

LEGAL ARRANGEMENT OF SUPERVISION OF USE OF CELLULAR RADIO FREQUENCY SPECTRUMS IN THE BORDER OF THE SOVEREIGNTY OF THE REPUBLIC OF INDONESIA AND TIMOR LESTE

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ABSTRACT

One of the things that determines radio frequency is the cellular band while cellular understanding is a communication system that can provide telecommunications services both data, voice and video where customer access can be carried out in a mobile state. Problems arising in the use of cellular radio frequencies in border areas are roaming. This is the background of the author's writing about "Legal Arrangements in the Arrangement of the Supervision of the Use of Cellular Radio Frequency Spectrum at the Sovereign Border of the Republic of Indonesia and Timor Leste", which is related to normative juridical writing to answer: 1) using legal assistance of the borders of Indonesia and Timor Leste; and 2) the amount governing national law regarding the use of special cellular radio frequencies in overcoming international roaming problems in the border regions of Indonesia and Timor Leste. Based on field research, it was found first, along the border of Belu regency (Republic of Indonesia) and Timor Leste, the cellular signal of Timor Leste (Telkomcel) was very strong in several districts namely: lasiolat, railhat, south south, dubious nanat, east tasifeto and lamaknen sub-districts. The problem that is needed is that our country does not need to do roaming between operators so it is not possible to do the roaming. For considerations that need to be present: 1) collaboration measurement between the two countries and 2). Roaming

Keywords: *legal arrangement, radio frequency spectrum monitoring.*

INTRODUCTION

The 1945 Constitution article 33 paragraph (3) states "that the earth and water and the natural resources contained therein are controlled by the state and are used to the greatest extent possible for the prosperity of the people" into the direction and development policy in the utilization of Radio Frequency Spectrums and Satellite Orbit is a limited natural resource controlled by the State with due regard to developments that take place both nationally and internationally⁸⁹.

The radio frequency spectrum is a limited natural resource which is currently increasing in demand while the amount of spectrum availability has not increased. The

⁸⁹ Ministry of Communication and Information, Explanation of Law No. 36 of 1999 concerning telecommunications

strategic value of these limited natural resources for the national interest is to increase efficiency and productivity and can improve the quality of life and welfare of the people of a nation because the radio frequency spectrum is of high economic value.

Benefits of Radio Frequency Spectrum in human life are used for a variety of radio communication services including personal and corporate communications, radio navigation, aviation and maritime radio communications, defense and security, satellite communications, space exploration, radar, remote control, broadcasting, safety and distress, location radio and amateur radio.

The importance of regulating the radio frequency spectrum in its use due to several things, namely:

- ✓ Prevent interference / interference
- ✓ Is a limited natural resource so the state needs to guarantee the availability of spectums for all purposes such as for safety purposes, namely Search and Rescue (SAR), security defense, governance, satellite commercial, research, broadcasting etc.
- ✓ Strategic value for the country and human life
- ✓ Has economic value
- ✓ Has an international impact (across national borders)
- ✓ Improper use can endanger life safety, for example interruptions in the frequency of flight navigation can endanger flight safety⁹⁰

In terms of use, Radio Frequency Spectrum needs to be coordinated to prevent interference (interference). Two radio communication devices that work on the same frequency, at the same time and at the same location will cause interference with the receiver. Therefore, the use of Radio Frequency Spectrum which is a limited natural resource as well as land and water must be utilized and its use must be done properly, so that it is not wasted if it is not used properly.

The Radio Frequency Spectrum as a limited natural resource (limited natural resources) is available in every country, in terms of its management having a strategic and economic impact on the welfare of the country's people. In modern life, the Radio Frequency

⁹⁰ Agus Priyanto, Radio Frequency Spectrum Regulation Handbook, page 2

Spectrum is used in almost all aspects of human daily life including telecommunications, broadcasting, internet, transportation, defense, security, government, health, agriculture, industry, banking, tourism, and so on.⁹¹

One allocation of the radio frequency spectrum is in the cellular band where cellular understanding is a communication system that can provide telecommunications services in the form of data, voice, and video in which the customer's access can be carried out in a mobile condition. With this cellular concept, users can communicate with other users without having to rely on physical media such as cables that can limit mobility activities.⁹²

The problem that arises in the use of cellular radio frequency spectrum in border areas is Roaming. Roaming is the ability to receive or make calls with cellular on the calculation of tariffs charged to customers according to their use or usage outside the cellular service area registered by the customer. The meaning of roaming should be as a transfer of customers from the network owned by the origin operator (home network) to the network owned by other operators. The problem faced is that in our country there is no collaboration for roaming between operators so it is not possible to do the roaming. Roaming is intended as a cost for cellular telephone conversations between network operators, which generally occurs at the border of a country with another country that is different from the operator operator, as happened in Belu Regency, Timor Leste border region, which is economically and politically very detrimental. community in the border area.

Along the border lines of Belu Regency (Republic of Indonesia) and Timor Leste, East Timor's cellular signal (Telkomcel) is very strong in several districts namely Lasiolat, Raihat, southern Lamaknen, Nanat Dubesi, East Tasifeto and Lamaknen sub-districts.⁹³

⁹¹ Drs. Tommy Suprpto, ntroduction to Communication Theory, Yogyakarta 2006, page 1

⁹² Amri Khoirul Fath Blogspot. Com, accessed 30 September 2018

⁹³ Kupang Class I Radio Frequency Spectrum Monitoring Office, Report on Observation Results of Radio Frequency Band Monitoring in Belu District 2017

Starting from this problem, researchers intend to examine and write about "Legal Arrangements in the Arrangement of Monitoring the Use of Cellular Radio Frequency Spectrums in the Border of Sovereignty of the Republic of Indonesia and Timor Leste.

MATERIALS AND METHODS

1. Materials

a. The concept of the rule of law

Law is the rule of rules as a system of rules about human behavior. Thus the law does not refer to a single rule (rule) but a set of rules (rules) that have a unity so that it can be understood as a system. The consequence is that it is impossible to understand the law if you pay attention to just one rule.⁹⁴

The question of what the meaning of law can be returned to the basic question what is the purpose of the law. Order is the first and foremost goal of all laws. The need for order is a basic condition for the existence of an organized human society. Besides orderliness other objectives of the law are the attainment of different justice - different in content and size according to society and era⁹⁵

Therefore, to understand various legal definitions as a whole must depart from basic understandings such as legal society, legal subjects, legal objects, legal events, legal actions, legal relations, legal consequences and legal functions.⁹⁶

The State of Indonesia itself is based on law. This is confirmed in the 1945 Constitution Article 1 paragraph (3) which reads: "The State of Indonesia is a state of law". The consequence of this provision is that every attitude, thought, behavior, and

⁹⁴ Jimmy Asshidique, Hans Kelsen's Theory of Law, Secretariat General and Registrar of the Constitutional Court Ri, Jakarta 2006

⁹⁵ Mochtar Kusumaatmaja, Legal Concepts in Development, Bandung 2006 page 3

⁹⁶ Dudu Daswara Mahmudin, Introduction to Legal Studies, bandung 2000 page 31

policy of the government of the country and its population must be based / in accordance with the law. With this provision intended to prevent arbitrariness and arrogance of power. Punishment holds power and leads the administration of the state, as the nomocratic concept means, that power is exercised by law.

b. State Border Concepts

Literally the Big Indonesian Dictionary (KBBI) defines the term border as a region or path of separation between political units (the State). Such interpretation shows that the State border contains the definition of a region or a dividing line between one State and another, or an area near the boundaries of two or more adjoining States. In general, the definition of a state border as a demarcation line between two sovereign states.⁹⁷

According to political geographers, the notion of borders can be divided into two namely boundaries and frontier. The two terms have different meanings and meanings even though they are complementary and have strategic values for the sovereignty of the country's territory. Border is called frontier because its position is located in front of or behind a country. The term frontier can also be referred to as foreland, borderland or march. While the term boundary is used because its function is binding or limiting a political unit, in this case the State. Everyone contained in it is bound to become a unified whole and intact and integrated with one another.

The Unitary State of the Republic of Indonesia as an archipelagic nation characterized by the archipelago has sovereignty over the territory and has sovereign rights outside its sovereign territory to be managed and utilized as much as possible for the prosperity of the people of Indonesia as stated in the opening of the 1945 Constitution of

⁹⁷ The Drafting Team of the language development and language development center of the Indonesian Ministry of Education and Culture in Dhesy Kase, International Dispute Resolution Model based on customary law, Kupang, Mediacentre Publishing 2018 page 22

the Republic of Indonesia. the territory of the country as referred to in the 1945 Constitution of the Republic of Indonesia follows the system:

1. Arrangement of an Indonesian government that protects all Indonesian people and all Indonesian blood
2. Utilization of the earth, water and air as well as the natural resources contained therein for the greatest prosperity of the people
3. Decentralization of government to large and small regions that are autonomous within the framework of the Unitary Republic of Indonesia
4. Social welfare for all Indonesian people.

The border area is still considered the backyard of the unitary state of the Republic of Indonesia. As a result, conditions in most border areas are relatively lacking in attention and minimal development. The border area is still very limited in infrastructure, which causes the condition of the border region to be isolated and lagging socially and economically. Whereas the border area should be used as the front yard and entrance of a country that can reflect the conditions of the region and the identity of the Indonesian people.⁹⁸

Considering that the outermost side of the state territory or known as the border region is a strategic area in maintaining the integrity of the state territory, it is necessary to regulate the boundaries of the state that are intended to provide legal certainty regarding the scope of the state territory, authority to manage the state territory, and rights - rights sovereign. Management of the country's territory is carried out through a joint welfare, security and environmental sustainability approach. The welfare approach in the sense of efforts to manage the territory of the country should provide maximum benefit

⁹⁸ Baso S dan Yayat H (2016) Use of Information Technology among Micro and Small Business Entrepreneurs in the border area (case study in Belu Regency, East Nusa Tenggara Province), Journal of the National Government, 1: 141-152

for the improvement of the welfare of the people living in the border region. A security approach in the sense of managing the jurisdiction to ensure territorial integrity and sovereignty of the country and the protection of the whole nation. Whereas the approach to environmental preservation in the sense of developing border areas that advertise aspects of environmental sustainability is a manifestation of sustainable development.⁹⁹

c. Concepts of Radio Frequency Spectrum Structuring and Monitoring at the Border

Radio waves propagate in space without recognizing the territorial boundaries of the country. In each border area between two countries, the use of radio frequency allocation for new radio communication technology requires close coordination between the two countries to prevent harmful interference.

Understanding Radio is a communication system that uses air or space as intermediate material whose general form is a transmitter that transmits power through an antenna towards its destination in the form of electromagnetic waves. At the destination this electromagnetic wave is captured by an antenna which is then transmitted to a receiver.

Internationally the use of the Radio Frequency Spectrum is governed by a treaty international law in the form of ITU Radio Regulations, which are an inseparable part of the ITU constitution and convention. The ITU Radio Regulations form a basic international framework in which each Member State allocates and arranges spectrum at a more detailed level.

2. Methods

This type of research is normative legal research, which is aimed at the legal approach and case approach by examining all laws and regulations relating to legal issues that are

⁹⁹ Ir. Tiur LH. Simanjuntak, Telecommunications basics, Bandung 1993 page 70

handled in overcoming the problem of monitoring the radio frequency spectrum in the border regions of Indonesia and Timor Leste.

RESULTS AND DISCUSSION

3. Legal Arrangements and Supervision Process of Cellular Radio Frequency Spectrum Arrangement in the Border Region of Indonesia and Timor Leste

3.1. Legal Regulations on the Use of Radio Frequency Spectrums

Law Number 36 of 1999 concerning Telecommunications states that telecommunications is every transmission, transmission and or receipt of any information in the form of signs, signals, writing, pictures, sounds and sounds through wire, optical, radio and other electromagnetic systems. Telecommunications are held based on the principle of benefits, fair and equitable, legal certainty and security. The purpose of telecommunications is to support the national unity and integrity and improve the welfare and prosperity of the people, support economic life and improve relations between nations.

Spectrum is the arrangement of radio frequency bands that have frequencies smaller than 3000 GHz as a unit of vibration of electromagnetic waves, propagating and contained in the aerospace, namely air and space. Radio frequency spectrum and satellite orbit are limited natural resources, and the use of radio frequency spectrum must be in accordance with its designation and not interfere with each other considering the nature of the radio frequency spectrum can propagate in all directions without recognizing national boundaries. These natural resources need to be managed and regulated in order to obtain optimal benefits by taking into account national and international legal norms such as the constitution and the international telecommunication union (ITU) convention and radio regulation (RR).¹⁰⁰

¹⁰⁰ Ministry of Communication and Information, Explanation of Government Regulation Number 53 of 2000 concerning Use of Radio Frequency Spectrums and Satellite Orbits

The importance of regulating the radio frequency spectrum in its use due to several things, namely:

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- ❖ Strategic value for the country and human life
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- ❖ Improper use can endanger life safety, for example interruptions in the frequency of flight navigation can endanger flight safety¹⁰¹

Radio frequency spectrum allocation refers to the allocation of the frequency spectrum allocation table officially issued by the International Telecommunications Union (International Telecommunication Union) which is also a reference for other countries in the world.¹⁰²

3.2. Supervision of Radio Frequency Spectrum Arrangement

The national development of the Indonesian state in general is aimed at realizing the welfare of people's lives in a fair and equitable manner in all corners of the region both living in rural areas (rural areas) including border areas and urban areas. In the implementation of national development, one of the regions whose development is lagging behind other regions is the border region.

Border areas in the context of national development are essentially a series of sustainable development efforts including the development of telecommunications infrastructure for the fulfillment of telecommunications and information technology services

¹⁰¹ Agus Priyanto. Op.cit. 10

¹⁰² BPPSDM Ministri Of Communication and Information, Use of Frequency for Maritime Service purposes, 2012

in the border region as a concrete form of state presence in the border communities responding to the Nawacita program of the President of the Republic of Indonesia "Building from the periphery". East Nusa Tenggara Province is one of the regions which is directly bordered by other countries, namely in the eastern part bordering the State of Timor Leste and in the southeast and south bordering Australia. Areas bordering include Belu district bordering land with Maliana district of Timor Leste, Malacca Regency bordering land with Kobalima district of Timor Leste, North Central Timor Regency and Kupang District bordering land with Oune Tomor Leste district, while the area bordering (sea) namely Alor district with Timor Leste and Rote Ndao District which is the southernmost island of the Republic of Indonesia with Australia.

From the results of monitoring the use of the Radio Frequency Spectrum in the Border areas especially in Belu Regency, meet:

1. The quality of telecommunications services (cellular communication) at the border (RI vs RDTL) of Belu Regency is still low
2. To improve service quality as referred to in point 1 (one) above, it is necessary to build more telecommunications infrastructure
4. National Legal Arrangements on The Use of Radio Frequency Spectrum in Overcoming International Roaming Problems in The Border Area Of Indonesia and Timor Leste

4.1. International Roaming Problems in The Border Areas of Indonesia and Timor Leste

To find out the extent of signal strength, the strength of the broadcast service field was measured at twelve (12) points, namely in the villages: Lokeu Village, Dafala Village, Lutarato Village, Lakmaras Village, Duarato Village, Lamaksanunu Village, Tohe Village, Asamanu Village, Dualasi Village, Sadi Village, Fulur Village, Tulakadi Village and Data collection through questionnaire method is done by asking the community to answer questions concerning the reception of signals both cellular and broadcast.

Data from the data questionnaire results are presented as follows:

1. From the questionnaire data it is illustrated that the Twelve Villages above are served by cellular signals but the quality of signal reception is poor
2. The types of cellular services used by the dominant community are call (voice) services but the quality of call services is considered poor by the local community.
3. Internet services in general in the six villages are described not all of them are affordable so that the community cannot assess the quality of their internet services, this is reflected in the answers of respondents who answered "Don't Know".
4. For roaming problems, most people consider that roaming still exists from the State of Timor Leste.
5. There are several radio broadcasts from Timor Leste that are received by the community.
6. From the results of the questionnaire also obtained input from the community where the dominant community provides input to make improvements to the quality and continuity of cellular services in their area.

CONCLUSION

Based on research related to "Legal Arrangement in the Arrangement of Supervision of the Use of Cellular Radio Frequency Spectrum at the Sovereign Border of the Republic of Indonesia and Timor Leste", the following conclusions can be concluded:

1. The quality of cellular telecommunications services at the borders of the Republic of Indonesia and Timor Leste is still low and the signal quality is classified as poor
2. Lack of infrastructure to support improved cellular telecommunications service receipt

SUGGESTION

Referring to the conclusions above, the researcher can recommend several things, as follows:

1. The need for cooperation in the measurement of radio frequency spectrum between the two countries to find out problems in telecommunications services
2. The need for the development of adequate telecommunications infrastructure in the border regions of the Republic of Indonesia and Timor Leste for the realization of a fair and equitable telecommunications so as to improve the economy of the local community.

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