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Space law in Vietnam: outer space policy, legal development and its future pathway

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1. INTRODUCTION

It can be said that space technology and the use of outer space are not new issues for many countries in the world because more than 25 countries have promulgated many legal documents in this field, such as Canada, Finland, Argentina, France, Germany, Hungary, New Zealand, Korea, Russia, Sweden, South Africa, the United States, Norway, Japan... Vietnam has also followed the global progress of outer space by building the premises relating to law, policy and international cooperation since the 1970s. The country even successfully launched the satellite VINASAT-1 into Earth's orbit in 2006, proving the government's interest in developing space science and technology. It has been almost 50 years since the space law of Vietnam was formed and developed, however, it is still at the initial stage and has many limitations, which need to be specified and oriented for completion. The article investigates the evolu-

tion of policies, laws and international cooperation on outer space in Vietnam from 1979 to the present, with the turning point (or the milestone of the division of the period) in 2006, the year marking the incredible transformation of Vietnam in the process of promoting technology and investing in space through the approval of the "Strategy for research and application of space technology until 2020" – the first official document separately and independently regulate Vietnam's outer space issues. This study will also analyze the present situation as well as existing problems in the current legal framework to provide a comprehensive view of Space Law in Vietnam, and give predictions of the pathway of Vietnamese Space law in the future.

2. INTERNATIONAL COOPERATION, POLICY AND LEGISLATION REGARDING TO OUTER SPACE IN VIETNAM

2.1. The period before 2006

Vietnam's outer space policy and legislation history could be dated back only to 1979, when the country joined the Soviet Union's space cooperation program. From 1979 to 2006, based on technological cooperation in outer space, Vietnam had specific research programs and national plans to advance space technology. Although numerous regulations and legislation were enacted at this time, most of them were limited in scope and primarily supported research and development of science and technology. In addition, there had been no codification of „space law” with particular rules for space exploitation or conflict resolution in space.

2.1.1. International cooperation

Before 2006, the Vietnamese government was not so concerned about international collaboration in the realm of space, because the country had recently endured protracted resistance battles, and people's lives were still harsh and unstable. As a result, the state sets the top priority as economic development and stabilizing people's lives. During this time, Vietnam only signed and ratified two international space treaties: the 1967 Treaty on Principles Governing States' Activities in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies, and the 1968 Agreement on the Rescue of Astronauts, the Return of Astronauts, and the Return of Objects Launched into Outer Space in June 1980¹ and May 1968², respectively.

Since the 1970s, as a member of the socialist bloc, Vietnam has strengthened international space cooperation with the Soviet Union through the Interkosmos Program, a space program designed to assist countries with good diplomatic relations with the Soviet Union in developing manned and unmanned space programs. On May 17, 1979, Vietnam and the Soviet Union signed a cooperation agreement, making Vietnam the ninth member of the Interkosmos program. Pham Tuan became the first Vietnamese citizen to travel into space on July 23, 1980³. Following this space voyage, Vietnam exploited satellite data given by the United Nations Development Program for long-term development. The period from 1980 to 1995 saw several significant changes: the Soviet Union dissolved (1988-1991), Vietnam entered the Doi Moi period (from 1986) and WTO admission (1994). Thus, international cooperation in the field of outer space had suffered a „calm” phase.

In 1995, Vietnam's first Vinasat 1 satellite project was launched when the government became increasingly aware of the importance of satellites to the telecommunications sector. The project was approved in 1998 and officially built the satellite in 2002. In order to successfully launch the satellite, Vietnam has increased exchanges and cooperation with many countries around the world: negotiating position satellite launch with Guyana; technology exchange with Canada and the US; registering orbital position through negotiations with 30 countries with satellites around it to avoid frequency interference...In 1995, Vietnam's first Vinasat 1 satellite project was launched when the government became increasingly aware of the importance of satellites to the telecommunications sector. The project was approved in 1998 and officially built the satellite in 2002. In order to successfully launch the satellite, Vietnam has increased exchanges and cooperation with many countries around the world: negotiating position satellite launch with Guyana; technology exchange with Canada and the US; Registering orbital position through negotiations with 30 countries with satellites around to avoid frequency interference⁴... Since then, Vietnam has gradually developed and expanded international cooperation in space, which leads to progress for the years following 2006.

2.1.2. Policy

Cooperation with the Soviet Union in the Interkosmos space program in 1979 was a significant milestone, a start to the development of Vietnam's space policies and aerospace technologies. Following the signing of a bilateral agreement with the Soviet Union on May 17th, 1979, the Prime Minister announced Decision No. 454/CP on the formation of the Vietnam Space Research Organization on December 27th, 1979⁵. This decision is considered Vietnam's first legal document on space issues and served as the foundation for undertaking cooperative operations with the Soviet Union to execute a space mission on July 23rd, 1980. Then, from 1981 to 1985, the State of Vietnam executed State-level research program code 48.07 on „Application of research accomplishments and utilization of space”; and the State-level scientific research program code 46A on „Geodetic and cartography” from 1985 to 1990.

In 2001, the Prime Minister issued Decision No. 158/2001/QĐ-TTĐ of ratifying Vietnam post and telecommunications development strategy till 2010 and orientations till 2020⁶. This decision has set objectives and orientations, focusing on developing national telecommunications network infrastructure, informatics, satellite communications, etc., as a premise for the successful construction and launch of satellite Vinasat I in 2006. In 2003, with the adoption of the „The strategy for Vietnam's scientific and technological development till the year 2010”, the government declared that space technology is a vital technological industry serving socio-economic growth and development, and established critical tasks for space technology industry⁷. In 2004, the government approved the „The strategy on application and development of natural resource and environment information technology till 2015 and orientation towards 2020”⁸, which recognized two critical projects related to technology, namely: “Project to build a system of national satellite image processing and receiving stations” and “Project to build a system of fixed GPS stations in Vietnam”.

2.1.3. Legislation

From 1979 until 2006, the Vietnamese law on outer space has not been specifically systematized and codified. As a result, there is no particular law or legal document

that regulates outer space explicitly, but only regulations relating to the application of aerospace technology in specific sectors, like telecommunications, radio frequencies, land management satellites, environmental resources, and so on⁹.

The only legal document that mentioned outer space during this period was The Law on National Border¹⁰, which had several provisions regarding airspace and the determination of national airspace boundaries. However, the concept of „airspace” and „space” to which this law refers can not be completely identical with the concept of „outer space”, which has greater specificity, scope, and connotation; this is also the usual scenario in contemporary legal documents, where laws on outer space are merely dispersed, not in-depth, and only referenced in peripheral sectors connected to space. Furthermore, there is no shared understanding of the law’s definition of the term „space”. Legal documents only govern how to exploit and utilize within the stated „space” and end at the restricted approach of the promulgation field.

2.2. The period after 2006

Unlike the period before 2006, when international cooperation was the premise for the formation of policies and legal frameworks on outer space in Vietnam, the period after 2006 witnessed the development of policy, law and international cooperation was built and completed in parallel.

2.2.1. International Cooperation

In the era of globalization, Vietnam’s diplomatic activities have become much more flexible and expanded than in the previous period. In the past, international cooperation on outer space was limited to socialist countries (like the Soviet Union). However, since the „Strategy for research and application of space technology until 2020” was promulgated; international cooperation activities in space technology have been carried out in many forms: bilateral, multilateral, regional, and international. Some of the outstanding international cooperation activities can be listed as follows: Participating in multilateral international forums on space technology such as IAF (International Astronautical Federation), CEOS (Committee on Earth Observation Satellites), APRSAF (Asia-Pacific Regional Space Agency Forum), participating in space congresses IAC (International Astronautical Congress), meetings of GEO, GEOSS. On October 18, 2018, in Brussels, Associate Professor. Dr. Pham Anh Tuan – General Director of the Vietnam Space Center (VNSC) under the Vietnam Academy of Science and Technology – on behalf of Vietnam to undertake the Chairmanship of the Earth Observation Satellite – Committee 2019 – CEOS Chair 2019. Signing and implementing the projects Bilateral agreements with many countries such as Agreement on Space Science and Technology between Vietnam and Israel, Agreement on satellite data exchange with Japan Aerospace Exploration Agency (JAXA), the MoU to increase mutual understanding and expand cooperation in space technology with the Roscosmos State Corporation for Space Activities of the Russian Federation; Cooperation framework agreement for cooperation in the use of outer space for peaceful purposes between the U.S Government and Vietnamese Government; the Inter-Governmental Framework Agreement for the Exploration of Outer Space for Peaceful Purposes between Vietnam and India... The contents of international cooperation that Vietnam is interested in are training high-quality

human resources, applying space technology to socio-economic development, disaster prevention, resource and environmental management, and the peaceful use of outer space¹¹.

During this period, Vietnam's international cooperation activities raised the national space science and technology level up, creating a solid premise for legislating a legal framework on domestic space law. However, most of the international treaties signed are bilateral treaties; the state still needs to make more efforts to sign and participate in other multilateral international treaties to strengthen the cooperation further.

2.2.2. Policy

Before 2006, research on outer space was only considered a small part of post and telecommunications¹², science and technology¹³, computer science, natural resources, and environment development strategies¹⁴. The policy on researching outer space was officially reckoned as a separate independent strategy in 2006 under Decision No. 137/2006/QĐ-TTg approving the strategy on research into, and application of, aerospace technology up to 2020 dated 09 July, 2006. In these years, the State would focus on the application of space technology in some central areas, such as: Researching international laws and regulations on the use of outer space to ensure national sovereignty; legislate and finalize public legal documents of the State and branches related to the research and application of aerospace technology; Develop and finalize legal documents on storage, management, exploitation and use of satellite images and derived information such as maps and databases; legislate and promulgate regulations on confidentiality related to Vietnam's space technology research and application program; legislate and promulgate formatting and normative standards in the application and development of space technology, ensuring compatibility domestically and internationally. Although the policies on outer space from 2006 to 2020 have institutionalized specific development orientations, it is clear that Vietnamese legislators have only developed and completed several policies on the application of space technology, on the use of satellite images, and derived information....There is no other strategy in completing space legal framework or orientations to regulate other outstanding issues in outer space, such as resolving disputes in outer space, space debris,...

By 2020, after 15 years of only legislating and promulgating separated regulations on the application of space technology, the Government of Vietnam has made a noticeable advance in the strategic direction of legislating and perfecting a unified legal framework of outer space. Thus, Decision No. 169/2021/QĐ-TTg of the Prime Minister promulgating the Strategy for development and application of space science and technology through 2030, emphasizing the following policies: Researching and proposing unified state management of outer space for civil activities, performing the tasks of protecting sovereignty and ensuring national security; Research and propose to legislate the National Space Law; Research and form legal bases for Earth observation data and use Earth observation data; Review and finalize the legal basis for compensation for internal and international damage caused by space objects; ensure conditions for the implementation of international treaties on outer space to which Vietnam is and will be a member.

2.2.3. Legislation

Although the country has been „entering” into space research for a long time, current Vietnamese legal regulations governing airspace issues are still scattered in many specialized legal documents and have not been codified. Since 2006, Vietnam has only issued several specialized legal documents to regulate legal issues related to space technology, such as: Law on Technology Transfer 2006; Law on Information Technology 2006; Law on High Technology 2008; Law on Atomic Energy 2008; Law on Telecommunications 2009; Law on Radio Frequency 2009; Law on Intellectual Property 2005; Law on Cybersecurity 2018, etc...

Obviously, up to now, Vietnam has not yet promulgated a national law on space, especially the concept of „space” is still not defined by law. In addition, some common problems about the use of outer space are being raised today, such as: using outer space for commercial purposes; disputes and conflicts in outer space; environmental protection issues, space waste; legal responsibilities, rights, and obligations of organizations and individuals in space activities... has not yet been resolved by Vietnamese law.

In summary, although the State has enacted some legal documents to regulate activities in space technology, many contents about the use of outer space and activities related to outer space have not been adjusted by law. This is considered as a limitation, inadequacy, and it is required that in the future, legislators in Vietnam must have a roadmap to build a complete and unified legal framework in space activities.

3. FUTURE PATHWAY OF VIETNAMESE SPACE LAW

Up to the present time, there are two trends in the legal framework development for the use of outer space that have received much attention from countries in the world: (i) development for peaceful purposes and (ii) towards commercialization. Although Vietnam has made many efforts in legislating space law, it is restricted in creating the necessary conditions and has not determined an obvious direction for the legal framework on outer space in the future. Therefore, we will make some predictions about the development trend of the space legal framework for Vietnam in the next period.

3.1. A space law for peaceful purpose

Research and enacting National Space Law is one of the crucial tasks mentioned in the Strategy for developing and applying space science and technology by 2030 by the Vietnamese Government. On researching the contents of international treaties that Vietnam has signed, the Strategy to 2030, the basic principles of the political-legal system of Vietnam, and the trend of space law in the world, it is predictable that using outer space for peaceful purposes will be a key and essential principle in Vietnam's National Space Law. This is most evident in the policies and legal regulations developed before 2021, focusing on the development and application of space technology in sustainable socio-economic development activities through the use of space technology, using satellite data, radio waves within the country of Vietnam, or predicting, preventing natural disasters, and managing the integrity of territorial sovereignty in the country.

Vietnam is currently a backward country compared to other countries in the area of space science and law. To do well in legislating a legal framework on space, Vietnam first needs to participate, signing and ratifying all international treaties on space. Currently, Vietnam has only joined and signed two out of five basic treaties drafted within the framework of the United Nations, this is considered a barrier for Vietnam because the development of the National Space Law needs to follow the basic principles of international law.

Based on the principle of using outer space for peaceful purposes, Vietnam will cooperate with more countries worldwide to get support in terms of capital, science, technology, and human resources to develop domestic space activities. Furthermore, with more advanced achievements in space science, Vietnam will continue to develop the market and commercialize outer space to serve economic development goals and ensure national interests and sovereignty.

3.2. A space law serving for commercial purpose

The present tendency to commercialize some aspects of outer space exploitation is not a new issue for the international community. Proposals to promote socialization and privatization of outer space utilization for commercial purposes have been suggested in Vietnam through several studies since 2011¹⁵. However, because of inadequate scientific and technological resources and a lack of a clear policy-oriented strategy, Vietnam has yet to establish a legal corridor on this subject. On February 4, 2021, the Prime Minister issued Decision No. 169/2021/QĐ-TTg on the development and application strategy of space science and technology through 2030, replacing and succeeding Decision No. 137/2006/QĐ-TTg. Specifically, the tasks and solutions to finalize the institution, the national legal framework for research, and proposes a unified state management on outer space for civil activities, protecting sovereignty and ensuring national security are mentioned at point a, clause 1, section III. Furthermore, the goal „Research and development of applications associated with the formation and development of start-up businesses in the direction of innovation based on innovative technologies, prioritize research, development, and application to actively participate in the 4.0 Industrial Revolution; develop applications for state management in related fields” are defined at point a, clause 2. The above orientations have shown the trend of designing a legal framework that allows the partial socialization of space exploitation activities for civil purposes and promotes the participation of private economic sectors in the application of space technology in Vietnam shortly. This trend, as part of a program to develop a unified national space law, can proceed as follows: (1) building regulation on „exploiting and using outer space for commercial purposes”; and (2) establish regulation on „space technology activities for commercial purposes”.

Defining the commercial purposes is to create conditions for other segments of society to have the opportunity to access space and space technology, helping to relieve financial and technological pressure on the State, helping Vietnam to quickly integrate in the era of Revolution 4.0. To achieve this goal, the country needs to perfect the legal framework on the use of outer space to ensure Vietnam’s legitimate rights and interests in cooperation with countries around the world. exploit and use outer space for commercial purposes.

4. CONCLUSION

In Vietnam, because of some historical obstacles such as war and backward economy, space technology and space law lag behind many other countries in the world. Up to now, Vietnam has not legislated a standard and specialized legal framework for space. The legal basis for operations in airspace in Vietnam are in the international treaties that Vietnam is a member of; oriented national policies and strategies; independent laws such as the Law on Information Technology, the Law on Atomic Energy, the Law on Cybersecurity... Vietnam is currently researching to promulgate a unified state management model on outer space, legislating the National Space Law, developing a legal basis for earth observation data and using earth observation data, and completing the legal basis for compensation for damage caused by space objects in both domestically and internationally. In the future, Vietnam's space law needs to be in line with international law, create favorable conditions to maximize the rights and benefits from space, and regulate civil and commercial activities that are related to the exploitation and use of outer space.

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- ¹ See Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies dated 27 January 1967 (https://treaties.unoda.org/t/outer_space).
- ² See Agreement on the rescue of astronauts, the return of astronauts and the return of objects launched into outer space dated 3 December, 1968 (<https://treaties.un.org/Pages/showDetails.aspx?objid=080000028012504f>).
- ³ Cottom T., An Examination of Vietnam and Space, Space Policy 2018, pp. 1-7.
- ⁴ VINASAT-1 satellite is about to be launched into the airspace (2008) (<https://nhandan.vn/khoa-hoc/V%e1%bb%87-tinh-VINASAT-1-s%e1%ba%afp-%c4%91%c6%b0%e1%bb%a3c-ph%c3%b3ng-l%c3%aan-kh%c3%b4ng-trung-486538/>).
- ⁵ The Committee is responsible for preparing scientific content for the program „Soviet – Vietnam space flight”.
- ⁶ See Decision No. 158/2001/QĐ-TTĐ of ratifying Vietnam post and telecommunications development strategy till 2010 and orientations till 2020 dated 18 October, 2001
- ⁷ See „The strategy for Vietnam’s scientific and technological development till the year 2010” issued together with Decision No. 272/2003/QĐ-TTĐ, dated 31 December 2003 of the Vietnam’s Government.
- ⁸ See „The strategy on application and development of natural resource and environment information technology till 2015 and orientation towards 2020” issued together with Decision No. 179/2004/QĐ-TTĐ dated 6 October 2004.
- ⁹ Specifically, these are sub-law documents such as Decree 12/2002/ND-CP of the Government on surveying and cartographic activities; Decree 24/2004/ND-CP of the Government detailing the implementation of a number of articles of the Ordinance on Post and Telecommunications on radio frequencies; Decree 50/1998/ND-CP of the Government detailing the implementation of the Ordinance on Radiation Safety and Control; Circular guiding the identification and recognition of projects with special investment incentives under Clause 5, List I, Appendix I, Decree 10/1998/ND-CP; Joint Circular 06/2005/TTLT-BTNMT-BQP-BCA-BBCVT of the Ministry of Natural Resources and Environment, the Ministry of National Defense, the Ministry of Public Security and the Ministry of Post and Telecommunications guiding the management of flight photography ground from aircraft and receive, transmit and transmit geodesic, cartographic, aerial photography data; Decision 39/2005/QĐ-BGTVT of the Ministry of Transport on the promulgation of “Regulations on information, navigation and supervision of civil aviation”.
- ¹⁰ The Law on National Border dated 17 June 2003.
- ¹¹ Act. 2, Section V on International cooperation and Pt. O, Act. 2, Section VI assigning responsibilities of the Ministry of Foreign Affairs, Decision No. 137/2006/QĐ-TTĐ approving the strategy on research into, and application of, aerospace technology up to 2020 dated 09 July 2006.
- ¹² Decision No. 158/2001/QĐ-TTĐ of ratifying Vietnam post and telecommunications development strategy till 2010 and orientations till 2020 dated 18 October 2001.
- ¹³ Decision No. 272/2003/QĐ-TTĐ of ratifying the strategy for Vietnam’s scientific and technological development till the year 2010 dated 31 December 2003.
- ¹⁴ Decision No. 179/2004/QĐ-TTĐ of approving the strategy on application and development of natural resource and environment information technology till 2015 and orientation towards 2020 dated 6 October 2004.
- ¹⁵ See: (1) Nguyen Sao Mai, Do Minh Anh, Exploiting outer space for commercial purposes and Vietnam’s international legal experiences, VNU Science Journal 2011, Jurisprudence vol. 27 (no. 2), pp. 118-125; (2) Do Minh Anh, Protection of intellectual property rights in outer space, Journal of Democracy and Law digital version, dated 22 August 2014; (3) Do Minh Anh, Improving the law on space tourism, Industry and Trade Journal 2014, no. 2/10, pp. 67-70; (4) Do Minh Anh, Some comments to improve international law on the exploitation of outer space for commercial purposes, Industry and Trade Journal 2014, no. 2/10, pp. 71-74; (5) Do Minh Anh, International law and the development of Vietnamese law on outer space for commercial purposes, Doctoral thesis of jurisprudence 2015, Faculty of Law, Vietnam National University, Hanoi.

ABSTRAKT:

PL: Choć Wietnam uczestniczył w licznych operacjach kosmicznych, współpracując z wieloma narodami z całego świata, prawna regulacja sektora kosmicznego jest wciąż w powijakach. W artykule przedstawiono rozwój polityki i prawa kosmicznego, a także współpracy międzynarodowej w zakresie wykorzystania przestrzeni kosmicznej w Wietnamie od 1979 roku do chwili obecnej, z punktem zwrotnym w 2006 roku. Autorzy wskazali także kilka prognoz dotyczących przyszłej ścieżki wietnamskiego prawa kosmicznego w nowej erze, liczonej od 2020 roku.

ENG: Although Vietnam has participated in numerous outer space operations with many nations worldwide, its legal system in this sector is still in its infancy and consequently has several restrictions. More specifically, this article investigates the establishment and evolution of policies, laws, and international cooperation regarding the utilization of outer space in Vietnam from 1979 to the present, with the turning point in 2006. The authors then give some predictions concerning the future pathway of Vietnamese space law in the new age from 2020.

SŁOWA KLUCZOWE:

PL: Przestrzeń kosmiczna, polityka, prawo, przyszła droga, współpraca międzynarodowa, Wietnam

ENG: Outer space, policies, laws, future pathway, international cooperation, Vietnam