

State Liability for The Fault Causing Damage in Outer Space

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History: Received 25/06/2023 | Revised 25/07/2023 | Accepted 26/07/2023 | Published 30/08/2023

Abstract. The implementation of outer space exploring and using activities by a state builds on the Space Treaty 1967. This provision governs two basic principles in using outer space: non-appropriation and freedom exploration. The principle of giving the states a freedom to do their activities in outer space leads so many space objects to be launched. Some problems then result from the activities done by the states in outer space: outer space debris problem, falling space object, and misuse. If a state does an activity and then results in damage or loss against other states in the outer space, it will be imposed with a liability as governed in the Liability Convention 1972. This research focuses on a study on the concept of state's liability if its activities in outer space results in damage/loss against other states. This research used a normative legal research method, aiming to analyze the concept of fault from the state's action resulting in damage/loss against other states in outer space. This analysis is important because the term of the fault of state action is not defined in Liability Convention 1972.

Keywords: Space; Fault; Responsibility; Liability; Damage

INTRODUCTION

State implements the activities of exploring and using outer space based on the provision of international law, particularly Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies 1967 (Space Treaty 1967) (Supancana, 2006). There are two basic principles on which the states build the implementation of outer space exploration and use (Irvan & Purwanto, 2020). The first principle is non-appropriation explaining that every state is not allowed to claim for its sovereignty in outer space (Wrench, 2019). It has been the part of customary international law, in which the outer space resource may not be taken certainly and absolutely (Yun, 2020). The second principle is the freedom of exploration meaning that a state has a full freedom in the attempt of

exploring and using outer space without discrimination (S.Gorove, 1971). The important precondition in this principle is that a state is not allowed to infringe other state's right in the attempt of implementing its activity in outer space (Doucet, 2019). The two principles make the activities of exploring and using outer space area increasing.

About 12,293 space objects were launched to outer space in 2022 with 31 air-, sea-, and submarine-based launching facilities (Mohanta, 2023). The term space object refers to a man-made device launched to outer space area (F. G. Van Der Dunk, 2008), including as well the component part of space object and launching vehicles and its components (F. G. Van Der Dunk, 2008). So many space objects have been launched; it of course generates some problems that later results in operational and environmental impact (Pardini &

Anselmo, 2021). One of the environmental impacts results from space debris phenomenon (U.S. Congress, 1990). Space debris is man-made object including its parts and elements that are no longer functional, are on earth's orbit, or have reentered the atmosphere (Hutagalung et al., 2020). Some factors affect the emergence of space debris population, the launching of many objects that then are damaged due to explosion or collision between space objects (Rachman, 2012). The environmental effect is a serious problem, in which the states that do some activities in outer space can result in loss such as the damage to earth and its surrounding (Layachi, 2020).

In relation to the phenomenon of damage occurring in outer space area, there is a principle of liability imposed to the state (Bratu et al., 2021). The principle is regulated in Article VII of Space Treaty 1967 containing the concept of state liability for the damage resulting from the launching of space object (Morozova & Laurenava, 2021), which elaborated further in Convention on International Liability for Damage Caused by Space Objects 1972 (Liability Convention 1972). The latter convention focus particularly on state liability principle related to all damage caused (Dennerley, 2018). Both regulations create two concepts of liability: strict liability/absolute liability and fault liability (United Nations, n.d.). Strict liability emphasizes the urgency of state responsibility without prior proof of fault action (Amalia,

2020). When the element of damage occurring on earth surface has been fulfilled, the state is obliged to be responsible absolutely for taking restoration action (Martin, 1980). Therefore, strict liability leads to no dispute about who is responsible legally for the damage occurring in the region (Kehrer, 2019). In contrast, in relation to the damage occurring in the region other than earth surface, the concept of responsibility applying to the situation is fault liability (Noor, 2018). This responsibility emphasizes the importance of fault made by one or more states that later causes damage/loss (Nollkaemper, 2014).

The term damage mentioned in Liability Convention 1972 means loss of life, personal injure, other health disorder, loss or damage on state property, person, legal entity, or intergovernmental international organization (Svetlana Myhailovna Sylkina, Mariyam Sultanovna Dosymbekova, Almagul Zhagaltaevna Tusupova, 2014). The explanation about damage has been elaborated clearly and thereby can be reference for the states to determine whether or not there is an activity in outer space that will result in damage later. In contrast to the element of fault made as a basis in determining a state's liability in the case of damage/loss in outer space region, the term and the determination of fault is not explained in Liability Convention 1972 (Newman et al., 2021). It leads to no normative rule that can be a reference in determining a fault of a state, occurring in the

outer space region and thereby causing loss/damage (Newman et al., 2021). Seeing the vacuum of law regarding this, this research aims to analyze the concept of fault in a state's action causing damage/loss based on international law in the attempt of achieving law certainty.

RESEARCH METHODS

This research employed a normative legal research method (Ishaq, 2017) with statute approach (Marzuki, 2005). The type of data used was secondary one (Depri Liber Sonata, 2014) with data source including primary, secondary, and tertiary law materials, and non-law material (Fajar, 2019). The primary law material used in this research consists of Space Treaty 1967 and Liability Convention 1972, secondary law material is sourced from books, scientific journals, and legal expert's writing. Meanwhile, non-law material consists of books, scientific journal and expert's writing in outer space field. Data collection was carried out using library study (Bachtiar, 2019) processed by means of selecting secondary data and analyzed qualitatively (Muhaimin, 2020).

DISCUSSION

The concept of fault in the state liability for its activity causing damage/loss in outer space region later is contained in the provision of Article III of Liability Convention 1972 (F. Von der Dunk, 1992). This provision confirms

the presence of the concept of liability arising in outer space region due to a state's fault, in addition to the damage occurring (Verëll, 2017). This concept is in line with 'culpa' constituting a Roman classical idea and civil law, with an explanation that if damage occurs due to the fault, two or more spacecraft involved and each of states has equal risk (Yusvitasari, 2020). Confusion arises concerning the definition of fault, conceptually and terminologically. It is because the provision of Article 3 of Liability Convention 1972 does not specify the requirements of cause and effect to the damage generated (Marakani, 2023). The concept of fault has not been defined well by International Court of Justice as appear in decision for 5 cases: Youmans Claim (1926), Trail Smelter Arbitration (1941), Corfu Channel case (1949), Case concerning United States Diplomatic and Consular Staff in Tehran (1980), and Case Concerning The Gabcikovo-Nagymaros Project (1997) (Diggelmann, 2006).

The provision about the state's fault-based liability in its activities in outer space region is also found in Article IV of Liability Convention 1972 (Zykov, 2023). Concisely, this provision explains the concept of mutual liability. In relation to the context of fault as mentioned in clause 1 letter (b), if some damage occurs due to the space object on the third state in outer space region, the third state's liability will build on the fault of one of

two states mentioned earlier (Lee, 2012). While clause 2 concerning on compensation based on fault measurement. If the fault cannot be measure, the burden of compensation should be distributed equally or evenly without reducing the third state's right to ask for entire compensation paid (Zafren, 1972).

Considering the importance of term 'fault' in the provision of Articles 3 and 4 of Liability Convention 1972, the interpretation of the fault concept is needed (Radi, 2023). Understanding the fault is an important requirement in the concept of liability based on fault in the Liability Convention 1972, and it can be done using fault theory. This theory relates to the presence of liability bond to the one causing some loss with negligence or willful act (Goldie, 1965). The fault theory emphasizes tht the negligence and willful act elements of a party should be present before its state is considered as responsible for the loss elicited (Shaw, 2008). Negligence is a failure of cautious behaviour that should be performed by the party that has cautious habit in the same situation (School, n.d.). The willful act is represented as an act taken intentionally, consciously, and deliberately without justifiable reason. This action is distinguished from the one taken carelessly, thoughtlessly, negligently, or unintentionally. This willful act is, in principle, different from the negligence, in which negligence is positive and willful act is negative consisting of aggressive wrong act, having an objective to injure deliberately

(Black, 1968). Based on this explanation, it can be concluded that the term fault refers to a state's action that can cause damage/loss due to negligence or willful act.

After the term is elaborated, then a discussion is needed on how to prove the element of negligence or willful act. It becomes important because in the concept of fault, the element of negligence or willful act of the state's action should be proved first to elicit liability. Each of states encountering loss due to the fault should prove first that the sued party did the fault due to negligence or willful act (University, n.d.). To determine whether a state's act belongs to negligence or willful act category, a test of 'serious fault' is needed. This test is defined as an action far below standard expected in a situation. The factors needing to consider in the 'serious fault' test are seriousness of damage/loss generated and the extent to which the stakeholders engage with the fault (Nolan, 2013). It is in line with the concept of liability based on fault that takes prohibition norm and standard, requirement or permit in relevant normative instruction into account (Gailhofer et al., 2023).

Further discussion to complement the concept of fault comprehensively in Liability Convention 1972 is carried out by analyzing the form of liability for damage/loss occurring in outer space region, because of negligence or willful act elements of the state's fault. The Liability Convention 1972 was established based on, among others, the need for

elaborating effective international rule and procedure about the liability for the damage caused by space object. Liability Convention 1972 specifies that if a state generates damage due to its activities in outer space, the form of liability it should take is compensation ([Convention on International Liability for Damage Caused by Space Objects, 1972](#)). Based on the Article 36 of Responsibility of States for Internationally Wrongful Acts 2001, compensation is a form of responsibility given in relation to the incidence of irreversible damage with restitution ([Justice, 2018](#)). Compensation also can be something valued financially including the lost profit (benefit), as long as it can be proven ([Responsibility of States for Internationally Wrongful Acts, 2001](#)). Compensation relates to the material damage suffered from as the result of wrongful act ([Crawford, 2023](#)). The state's responsibility in the form of compensation aims to compensate and can be measured from the damage suffered from by a state ([Shelton, 2002](#)). Compensation can be filed through diplomatic channel, if a state does not has diplomatic relation, it can ask other states for help to deliver the claim of compensation. In addition to diplomatic channel, the claim of compensation can also be filed through the Secretary General of United Nations if both parties are member states ([Pedrazzi, 2008](#)). This mechanism of filing compensation aims to avoid one of parties from perceiving lost and to prevent the conflict from occurring ([Amalia,](#)

[2020](#)). There is no difference of liability in the form of compensation provided by the state for damage occurring on earth surface or the one in outer space region.

CONCLUSION

Specifying the concept of liability based on fault in the Liability Convention 1972 can be analyzed by interpreting the term fault, proof of fault, and form of fault liability. The understanding of fault can be based on fault theory. This theory explains that a wrongful act is an act of a state that causes damage/loss due to negligence or willful act. The fault made by the state can be determined using "serious fault" emphasizing on the seriousness factor of damage/loss elicited and the extent to which the stakeholders engage with the fault. Based on the Liability Convention 1972, the form of liability for the damage in outer space region due to the fault made by the state is compensation.

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