuals,[58] or mixed companies.[59] The last term, namely Mixed companies, is detailed by Malcom N. Shaw, namely between the government and the private sector called International public companies.[60] According to Ricky J. Lee, such as private individuals or companies.[61] According to Bess M. Reijnen, these entities can be private, commercial enterprises or, for example, scientific communities of either national or international composition[62] and Multinational Private Enterprises."[63] According to research by Alex Mills, these 'non-governmental entities' include individuals and groups as already known as commercial and non-commercial entities.[64] According to William R. Slomanson, in the subject of European Community, private individuals and companies are referred to as Member States.[65]

There are many varieties of this non-governmental entity, but basically, this term refers to a private company whether its composition consists of national or international entities, both individuals and groups and is engaged in commercial and non-commercial areas. Such actors have no locus standi in international law. Non-governmental entities, in this case private entities, are not eligible to become subjects in the Convention on Space law,[66] this is considering that these space activities are activities that have global effects.

The international legal system actually recognizes only a small number of entities, and most importantly the state, a subject that can be granted rights and obligations under international law. The concept of legal personality in international law means to protect those entities which the legal system has given to play its role in the realm of law.[67] Non-governmental entities, based on the identification of previous experts, are the actors who get locus standi from national law. Transformation theory tries to illustrate that international agreements only apply within the territory of a country that is a participant after the enactment of the implementing legislation.[68] This theory is another embodiment of the theory that

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[58] Julián Hermida, *Op.cit*. p. 7.

[59] Ibid. p. 47.

[60] Malcolm N. Shaw, *International Law (fifth Edition)*, United Kingdom-Cambridge University Press, 2004. p. 223.

[61] Ricky J. Lee, *Op.cit*. p. 178.

[62] Bess C.M. Reijnen, *Op.cit*., p. 113.

[63] Ibid., p. 114.

[64] Anna-Karin Lindblom, *Non-Governmental Organisations in International Law*, Cambridge University Press, London, 2005. p. 272.

[65] William R. Slomanson, *Fundamental Perspectives on International Law (sixt Edition)*, Wadsworth Cengage Learning, Australia, 2011., p. 195.

[66] Yun Zhao, *The 1972 Liability Convention: Time for Revision?,* Space Policy, Vol. 20, 2004. p. 118.

[67] Andrea Bianchi, *Introduction: Relativizing the Subjects or Subjectivizing the Actors: Is That the Question.;* dalam Andrea Bianchi (ed.), *Non-State Actors and International Law*, Ashgate Publishing, London, 2009. p. xiv.

[68] Mochtar Kusumaatmadja & Etty R. Agoes, *Op.cit*. p. 96.

only states are subjects of international law.[69] The state, in international public law, is a subject of international law, which according to Mochtar Kusumaatmadja and Etty R. Agoes, is the holder of (all) rights and obligations under international law.[70] This means that states can enter and negotiate to make international agreements and are burdened by the provisions of these instruments, therefore traditional international law is a system of rules made by states for states.[71]

Seeing this identification, several studies in international law state that these entities are also known as non-state actors. If mentioned by experts, be it in the field of space law or public international law, these non-governmental entities are individuals and companies. This company is called by various terms, namely enterprise, companies, corporation, and so on.

3. Authorization and continuing supervision

The second sentence of Article VI, OST 1962, explains that the state is given an obligation, which requires non-governmental entities to obtain authorization and continuous supervision from the state where the non-governmental entity is located. Therefore, the state must grant permission and continue to monitor the space activities of non-governmental entities. Thus, it is clear that, while non-governmental entities are entitled to carry out activities in outer space, if they (non-governmental entities) have received authorization from the country in which they carry out their business activities.[72]

In short, the non-governmental entity that operates within the jurisdiction of a country, must be carried out on the condition that its activities take place under the supervision of the country concerned or the countries that form the organization.[73] Article VI stipulates the task to the state as the provider of 'licensing and supervision'.[74] Thus the state granting permission and supervision will be the responsibility of that state and for the activities of an international organization bound by the organization and the countries that are members.[75]

Implicitly, Article VI wants national law to properly regulate the participation of the public and private entities for space activities.[76] The obligations that must be fulfilled by the state, in order to fulfill the international obligations required by the second sentence of article VI, OST 1962, implicitly, the state must

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[69] Ibid. p. 96.
[70] Ibid. p. 97.
[71] Lotta Viikari, *The Environmental Element in Space Law*, Martinus Nijhoff Publishers, Leiden-Boston, 2008. p. 21.
[72] Fabio Tronchetti., *Fundamentals of Space Law and Policy*., Springer, New York, 2013. p. 27.
[73] Priyatna Abdurrasyid, *Hukum Antariksa Nasional (Penempatan Urgensinya)*, Rajawali Pers, Jakarta, 1989. p. 20.
[74] Francis Lyall, Paul B. Larsen, *Space Law Treatise*, Ashgate Publishing Limited, England, 2009. p. 68.
[75] Ibid. p. 68.
[76] Fabio Tronchetti., *Fundamentals of Space Law and Policy*., Springer, New York, 2013. p. 9.

set up a mechanism that allows the realization of authorization and continuous supervision of space activities carried out by non-government.[77] It is also directly related to the jurisdiction and right of a country to legislate for activities into space under its jurisdiction.[78] This eventually emerged as the optimal solution for regulating the authorization and supervision of private activities in space.

Finally, it should be emphasized that the scope of national space legislation should not be limited to the implementation of Article VI of the Outer Space Treaty, but may serve other purposes, such as ensuring that private activities comply with safety standards and rules of debris mitigation and prevention as well as ensuring that they do not interfere with the security interests and foreign policy of a country.[79]

4. National Activity

In the research of Imre Anthony Csabafi, in his writing entitled "The Concept of State Jurisdiction in International Space Law", the term national activity is directly related to the national jurisdiction of space.[80] In short, Imre A. Csabafi wants to argue that national law is a determinant of an activity that can be considered as a national activity of a country.[81] This means that every non-government entity, whether foreign or domestic, has the same opportunity, as long as the conditions are met according to the legal aspects of the country's national space activities. However, according to V. Kayser, this provision has consequences, namely, "Consequently, it is the responsibility of a given State to ensure compliance with the provisions of the Outer Space Treaty by private enterprises."[82]

In Bin Cheng's observations, he took the example in several countries such as the UK and the US. In the UK Act, the Outer Space Act 1986, they define the phrase "...'national activities' means solely activities of a State and its nationals." According to his analysis, Bin Cheng revealed that the definition is based on Article IX of the 1967 OST, which stipulates that, "...'an activity ... planned by it or its nationals'...". According to him, this interpretation cannot be justified. The reason is, "It is submitted that this interpretation cannot be correct because it is at once both too narrow and too broad.... It is too restrictive inasmuch as it excludes activities by foreigners within its territory."[83]

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[77] Ibid. p. 27.

[78] Julián Hermida, *Op.cit*. p. 7.

[79] Fabio Tronchetti., *Op.cit*. p. 27.

[80] Imre Anthony Csabafi, *The Concept of State Jurisdiction in International Space Law*, Martinus Nijhoff Publishers, The Hague, 1971., p. 122.

[81] See, Wahyuni bahar, *Pertanggungjawaban Negara Terhadap Aktivitas Komersial Di Ruang Angkasa,* dalam E. Saefullah Wiradipradja & Mieke Komar Kantatmadja (Ed.) *Hukum Angkasa dan Perkembangannya,* CV. Penerbit Remadja Karya, Bandung, 1988. p. 170.

[82] Valérie Kayser, *Op.cit*. p. 42-43.

[83] Bin Cheng, *International Responsibility And Liability For Launch Activities*, Air & Space Law, Vol. XX, Number 6. 1995., 297-310, p. 302.

Meanwhile, The United States Commercial Space Launch Act of 1984, as amended in 1988, for example, is more careful in determining the scope of these national activities, which are not only about launching celestial bodies, but including places of operation. launch, US citizens, but also any, regardless of nationality, it also specifies that in this US decree also excludes activities "...carried on by, or by persons on board, ships, aircraft and spacecraft under its flag or registration, especially when such craft are outside the territorial jurisdiction of any State and are, therefore, within the sole operative jurisdiction (or more specifically the effective jurisdiction) of the flag State."[84] And based on this, Bin Cheng is of the opinion, if the territory of the country or the flag State in such a situation is not internationally responsible for the space activities carried out in their territory or by spacecraft (craft) or with people included in the aircraft (craft) in an area that is not under the territorial jurisdiction of any country, then no other country will actually be able to control such activities. The OST doesn't really mean that. According to him, this interpretation is too broad, because citizens (nationals) are often under the operating jurisdiction (effective jurisdiction) of other countries. It seems unlikely that States would expect to assume responsibility for activities that they are not in a position to control.[85]

According to Bin Cheng, a reasonable interpretation would look, therefore, one that makes all international participating countries responsible for activities in space—including launches—carried on by themselves, perhaps in anywhere, and it is also brought by people within their jurisdiction, including their territory, quasi-territorial and personal jurisdiction.[86] According to Bin Cheng, the word 'national activities' from the explanation, the author briefly means that the interpretation emphasizes the notion of launching state—both the meaning of LC 1974 and RC 1976—which is then linked to Article VIII of the 1967 OST. an activity that meets the requirements as a launching state and carries the name of a country, so that the jurisdiction of a country in space exists, then it will be called a 'national activity' and will have consequences as stipulated in article VI Ost 1967, namely 'responsibility'.[87]

In Julian Hermida, these opinions regarding 'national activity' are classified as very risky, namely responsibility, because, "...This issue is directly related to the jurisdiction and the rights of the state to legislate over activities carried out under its colors."[88] In it, the discussion on 'national activities' is divided into two perspectives, namely first, which sees that the word 'national activity' is defined as "...the concept of national activities is remitted to domestic law."[89] Or determined based on national law, and the second is, from the perspective, "...the

[84] Ibid., p. 302.-301.
[85] Ibid., p. 303.
[86] Ibid., p. 303.
[87] Ibid., p. 303.
[88] Julián Hermida, *Op.cit*. p. 7.
[89] Ibid..p. 7.

conceptualization of the notion of 'national activities' revolves around the doctrine of jurisdiction and the interpretation of the term “national activities” as contained in article VI of the Outer Space Treaty."[90] Therefore, it was concluded by Julian Hermida, in article VI of the 1967 OST, that the state is responsible for activities in which it has the opportunity to exercise legal control, that is, activities that fall within the jurisdiction of the state, whether they are territorial, quasi-territorial or private.

The point is, every launch must carry the jurisdiction of a country, even though it is carried out jointly, the activity must still carry the jurisdiction of a country, except for international organizations that can carry the name of their organization in space. This means that there are no 'stateless' launches or on behalf of individuals or private individuals in space.

5. Appropriate state

However, there is a space law expert who tries to find the meaning of "the appropriate state party", namely Bess C.M. Reijnen. According to him, this term is one that cannot be defined. However, Reijnen assumes that what is meant by 'the appropriate state party' is the 'state registry'.

If it is related to the context of article VI, this 1972 OST, then the ‘appropriate state party’ is “…the state of nationality of the non-governmental entity.” More specifically, if it is related to—in Reijnen's terms—Multinational Companies, then “…it would mean that the various national partners in the international private enterprise choose, by common agreement, domicile in one of the constitution partner countries of the enterprise.”[91] This means that the State of Registry of the launched celestial body is registered in the name of the country where one of the companies is domiciled. So the international responsibility lies in the name of the registered country, even though nationally the company and the government have agreed on the responsibility. So the main point of this responsibility is the State of Registry.

This is referred to by Reijen in article V and article VIII of the 1967 OST itself. The two articles, according to Reijnen, stipulate that, “…after an emergency landing, to be returned safely and promptly, to the state of registry of their space vehicle.” And in article VIII refers to the jurisdiction and control of spacecraft launched into space, and the following personnel, is a 'state of registry'. And related to this 1967 OST VII also, that the launching country is responsible for any damage to the aggrieved parties, internationally.[92]

[90] Ibid. p. 7.
[91] Bess C.M. Reijnen, *Op.cit*. p. 114.
[92] Ibid. p. 113.

6. Launch State and State of Registry

In the LC 1972 and RC 1974, gave the definition of launch and "launch state". Launching is defined in article I (b), LC 1972 as “includes attempted launching”, which means that the attempt to launch is referred to as a launch. Even if this launch fails or does not reach the specified orbit, it will still be referred to as a launch.

Article I (c) and Article I (a), RC 1974 The launching state is defined as: (i) A State which launches or procures the launching of a space object; and (ii) A state from whose territory or facility a space object is launched; meaning, these provisions regarding the launching country include, e.g.; a country that launches or becomes an intermediary in the launch of a celestial body, and a country that provides its territory or facilities within its territory for the launch of a celestial body.[93] That is, a country can be said to be a launching country if it meets the following requirements:[94]

1) That State launches a celestial object from its territory using its own means;
2) That country launches a space object from the territory of another country, based on an agreement with it, using its own or local means; or
3) Carry out the launch of other countries' space objects or other non-governmental bodies; or
4) Provide launch facilities for use by other countries within the territory of other countries.

In the event that two or more countries become launching countries, they will determine who will be the State of Registry. This determination is very important because the chosen country will exercise jurisdiction and control over the spacecraft and its crew while in space and other celestial bodies. However, the exclusive right of the registration state to exercise jurisdiction and control is reduced by the provisions in article II (2) of the 1974 RC. This provision provides an opportunity for an agreement between the launching states to stipulate that the state of registration is different from the state which has jurisdiction and control.[95]

In the context of multinational companies, if there is a company that establishes a kind of launching service in a country, then that country can indirectly be referred to as a launching country. The consequences of this designation of the launching country, if an accident occurs, it can be subject to international responsibility. Based on this, new difficulties will arise if the multinational company or organization launches its satellite from the territory of a country that is not a party to the agreement without involving the treaty participating countries.[96]

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[93] Mieke Komar Kantaatmadja, *Berbagai Masalah Hukum Udara dan angkasa*, Bandung, 1984. p.125.

[94] Wahyuni bahar, *Op.cit.* p. 170.

[95] Ibid. p. 170.

[96] See, Ibid. p. 171.

E. The Concept of Liability in Space Law

The term responsibility is translated as responsibility, namely the obligation to bear everything. While liability is translated as responsibility, which means an act to account for or bear all the consequences of his actions. Based on this term, the writer chooses the word 'responsibility' in this thesis as a translation of the word 'responsibility' in the context of Article VI OST 1967. The term responsibility is more directed to the public and is administrative in nature rather than accountability. Because the term responsibility is more directed to the context of civil law, which is more risk allocation.

For the principle of responsibility (Responsibility), for damage caused by the launch of artificial celestial bodies launched into space will be imposed by international law on the state, contained in article VII OST 1967.[97] Meanwhile, in terms of liability according to LC 1972, according to Diederiks Verschoor, that this convention is united in the opinion that, "Responsibility should be placed on the person or entity who holds the first decision to engage in an activity that is likely to pose a risk to the other party, even in cases where due care or precautions are taken. cannot completely avoid loss or accident. It is said that the person who benefits the most from such activity should bear the risk involved, and not share it with third parties."[98]

In the 1972 LC, it stipulates a dual system of liability, in articles I to VII. The two systems are absolute liability (absolute liability-Article II and IV(a), LC 1972) and liability of fault (Article IV (b) LC 1972). Absolute liability applies if the loss is caused by a space object above the earth's surface or to an aircraft in flight. The liability for fault applies if the loss occurs in a place other than above the earth's surface to a space object or to people or property in a space object launched by a launching country by a space object belonging to another launching country.[99]

In space law, apart from the requirement of a causal relationship between loss and space object, no definition is given for either direct or indirect loss. For the last-mentioned loss, each claim is based on merit (own merits-article XVIII),[100] within the limits of feasibility and justice, which carries the obligation to return to its original state (status quo ante).[101] The imposition of this standard of absolute responsibility on states might create problems in the implementation of the 1972 LC is not at all surprising. In each country, civil liability is regulated by domestic law, while international law has not yet developed an appropriate legal pattern to regulate this issue. As a corollary of state responsibility, a person who suffers a loss caused by a space object cannot file a claim on his own: such action must be taken

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[97] Fabio Tronchetti., *Op.cit*. p. 28.

[98] Diederiks-Vershoor, *Op.cit*. p. 30.

[99] Ibid. p. 32.

[100] Pasal XVIII, LC 1972: *The Claims Commission shall decide the merits of the claim for compensation and determine the amount of compensation payable, if any*.

[101] Diederiks-Vershoor, *Op.cit*. p. 36.

by his country or by another country. However, there is no obligation for a country to raise the case on behalf of its citizens.[102]

According to Verschoor, based on careful research it is proven that the 1972 LC includes 'gross neglience'. The concept of gross negligence has given rise to many interpretations, ranging from negligence in taking precautionary measures to 'large excessive neglience'. An attempt to apply it at an international level is likely to lead to complications, even in the field of civil law. Indeed gross negligence means more than ordinary negligence, and it denotes a "real negligence" rather than simply "accidental".[103] Then Article XXII LC 1972, confirms that the provisions of the Convention will also apply only to intergovernmental organizations.

F. Responsibilities in Space Activities

If an activity causes harm to another party, the state is obliged to provide compensation to the injured party. The principles and procedures for providing compensation are outlined in the 1972 LC which has established two legal principles governing liability for compensation, namely:

1) Absolute liability, used for damage that occurs on the Surface of the Earth and airplanes that are flying in the air (Aircraft in flight), (article II LC 1972);
2) Fault Liability, is used in the event that occurs with a space object belonging to one of the launching countries, or against people or property on board the spacecraft, which is caused by a space object belonging to another launching country, then that party must liable only if the loss was due to his fault or the fault of the responsible persons (article III, LC 1972).
3) Joint and several liability, used in the case of joint launches, i.e. If two or more countries jointly launch a space object, they will be jointly and severally liable for a loss caused. Thus all participants in joint launches are 'Tortfeasors' (shared responsibility bearers).

In the 1972 LC, it is determined who can ask for compensation for the occurrence of an accident or damage caused by a space activity. According to the 1972 LC, the claimants are:

1) A country that suffers losses or whose citizens suffer losses (Article VIII paragraph 1);
2) A country in relation to the loss suffered by a person residing in its territory, if the country of which that person is a citizen does not file a claim; or (Article VIII paragraph 2);
3) A country in connection with the loss suffered by a person who permanently resides in its territory, if the country in which that person is a citizen or the country in whose territory the loss suffered is not filed a claim or shows its desire to file a claim (Article VIII paragraph 3).

[102] Ibid. p. 39.
[103] Ibid. p. 43.

LC 1972 stipulates that this claim for compensation does not apply to; Citizens of the Launching State (article VII, paragraph a), and foreign countries that are participants in space activities at the time of launch. (Article VII, paragraph b). As for the Prosecution Mechanism according to the 1972 LC, it is carried out by means of;

1) Claims for compensation must be submitted through diplomatic channels (Article IX).
2) If a country does not establish diplomatic relations with the launching country, it can ask other countries to submit claims or represent other interests, in accordance with the contents of the Convention (Article IX).
3) If the claimant state and launching state are both members of the United Nations, the claim can also be submitted through the Secretary-General (Article IX).
4) In other words, claims must be submitted in the standard form as international claims are usually filed, i.e. at an inter-governmental level (Article IX).

The Time of Prosecution, according to the 1972 LC, is as follows:

1) A claim must be filed within one year from the date of occurrence of the loss or identification of the launching state, or within one year of the occurrence of the incident or identification.
2) If, the state is not aware of the incident or damage, or cannot know which launching state to claim, it may claim within no later than one year, following the date when the incident was investigated under Article X paragraph 1 and claim but will not there has been a case that a claim was filed later than one year after the claimant state was able to properly study the facts through careful research.
3) In this case the amount of the loss is not fully known, the claimant state has one year until the amount of the loss can be determined so that it can correct its claim and submit additional documents, according to this Article (X).

Prohibitions in Claims:

1) This article stipulates that the settlement of a preliminary case (prior exhaustion) at the local level is not required for filing a claim (Article XI, paragraph 1).
2) This Convention does not prohibit a State from seeking litigation in the courts or administrative tribunals or bodies of the launching State, but, if so, or if a claim is pursued under another international agreement binding on the parties, a State can no longer make claims under the Convention, in accordance with this Article (XI, paragraph 2).

Compensation Amount:

1) The compensation which the launching State must pay under this Convention shall be determined in accordance with international law and the principles of justice and equity, in order to restore the claimants' damages to their original condition as if the incident did not occur (Article XII).
2) Compensation must be paid in the currency of the claiming country or if that country requests to be paid in the currency of the country of compensation (article XIII).

If there is no agreement, then:

1) If the settlement of a claim cannot be reached through diplomatic negotiations within one year after the claimant state has notified the launching state of its claim, a claim commission may be established (article XIV).
2) The Claim Commission consists of three members: one appointed by the claiming state, one appointed by the launching state, while the third, the chairperson, will be elected by both parties jointly (article XV paragraph 1).
3) If they do not reach an agreement on the election of the chairman for four months, then both parties may ask the Secretary-General of the United Nations to appoint a chairman (article XV paragraph 2).

III. CONCLUSION

The concept of responsibility in space activities of responsibility and liability. The concept of responsibility is more of a public or administrative responsibility, while the concept of liability is more of a civil responsibility which means an act to account for or bear all the consequences of one's actions. The concept of responsibility in terms of the public can be seen in Article VI of the 1967 OST while the concept of responsibility in the act of bearing the consequences of one's actions is set out in the 1972 LC. Articles II and IV (a), LC 1972) and liability of faults (Article IV (b) LC 1972). Absolute liability applies if the loss is caused by a space object above the earth's surface or to an aircraft in flight. Liability for fault applies if the loss occurs in a place other than above the earth's surface to a space object or to people or property in a space object launched by a launching country by a space object belonging to another launching country. If these space activities are carried out jointly, in the sense of cooperating with more than two countries, then using the concept of joint and several liability or also known as joint responsibility.

Under the provisions of international law, if a space activity causes harm to another party, the state is obliged to provide compensation to the injured party, based on article VI OST 1967. This means that this article provides responsibility in public matters. By act or act of responsibility, delegated to LC 1972. In this convention, it is determined who can claim compensation for the occurrence of an

accident or damage caused by a space activity, namely, a country that suffers a loss or a citizen country suffers, then a country in connection with the loss suffered by a person who is in its territory, or a country in connection with the loss suffered by a person who permanently resides in its territory. Based on this, the compensation or compensation given must be in accordance with international law and the principles of justice and equity, to return the damage to the original claimant to its original condition as if the incident did not occur. In addition, compensation must be paid in the currency of the claiming country or if the country asks to be paid in the currency of the country of compensation. And if this claim for compensation is not reached in diplomatic negotiations, it can form a claim commission, with members from each participating country and the victim, and elect the chairman of the commission. If the election of a chairman is not reached, then the secretary general of the United Nations can appoint a chairman, namely one of the participating countries and the victim country. With the existence of the 1974 RC, the exclusive right of the registered state to exercise jurisdiction and supervision is reduced, with the provisions in article II (2) of the 1974 RC. This provision provides an opportunity for an agreement between the launching countries which stipulates that the country of registration is different from the country that has jurisdiction and supervision.

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