

SOVEREIGN RIGHT CLAIM ON GEO STATIONARY ORBIT (GSO)

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Abstract

The potency and unique characteristics of GSO for placing communication satellites located only above equatorial states makes the GSO as part of natural resources. The equatorial states realized that the use of GSO has many advantages and has implications to their national interest. However, basic principle in space law, Outer Space Treaty 1967 (Art.II), states that equatorial states forbidden to claim ownership of any part of outer space, particularly claim in sovereignty.

The principle “first come first served” in placing of satellite on GSO, practically only gives the advantage to developed countries which have high satellite technology. Hence, the level of technology of a state plays important role in developing of space law internationally. The equatorial states which are mostly developing states (low and middle level in technology in outer space activities) claimed their right to use natural resources for their national interest based on equatorial position principle.

Keywords: Geo Stationary Orbit (GSO), Natural Resources, Sovereignty, Sovereign Right, Equatorial States.

I. Introduction

There is no international legal interpretation to distinguish between air space and outer space. However, the distinction can be found in the right and obligation in the application and use of state. In air space, sovereignty is exclusive², means that the national law of the state below is applicable. By contrast, in outer space, the principle of a non-appropriation is applicable.³ In the other words, the basic difference between the legal status of air space and outer space has been pointed out: while every state has complete and exclusive sovereignty over the air space above its territory, national sovereignty cannot be extended to outer space.⁴

The development of telecommunication technology has been rising year to year; placing satellites in outer space is an activity in which operators can maximize the use of technology. Satellites circling the Earth are bound to overfly the territories of quite a number of countries all over the world.⁵ In outer space, the orbital satellite positions divided into four orbital satellite positions, Low-Earth Orbit (LEO), Medium Earth Orbits (MEO), Highly Elliptical Orbit (HEO)

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² Art.1, of Chicago Convention 1944.

³ Art. II Outer Space Treaty 1967.

⁴ Marietta Benko, willem de Graaff and Gijsbertha C.M. Reijnen, Space Law in the United Nations, Martinus Nijhoff Publisher, 1985, p.130.

⁵ *Ibid*, p.54.

and Geo Stationary Orbit (GSO). In those positions, Geo Stationary Orbit (GSO) position is the most sensitive issue in the case of law. The reason is that GSO has more advantages than other positions. The advantage of GSO has been implicated in conflict of law among states from equatorial states and others.

In 1976, some equatorial countries (Brazil, Zaire, Indonesia, Kenya, Colombia, Congo, Uganda and Equador) adopted the Bogota Declaration 1976. The declaration proclaimed the sovereignty of the equatorial states over the geostationary orbit segments over their territories. The claim of these countries was automatically rejected by international community which stated that no state could claim its sovereignty over outer space.⁶

By looking at the problem above, this paper tries to explore the conflict of law related to the interests of equatorial states (especially Indonesia) and the others which rejected the claim of equatorial states.

II. GSO and Its Position

A. Definition, Characteristics, and Conditions of Earth Orbit

In physical nature and technical characteristics of earth-orbit, there are four earth-orbital mentioned, *First*, Low-Earth Orbit (LEO) which is defined by objects orbiting the earth at less than 5500 km altitude.⁷ This equates to an orbital period of less than 225 minutes. It is a spherical shell, bounded below at about 200 km by the earth's atmosphere and above at about 4,000 km by Van Allen Belts.⁸ Space object cannot operate below 200 km due to atmospheric drag, while those operating above approximately 1,000 km must be designed to withstand the solar wind radiation which becomes trapped in the earth's magnetic field.⁹

Secondly, Medium Earth Orbits (MEO) located at an altitude between 10,000 – 20,000 km above sea level.¹⁰ *Thirdly*, Highly Elliptical Orbit (HEO) which typically have apogees at around 40,000 km and perigees at less than 1000 km and are inclined to the equator at the unique angle of 63,4 degrees. This orbit is also called "Molniya Orbit" which provides a high angle of elevation even in polar regions for satellites which spend a good fraction of their nominal 12 hour orbital period near the apogee over the Northern hemisphere. The orbit has been proposed for several commercial audio direct broadcasting and mobile satellite services.¹¹ The last one is Geo Stationary Orbit (GSO).

B. Geo Stationary Orbit

GSO is a member of the family of geosynchronous orbits. The term "geosynchronous" applies to all orbits having a period of rotation corresponding to that of Earth (about 23 hours, 56 minutes).¹² From Earth, a geosynchronous space object will appear to describe a single or double loop about a point on the

⁶ Art. II Outer Space Treaty 1967

⁷ Ida Bagus Rahmadi Supancana, *The International Regulatory Regime Governing the Utilization of Earth-Orbits*, 1998, p.16

⁸ *Ibid*

⁹ *Ibid*

¹⁰ *Ibid*, p.23

¹¹ *Ibid*, p.25

¹² Howard A. Baker, *Space Debris: Legal and Policy Implications*, MartinusNijhoff Publisher, 1989, p.25

equator once every 24 hours.¹³ Space objects in GSO are approximately 35,787 km above the equator and appear from the ground to remain stationary, if they revolve from East to West, as Earth does.¹⁴ GSO was also defined by Colombian Working Non-Paper circulated at the Legal Sub-Committee Session of the UNCOPUOS of 1992 as a geometric locus in outer space where an object in orbit behaves differently with respect to the earth from the way in which it would behave in any other locus in outer space.¹⁵

GSO is a unique natural resource of vital importance for a variety of space activities, including communications, meteorology, broadcasting, remote sensing, data relay and tracking.¹⁶ It is long enough to satisfy the requirements of all states that might wish to establish satellites there.¹⁷ In the GSO, satellites appear to remain stationary above the same point on the equator because they revolve in a circular orbit above the equator with the same rotational period as the Earth. Although the GSO is not the only orbit that could be used for communication satellite, it is preferred for most purposes because a satellite in the GSO has a constant view of a large area of the Earth. Due to the existence of a state of permanent or for a geostationary satellite placed in orbit, it is clear a path (orbit) is very potential for the placement of communications satellites.¹⁸ In conclusion, GSO is the best placed orbit for placing satellites with unique characteristics or features located above equatorial line of Earth.

There are three kinds of communications satellite services using the GSO:¹⁹

1. The Fixed Satellite Services (FSS)

These services are for communication via satellite between fixed earth stations, and are the first type of satellite communications systems developed. The FSS carriers television, telephone, telegraphic, and telex traffic. It has the capability to carry other types of information.

2. Mobile Satellite Services (MSS)

MSS is for communication via satellites with earth stations located on ships, aircraft and land vehicles.

3. The Broadcasting satellite Services (BSS)

BSS carriers television or radio signals via satellite from a fixed earth station to large numbers of small inexpensive receiving stations.

Here, all the member of ITU is guarantee by space service plans which were developed in equitable access to the GSO and associated frequency resources.²⁰ This is necessary to preserve a certain amount of frequency spectrum to use for all countries especially to the state which are not in a position, at present, to use

¹³ *Ibid*

¹⁴ *Ibid*

¹⁵ Ida Bagus Rahmadi Supancana, *Op.Cit*, p.12, see also par:4 of Working Non-Paper circulated at the 31th session of Legal Subcommittee 1992. UN Doc. A/AC.105/C.2/L.190/Add.8.of 9 April 1992..

¹⁶ Howard A. Baker, *Ibid*.

¹⁷ Gennady Zhukov and Yuri Kolosov, *International Space Law*, Praeger Publisher, 1984, p.156

¹⁸ Nandasiri Jasentuliyana, *International Space Law and the United Nations*, Kluwer Law International, 1999, p.260

¹⁹ Ida Bagus Rahmadi Supancana, *Op.Cit*, p.13

²⁰ Maria Buzdugan, *Recent Challenges Facing the Management of Radio Frequencies and Orbital Resources Used by Satellites*, Space Law and Policy 2011-2012, Universiteit Leiden.

of the resource.²¹

C. Legal Regime Governing the GSO

The potency and unique characteristics of GSO for placing communication satellites located only above equatorial states (Brazil, Zaire, Indonesia, Kenya, Colombia, Congo, Uganda and Equador) makes the GSO as part of natural resources. The term GSO as a natural resources can be found on article 33 (2) of International Telecommunication Convention of Space Law 1982.²²

Even The Outer Space Treaty provides that outer space is 'free for use by all countries without discriminations of any kind' and 'is not subject to national appropriation by claim of sovereignty, by means of use or occupation or by any other means'.²³ The International Telecommunication Convention 1982, in article 33 stated that radio frequencies and the geostationary satellite orbit are limited natural resources, and, the convention assures all countries equitable access to the radio-frequency spectrum and the geostationary orbit. The principle that all countries have a right to the orbit is therefore, clearly established. However, to gain access in practice requires that a country is able to build or buy a satellite, have the satellite launched, and have the frequency and orbital position protected against interference through registration with the International Frequency Registration Board (IFRB) of the ITU.²⁴

This is absolutely dilemmatic position among the states which is located below GSO; in one hand, if GSO is a part of outer space, a principle of OST 1967 (Art.II) applies, which implies that equatorial states forbidden to claim ownership of any part of outer space²⁵. Consequently, they cannot maximize GSO because its ability in satellite technology, on the other hand, they know the advantage of GSO which is only few states can maximized the GSO which have high technology in satellite and rocket launching. The question concerning the GSO has been under discussion for several years with UNCOPUOS and both subcommittees. Differing opinions about the legal status of the GSO have surfaced during many assemblies and are especially reflected in several reports compiled by the legal subcommittee.²⁶

Until 2011, there are 101 states had ratified Space Treaty and signed by 26 others.²⁷ As the primary convention in international law, especially in regulation of use of outer space and the treaty is used for peace purposes, the states, including in which ratified yet have the obligation to respect for all the principle in which regulated in the convention. States must avoid to use outer space for

²¹ *Ibid*

²² Art. 33 (2) of Space Treaty "In using frequency bands for space radio services Members shall bear in mind that radio frequencies and the geostationary satellite orbit are limited natural resources and that they must be used efficiently and economically, in conformity with the provisions of the Radio Regulations, so that countries or groups of countries may have equitable access to both, taking into account the special needs of the developing countries and the geographical situation of particular countries."

²³ Art. II of Space Treaty 1967.

²⁴ Nandasiri Jasentuliyana, *Op.Cit*, p.257

²⁵ Tanja Masson-Zwaan, *Current Issues & Prospects of International Space Law, Space Law and Policy 2011-2012*, Universiteit Leiden.

²⁶ General Opinions Contained in the Non Working Paper of the COPUOS (1989) see also Hanneke Louise van Traa-Engelman, *Commercial Utilization Of Outer Space – Legal Aspects-*, DrukkerijHaveka B.V., Alblasserdam, p. 72

²⁷ <http://www.oosa.unvienna.org/oosa/en/SpaceLaw/treatystatus/index.html> (last visited 2/5/2012)

purposes, which endanger world peace. In other words, all state should apply the principles of the treaty in peaceful purposes. The tribute to the convention has implicated to the recognition that GSO as a part of outer space, furthermore, the claim of equatorial states cannot be accepted as a part of their sovereignty. There are some reasons of it:

1. This issue was discussed by United Nation Committee on the Peaceful Uses of Outer Space (UNCOPUOS). This committee in United Nation has a specific work in technical and law aspect, specifically regulates the use of GSO in its concern; this is because GSO is a part of Outer Space.²⁸

In UNCOPUOS there are two subcommittees, one is Legal, another Scientific and Technical, each composed of the same member state as the parent body, were created for detailed consideration of specific proposals and suggestions concerning scientific, technical and legal problems submitted by the COPUOS members for the development of international cooperation in the field of space exploration for peaceful purposes.²⁹

2. Equatorial states in the first year of Bogota Declaration, in UNCOPUOS meeting, stated that GSO was not a part of outer space, however, in recent years some of the states (including Indonesia) have not ignored that GSO is a part of outer space.
3. Remote sensing satellite activity which is located less than 36.000 km can be classified as an outer space activity. It means that GSO in which is located on equatorial line under 36.000 km high from Earth is also a part of outer space.

In conclusion, internationally, there is recognition that GSO is a part outer space. Furthermore, all activity relating to the use of outer space (including GSO) should follow the rule of Space Treaty 1967.

D. Space Law Principles Governing the GSO

The use of GSO is in principle regulated on Space Treaty 1967 and the ITU convention 1982, it is not subject to national appropriation by claim of sovereignty,³⁰ equitable access,³¹ province of all mankind,³² maintaining international peace and security,³³ and promoting international cooperation and understanding.³⁴ However, on the GSO, ITU rules are fairly well established, though incomplete. Recognizing the importance of the position of GSO, the

²⁸ Art. 10 of ITU Convention 1982, the duty of International Frequency Registration Board. See also UNISPACE recommendation 1982, UNCOPUOS was established by General Assembly resolution 1348/XIII/ of 13 December 1958, first as an ad hoc body, and then transformed one year later by resolution 1472/ XIV/ of 12 December 1959 into a permanent organ of the General Assembly. See also Declaration of Legal Principles Governing the Activities of States in the Exploration and Use of Outer Space. Resolution 1721A (XVI) was adopted by the UN 20 December 1961; resolution 1962 (XVIII) was adopted by the UN 13 Dec. 1963.

²⁹ Vladimir Kopal, *United Nations Space Treaties: Achievements and Further Development*, ESA Publications Division, 1999, p.267

³⁰ Art. II of Space Treaty 1967

³¹ Art. 33 of ITU Convention 1973

³² Art. I of Space Treaty 1967

³³ Art. III of Space Treaty 1967

³⁴ *Ibid*

writer cites the though Dr. Jakhu, which there are some principles can be applied extensively.³⁵

1. A Right to “Use” and Not to “Own”

This is a direct consequence of space law principles; the recording of an assigned orbital position does not confer national property right, whether those rights have been granted on a “first-come, first-served” basis, or on an “a prior” plan.

2. A Right to Use Perpetually

The rule is that the notifying country is allowed continuous use without a time limitation.³⁶ However, in the “a prior” plan, the procedure is designed to meet the requirements of the concerned country for specified periods of time.

3. A Right to Barter a GSO Slot

Since the right to use a particular orbital position/radio frequency is non transferable. This right is the de facto consequence of the established a priori procedure which open the way for adjacent countries to “exchange allotments because the proposed modification or inclusion of a new frequency assignment would affect the nearby allotments only.”³⁷

4. A Right to Replace a Dead Satellite

The protection of assigned frequencies counter harmful interference requires that any change be notified with regard to an assignment which has been recorded in the Master registry. Here, in terms of identification are the name of the space object and the effective use of the frequency. In practice, nothing a state from replacing an expired satellite with an identical one which carries the same technical characteristics.³⁸

5. A Right to More Recorded Assignments than Satellites

The reasons why the situations may happen for a nation could come from the need to pile up positions for future use or to make the best use of available satellites in providing service wherever and whenever needed. International satellite operators such as INTELSAT, INMARSAT and the like may need, for many reasons, to switch one of their satellites from one position to another. Such a move can only possible if the operator keeps the different orbital positions available.³⁹

Since there is no definition of delimitation between air space and outer space, every state can define how high the delimitation between them and how high they have the right to control. However, in implementation, every state shall respect the regime of Space Law internationally, in where outer space particularly in GSO regulated by ITU (non-state body).

³⁵ Patrick-Andre Salin, *Satellite Communications regulations in the Early 21st Century ‘Changes for a New Era’*, MartinusNijhoff Publisher, 2000. p.49

³⁶ This rule has been introduced in Resolution Number 4 World Administrative Radio Conference (WARC) year 1979.

³⁷ Patrick-Andre Salin, *Op Cit.*

³⁸ *Ibid*

³⁹ *Ibid*

III. International Law and Claim of Equatorial States

A. The claim of equatorial states above GSO

Recognition of GSO as a natural resource implies that other Earth Orbits are also defined as natural resources. However, the GSO defines as limited natural resources means that the capacity of GSO above equatorial earth for placing the satellite is limited.

The principle *first come first served* in placing of satellite on GSO, practically only gives the advantage to developed countries which have high satellite technology. Equatorial states which usually developing countries have no choice related to use of GSO above its territory by claiming in Law.

Responding to the issue of use of the GSO, equatorial states initiated a meeting. The first meeting of equatorial countries (Brazil, Zaire, Indonesia, Kenya, Colombia, Congo, Uganda and Equador), held in Bogota (Colombia) from November 29 to December 3, 1976, adopted a Declaration in which it is argued that the GSO is a physical fact connected with realities of Earth. The declaration proclaimed sovereignty of the equatorial states over the geostationary orbit segments over their territories. These segments, it is claimed, are part of the territories of these countries, their natural resources, to which national sovereignty extends.⁴⁰

Generally speaking, the reaction from equatorial states is the action in protecting their territorial interest regarding to the use of GSO. The reaction was rising as the respond of inequity developed countries to equatorial states in which majority from the developing country.

1. Sovereignty and the model of claiming

Territorial sovereignty was defined by Max Huber, an arbitrator in the case island of Palmas:⁴¹

'Sovereignty in the relation between States signifies independence. Independence in regard to a portion of the globe is the right to exercise therein, to the exclusion of any other State, the functions of a state.'

Montevideo Convention 1933 article 3, stated that:

The political existence of the state is independent of recognition by other states. Even before recognition the state has the right to define its integrity and independence, to provide for its conservation and prosperity, and consequently, to organize itself as it sees fit, to legislate upon its interest, administer its services, and to define the jurisdiction and competence of its courts.

The exercise of the rights has no other limitation than the exercise of the right of other states according to international law.

Sovereignty itself refers to the ultimate legal authority within a national legal system (internal sovereignty), and the power which a state has to conduct relations with other states according to the rules of international law.⁴²

Sovereignty in international law is the right to exercise the functions of a state to the exclusion of all other states in regard to a certain area of the world. The consequence of that is, that every state is equal to the other state. In the

⁴⁰ Gennady Zhukov and Yuri Kolosov, Op cit, p.155. See also point 5 of Bogota Declaration 1976

⁴¹ I A Shearer, 'Starke's International Law', Butterworth & Co (Publishers) Ltd, 11th edition, 1994, p.144

⁴² Malcolm D. Evans, 'International Law', Oxford University Press, 2003, p.207

context of outer space, the claim of sovereignty over outer space means that the state can exercise its jurisdiction and control over outer space.

In international law, there are five models for the state to acquire territorial sovereignty, occupation, annexation, accretion, prescription and cession.

Occupation is an original mode of acquisition whereby a state acquires sovereignty over *terra nullius* (i.e. a piece of territory not under the sovereignty of any state)⁴³, it is different to *annexation* in which a method of acquiring territorial sovereignty which is resorted to in two sets of circumstances:⁴⁴

- a. *Where the territory annexed has been conquered or subjugated by the annexing state.*
- b. *Where the territory annexed is in a position of virtual subordination to the annexing state at the time the latter's intention of annexation is declared.*

Cession is the right state of transferring its territory⁴⁵ to another state. The use of this model can be found in the *Island of Palmas* case, the United States claim to the island was based in part on the Treaty of Paris of 1898, which transferred all territorial rights which Spain possessed in the region.⁴⁶ The other way, prescription is the result of the peaceable exercise of the de facto sovereignty for a very long period over territory subject to the sovereignty of another.⁴⁷ The last one accretion, which occurs where new territory is added, mainly through natural causes, which can be by fluvial action or otherwise (eg. wind blown sand) to territory already under the sovereignty of the acquiring state.⁴⁸

Relating to the model above, can we say that the equatorial states extend their sovereignty by occupation or accretion?

The principles of governing outer space stated clearly that outer space is not subject state sovereignty. But even though of outer space is not owned by any state, it does not mean that state cannot claim sovereignty by occupation. The context of accretion also cannot be generalized to this context. Even GSO has special characteristic related to its nature in which connected to the Earth, however, the arrangement of GSO in putting satellite is regulated by the international body (ITU).

2. Sovereign Right on GSO

By looking at the reason of equatorial states to claim sovereignty on GSO, the international community should consider the interest of all states, not only the interest of the developed countries which have the technology of outer space but also to the state where the geographic location gives the opportunity to its state to maximize the position to reach welfare for its people. In this context, a principle of *first come first served* is not reasonable to apply in the context of putting the satellite on GSO. This principle violated the principle of equitable access to all states. In my view, *equitable access* is not only defined as the right of every state to explore outer space without limitation or share the information in

⁴³ D.W. Greig, *International Law*, Butterworth & Co (Publishers) Ltd , 2nd edition, 1976, p. 161

⁴⁴ I A Shearer, *Op.Cit*, p. 152

⁴⁵ *Ibid*, p.153

⁴⁶ D.W. Greig, *LocCit*, p. 158

⁴⁷ I A Shearer, *LocCit*, p. 153

⁴⁸ *Ibid*, p. 152

research to the other, but also should consider the interest of states because its advantage as position such as the equatorial state.

Recognition of GSO as a natural resource where not every satellite orbital place has nature such as GSO, shall consider the interest of states below. In the context of it, the regime in Law of the Sea can be allowed to apply on GSO, especially to the application of sovereign right in Economic Exclusive Zone (EEZ).

Legally speaking, definition of sovereign right is varying to sovereignty. The term of sovereign right can be found in the context of exclusive right to Economic Exclusive Zone (EEZ). The nature of the EEZ is something different from both the territorial sea and the high sea, it will be obvious that the coastal state does not have any sovereignty over this zone.⁴⁹ The sovereign rights of the coastal state are only for the economic resources of the zone, not for ownership of the zone.⁵⁰ For example, the coastal state's sovereign rights over EEZ fisheries have to be exercised subject to clear obligation to sure in access of the other states in specified circumstances.⁵¹ Similarly, the jurisdiction of the coastal state over marine scientific research in the EEZ it doesn't mean that national of coastal state applies.⁵²

The United Nations Convention on the Law of the Sea (UNCLOS 1982), article 55, defines EEZ an area beyond and adjacent to the territorial sea, subject to the specific legal regime which the right and jurisdiction of the coastal state and the rights and freedom of other states are governed by the relevant provisions of this convention. The right is limited only to activities for the economic exploitation and exploration of the zone.⁵³ In this zone, all states, whether coastal or land-locked, enjoy the freedom of navigation and over-flight and of the laying of submarine cables and pipelines and other internationally lawful uses of the sea.⁵⁴ Concept of sovereign right in economy activity in EEZ indicates that utilization of natural resources is not always relating to ownership. The utilization can give on the respect among states.

If the sovereign state can apply the Law of the Sea, can this concept apply to Outer Space? Is the character of sovereign right the same?

OST 1967 in article II only states that outer space is not subject to national appropriation by claim of sovereignty not to sovereign right. As mention above, the concepts of "sovereign state" and "sovereignty" are different. In GSO, if we look at the history of claiming, equatorial states only really want to protect their national interest relating to the use of satellite technology. The nature of GSO a limited natural resource where the slot allocation is already taken, and the principle *first come first served*, implies that equatorial states cannot place their satellite over GSO if, in fact, that slot allocation already fulfilled by other satellites.

The situation above should be solved by the international community, particularly by the ITU. The principle of equitable access for equatorial states can be defined by giving special status to them to place their satellite in it. In the case on GSO above Indonesia's territory, for instance, if there are ten slots

⁴⁹ E.D. Brown, *The International Law of the Sea*, Darmouth Publishing Company, 1994, p. 220

⁵⁰ *Ibid*

⁵¹ *Ibid*

⁵² *Ibid*

⁵³ Art. 56 (1) (a) of UNCLOS 1982

⁵⁴ Art. 58 (1) of UNCLOS 1982

allocation for placing the satellite, based on equitable access principle, Indonesia should have a sovereign right to use two or three slots allocation to place its satellite over there.

The sovereign right over GSO could be defined on the right of states to explore and exploit the natural resources by placing their satellite in it in the interest of national development and welfare of its people. Even OST does not regulate sovereign right specifically; here, 'use outer space should somehow benefit mankind'⁵⁵ which is stated in article I that the use of outer space '*shall be carried out for the benefit and in the interests of all countries... and shall be the province of all mankind*' However, the right does not exclude other states to place their satellite on GSO. Giving the equatorial state the right in slot allocation to place their satellite above their territory shows that the use of outer space is not the monopoly of developed countries but open to all states.

In the end, in Outer Space Treaty 1967 states the prohibition to the claim of sovereignty in outer space, however, the prohibition of it not to claim of sovereign right. However, the legal reason of the term should be regulated in the international treaty as recognition in international community.

B. Indonesia Position on GSO from 1979 to 2002

In 1979, the position of Indonesia recognized the claim of GSO over the territory of state. The interest of Republic of Indonesia relating to use of GSO can be seen on national policy in which stated that:⁵⁶

1. The existence of GSO has significant correlation to gravity of Earth below. Furthermore, GSO cannot be claimed as a part of outer space.
2. GSO is a limited natural resource, which must be used in efficiency and economically. Furthermore, the use of it should be maintained to not saturation point position.
3. The increasing number of satellite in the GSO, violates article 33 (2) of ITU Convention and anxious equatorial states from developing states in which have not been fully able to take the advantage of GSO.
4. The increasing number of satellite in the GSO, also increase the danger of collision.
5. The concern of equatorial states due to the possibility of use of nuclear power for satellites that are placed in the GSO, the satellite and the falling the territory of the equator.
6. The possibility to abuse of GSO for hostile purposes, such as espionage by other states that would prejudice the interest of a particular equatorial state. When the equatorial states have no right to regulate the GSO above its territory, equatorial states will remain a potential victim of spying activity by the other.
7. The existence of the principle of the resolution 2692 (XXV), General Assembly, United Nations, that peoples and nations have the right on sovereignty over

⁵⁵ Tanja Masson-Zwaan, *Op., Cit.*

⁵⁶ B. Bambang Riyanto and Triyana Yohanes, Pengaruh Ratifikasi Traktat Angkasa Tahun 1967 Terhadap Posisi Indonesia Atas Tuntutan Pemanfaatan Segmen Geo Stationary Orbit (GSO) Di Atas Indonesia Bagi Kepentingan Nasional Indonesia, *Justitia Et Pax*, Vol.26 No.1, June 2006.

wealth and natural resources in which should be implemented in the interest of national development and welfare of its people.

8. Although Indonesia signed a Space Treaty 1967, Indonesia was not a party, this is because Indonesia has not ratified yet. Therefore, Indonesia was not to be bound by the provisions of the treaty.

By the time, Indonesia realized that the claim of sovereignty over the equatorial state was hard. The fact that Indonesia was not a party of space treaty 1967 caused some difficulty at the level of the international forum, the difficulty is because of, there are fewer basic claims about the source of law and the opposite opinion of developed states. Although, most of the problems might be remedied by technological developments and solutions, a number of member states of the United Nations and the ITU are showing interest in more politically directed approached favoring international legal regulation.⁵⁷ Furthermore, in 2002, Indonesia ratified the Space Treaty into national law by Law Number 16/2002.

The ratification of treaty by Indonesia had consequence related to the claim of Indonesia before 2002. Now, after ratifying the Space Treaty, it is hard to say that Indonesia can ignore the principles stated in the Space Treaty.

IV. Conclusion

There is no definition of delimitation between air space and outer space internationally. The consequence of it makes that every state can define how high their national airspace. Although there is no definition, international communities agree that the regimes are absolutely different, where air space it's a part of national sovereignty, and outer space is not.

There are many orbital satellites in outer space; however, only GSO causes problems in practice. This is because the characteristics of the orbit. GSO as the particular orbit by international community defines as natural resource; this is because the orbital only exists on equatorial of Earth, no in other.

Since GSO is defined as limited natural resource, some equatorial states are concerned regarding the use of this orbit to the interest of their nationality interest. There were no ways for them but to declare their interest that GSO was a part of their national territorial. Consequently, in legal terms, GSO is a part of their sovereignty. The principle first come first served in placing satellite activity, by equatorial states is regarded to bean unfair principle.

Indonesia, one of the declaratory states of the Bogota Declaration 1976, over time changed its position about the declaration. Although the claim changed, there is still unclear definition relating to the prohibition of state to claim sovereignty over the outer space. By looking at the practice of sovereign states in international Law, in the context of outer space, to claim sovereignty over outer space means that the state can exercise its jurisdiction and control over outer space. They have the right to determine the use of GSO, and other states must ask permission to use it.

UNCLOS 1982 has promoted the concept of Sovereign Right, this concept is well-known in EEZ regime of the sea. In practice, the regime can be applied without any objection from international community. The use of this terminology in outer space is still debatable. This term is not known yet in outer space treaty.

⁵⁷ Hanneke Louise van Traa-Engelman, Loc Cit.

However, there is no prohibition for the state to claim it. In my view, the use of this term can be a solution to international community to face the interest of equatorial states.

Hence, I propose that the treaty relating to outer space should be amended to adapt to the increasing use of technology in outer space and conflicts of interest among states.

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