
Endang Puji Lestari
Human resource development of transportation agency of ministry of transportation
puji.dephub@gmail.com

Abstract

The state sovereignty over airspace with its complete and exclusive nature experiences a significant dynamic in both its concept and implementation in the international air law. Sovereignty over the airspace not only provides legislative, executive, and judicial authorities of the state but also puts an obligation on the state to provide facilities for aviation safety. The reason for aviation safety airspace of a sovereign state can be delegated to other states to manage the service of navigation, for example, Indonesian air spaces in the Natuna and Batam, are maintained by Singapore for the sake of aviation safety. The taking over of the management of FIR in Batam and Natuna had been carried out through several steps. First, establishing Civil Military Aviation Coordination (CMAC) as outlined in the Government Regulation (Ministry of Transportation Regulation Number 55 on 2016) concerning the order of the national airspace. Second, evaluating the implementation of air navigation by reformulating the institutional of LPPNPI, evaluating the cooperation agreement between the Government of Indonesia and Singapore, and providing air navigation service during the transition period in Natuna Islands. Third, conducting the taking over concept phase by phase, in which the first phase, Singapore only provides air navigation service, while Indonesia only monitors. The second phase, Indonesia provides air navigation services, while Singapore only monitors, and for the third phase, as the final implementation, Indonesia provides air navigation services fully.
Keywords: Delegation, Sovereignty, Air Space, Air Navigation, Agreement

A. Introduction

The state sovereignty over the Indonesian airspace region is a crucial problem faced by Indonesia as a sovereign state over its airspace. International air law states in Article 1 of Chicago Convention 1944 that “the contracting States recognize that every state has complete and exclusive sovereignty over the airspace above its territory” legitimizes the sovereignty over the airspace as a full and exclusive nature. The similar legitimacy is also regulated under Article 5 of Law No. 1 on 2009 on Aviation, which provides that the Republic of Indonesia has complete and exclusive sovereignty over the airspace of the Republic of Indonesia. Chicago Convention 1944 is an international legal instrument in which Indonesia is a state party, which then entitles Indonesia to claim its rights and jurisdiction over the airspace. Article 5 of Aviation Law also provides national and international legal legitimacy to Indonesia for the full and exclusive sovereignty of the airspace.

However, the country's sovereignty over the airspace as stated above are faced to the reality in which Indonesian government has given the management of air navigation in the airspace in Batam and Natuna to Singapore government through an international agreement called “Agreement Between the Government of the Republic of Indonesia and The Government of the Republic of Singapore On the Realignment of the Boundary Between the Singapore Flight Information Region and The Jakarta Flight Information Region.” Indonesian government ratified this agreement through Presidential Decree No. 7 of 1996. Through this agreement Indonesian government had delegated the control of air navigation above the Natuna and Batam to the government of Singapore (90 nm from SINJON (01 ° 13'24 "N 103 ° 51'24" E, up to 37,000 ft) subsequently entered in Jakarta Flight Information Region (FIR) and Singapore for air traffic control services in addition to section A sector and the northern boundary of sector B (05 ° 00'N 108 ° 15'E, 05 ° 00'N 108 ° 00'E, 03 ° 30'N 105 ° 30'E, 01 ° 29'21 "N 104 ° 34'41" E).


The agreement raises several issues in national law and internal regulations. The internal issues related to public demanded the Indonesian government to take over the management of the airspace delegated to Singapore navigation services, particularly the air navigation services managed by Singapore. The demand were then reflected in Article 458 of Law No. 1 Year 2009 on Aviation which stipulating a mandate that the airspace of the Republic of Indonesia which the air navigation services delegated to other countries under the agreement had to be evaluated and served by the providers of air navigation service no later than 15 (fifteen) years since the enforcement of the Law. The deadline for the government’s obligation is to evaluate and serve the aviation navigation on the FIR maximum in 2024. However, until the present time, the progress of the evaluation and the acquisition of air navigation services so far have shown no optimal development. Also, with the dissolution of the team that carried out the study and evaluation of the acquisition transition plan that is not only entirely based on the expertise of aviation navigation technology, but also the concept of sovereignty over the airspace by the President Joko Widodo.

Regarding the question of international law, the issue of sovereignty over the airspace of Natuna and Batam waters has caused essential problems, mainly related to state sovereignty. The international law puts the state sovereignty as an essential element to establish a fair system of international law. Mochtar Kusumaatmadja states the existence of international law as an essential condition for the formation of international law. The agreement between Indonesia and Singapore on the management of Batam and Natuna FIR is an agreement that can degrade the meaning of state sovereignty, particularly Indonesia as the owner of the full and exclusive sovereignty over the airspace. Based on the state sovereignty perspective, the agreement between Indonesia and Singapore had degraded Indonesia’s sovereignty over its airspace. However, from the perspective of aviation safety, the agreement does not constitute an excessive problem as the agreement is based on aviation safety interest.

When it is compared between the interests of aviation safety and the state sovereignty over its airspace, we will face two contrast facts. On one side, the concept of state sovereignty expects to be entirely respected and implemented in term of state sovereignty over the airspace. While on another side, the safety of aviation becomes a condition sine quonan for safe and secure aviation operational as an essential issue in aviation. This article is aimed to find a concept combining the concepts of state sovereignty and aviation safety in the operation of air navigation in the law perspective, as a new concept to harmonize the two contradiction concepts. At the practical level, this article is aimed to give a solution for the policies of Indonesian government who are trying to take over the management of air navigation
services over the airspace of Natuna and Batam, which have not been resolved until the present time.

There are two main problems in this article that will be acknowledged in the analysis. First, how the regulation of the delegation of state sovereignty in the implementation of air navigation is under the international air law. Second, how the implementation of the concept of state sovereignty over airspace in the implementation of air navigation is over the airspaces of Batam and Natuna about the state sovereignty and aviation safety.

B. Discussion


International air law on regulation of air navigation is stipulated under the Chicago Convention 1944 as the principal international agreement, which gives the fundamental foundation for other agreements, such as Annex that regulate the air navigation in particular. The air navigation regulation under Chicago Convention 1944 is based on two basic paradigms, i.e. the state sovereignty and the state obligation to implement the air navigation to meet the requirements of the aviation safety to establish the ideal aviation.

The state sovereignty paradigm is formed significantly by the argument that the state has complete and exclusive sovereignty over its airspace including the sovereignty to regulate and manage the FIR in its state. The state obligation paradigm is based on the argument that the implementation of air navigation is aimed to establish the aviation safety, therefore, officially the ICAO state members have to provide the air navigation facility. In this regard, the writer will analyze the two paradigms of the principle of air navigation implementation, i.e., first, the principle of state sovereignty including its development, and second, the principle of state obligation to establish the state safety including its progress.


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The main principle of the state sovereignty in airspace has a complete and exclusive nature in the Chicago Convention 1944 associated with the air navigation. Chicago Convention 1944, which regulate civil aviation, according to Bin Cheng, is considered as the constitution of the ICAO, becoming the source of the international air transportation regulation, which is supported by 4 (four) main principles: i.e. the principle of airspace sovereignty; the principle of nationality of aircraft; the principle of condition to fulfill with respect to aircraft or by their operators; and the principle of international cooperation and facilitation.

According to Saefullah Wiradipradja, the principle of airspace sovereignty is a legal principle with universal nature that is accepted by all state members and approved in all international agreements outlined before Chicago Convention (Paris Convention 1999 and Havana Convention 1928), and also bilateral convention after that. Complete and exclusive state sovereignty is considered as international law codification, which has been accepted and stipulated as the law by the state members (oponio juris sive citates). Thus, it gives the right and responsibility to the state to explore their airspace exclusively if they have any airspaces.

As the implementation of state sovereignty over the airspace, the international law acknowledges the state jurisdiction over airspace that covers the legislative jurisdiction, executive jurisdiction, and judicative jurisdiction. The legislative jurisdiction gives the authority to the state to establish legal regulation concerning the air navigation for the foundation of the air navigation implementation in its region, apply to both the domestic (for the domestic airline), and international air navigation (for the international airline). The executive jurisdiction associates with the state authority to execute all regulations on air navigation in its jurisdiction.

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10Ibid.
11Ibid.
Regarding this issue, Ruwantissa Abeyratne\textsuperscript{15} has the same opinion that the state sovereignty in international aviation law as the state’s highest authority is to regulate and enforce the law in its state. Judicative jurisdiction associates with the state authority to judge and enforce the law concerning the air navigation in its jurisdiction\textsuperscript{16}.

Working paper issued by the Civil Air Navigation Services Organization (CANSO)\textsuperscript{17} in 2013 stated that the airspace sovereignty is considered a fundamental principle in the international law on which its progress, this term is often used in a political sense with different interpretations according to the context and intention. The state sovereignty in the international air law has gone through a dynamic global development. In aviation, the airspace sovereignty concept focuses on the ownership of air jurisdiction, in other words, the state’s exclusive authority in performing legislative, administrative, and legal authorities over national airspace. In the context of air navigation implementation, the sovereignty concept is not merely a state sovereignty issue based on the state’s borders. The state sovereignty should be realized that it has overcome many substantial developments by the political, economic, and social realities without altering the basic nature of the airspace sovereignty, i.e., complete and exclusive, acknowledged by Chicago Convention 1944\textsuperscript{18}.

The CANSO study on air navigation service stated that the airspace sovereignty is a fundamental, valid, and legitimate principle. It concluded that the airspace sovereignty is complete and exclusive as stated in Chicago Convention 1944, that the agreement concerning the delegation of the air navigation service beyond the state border shall comply with the state sovereignty principle. The principle itself is by the state obligation as stated in Article 28 of Chicago Convention 1944. The textual meaning of Article 28 “Each contracting State undertakes, so far as it may find practicable, to provide, in its territory, airports, radio services, meteorological services and other air navigation facilities to facilitate international air navigation, in accordance with the standards and practices recommended or established from time to time, pursuant to this Convention” is that ICAO state members, concerning the air navigation service, should not only give the service in its air navigation jurisdiction but also they have to serve in the facilities and services to support the international air navigation. Therefore, the facility

\textsuperscript{15}Ibid, pp. 1-2.
\textsuperscript{16}Potter, W Donald. idem.
\textsuperscript{17}Civil Air Navigation Services Organization (CANSO), \textit{Air Space Sovereignty, working paper} in Worldwide Air Transport Conference (ATCONF) sixth meeting, implemented by ICAO, Montreal, (2013), pp. 1-6.
and service standard have to comply with the ICAO standard and recommendation. In other words, the state has a “regulate and supervise” obligation in implementing the air navigation. The state is then obliged to take action to make sure the enforcement\textsuperscript{19} of the implementation of safety and operational efficiency principles.\textsuperscript{20}

The state sovereignty is considered as the main component in the international law.\textsuperscript{21} As state sovereignty is a fundamental principle in international law, thus, according to CANSO, the airspace sovereignty cannot be delegated. However, the state must ensure aviation safety and security. Therefore, in a certain case like the air navigation services, it can be delegated to the other state through a treaty in the form of international agreement.\textsuperscript{22} The international law gives freedom for the states to establish a cooperation with other states in the management of the air navigation services “National sovereignty cannot be delegated. But the responsibility for the performance of functional responsibilities, such as the provision of air navigation services, can be delegated to third parties. States retain complete freedom to designate a third party service provider, be it a national or foreign entity”.

Other development shows that the management of airspace sovereignty can be delegated not only to other state but also through the ICAO stipulation. However, the delegation does not cut off or degrade the complete and exclusive nature of the airspace sovereignty. The delegation of the air navigation services management to other states or international organization is the state’s action based on the airspace sovereignty. This legal action is based on a bilateral agreement between both states in which the rights and obligations are negotiated and then stated in the form of international agreement. Moreover, the airspace sovereignty is very flexible and dynamic, which can be started and ended by both states at any time according to their agreement.\textsuperscript{23}

The airspace management delegation is the delegation of responsibility to give the air navigation services in certain airspace from one state to another state. This delegation will not decrease the airspace sovereignty of the state. However, it is only the FIR management in which both states agree on the rights and obligations in an international agreement arranged based on

\textsuperscript{19}\textit{Convention on International Civil Aviation}, Signed at Chicago, on 7 December 1944.
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free consent principle. This delegation is normally conducted in international air law, and almost all undertake it, such as the delegation of FIR management between USA and Canada, while Tonga and Samoa have been delegated their airspaces to New Zealand. Part of the airspace of Scotland has been delegated to the air navigation service provider of Denmark (ANSP) because Denmark has better radar coverage in particular region. In Europe continent the same delegations have been undertaken, i.e. the airspaces of Denmark, Norway, Sweden, and UK have been arranged with bilateral agreement to transfer the responsibility of ATS provision as part of their own region to their neighbouring states, i.e. Spain delegated to Portugal with the agreement between Seville ACC and Lisboa ACC, in which Lisboa ACC provides the air traffic service in the airspaces defined by Seville.

Meanwhile, Spain accepted Portugal’s delegation with the agreement between Lisboa ACC and Madrid ACC, in which Madrid ACC provides the air traffic service in the airspaces defined by Lisboa. In South East Asia, the agreement on the delegation of particular airspace management of the RI above Natuna water to Singapore is up until the present time.24

The delegation of airspace management to other states is indeed will free the state obligation concerning the air navigation implementation as stated in Article 28 of Chicago Convention 1944. The obligation stated in Article 28 is limited to the state obligation to ensure the services provided by the state, under the regulation, the air navigation arrangement has to be certified by ICAO standards (as stipulated in Annex 11 with the SARPs and supporting document), and also there will be an effective and proper supervision carried out by the delegated state. The principle of air navigation services regulation is based on the safety and efficiency standards stated by ICAO. ICAO supervises state obligation fulfillment to establish the regulation. The performance of air navigation services must be based on safety, operational efficiency, cost-effectiveness, and the environment. The incentive to improve the competency can be attained through several instruments supporting safety, efficiency, and environment. Besides, the delegation agreement is based on the service deadline in service level agreement (SLAs) including key performance indicators (KPIs) stated in the bilateral agreement. Failure to fulfill the criteria may cause the lost for the state which gives the mandate. As Mcgill University’s aviation law lecturer, Paul Stephen Dimpsey25 that air navigation is needed in aviation to establish the safety and the efficiency of air transportation.

The main problem associated with the state preoccupation in respecting the delegation of cross states air services is related to the needs to ensure the authority of the state to monitor the airspace for national security purpose, and the ability to response security and military threats at any time. The civil air navigation services provider (ANSP) should be able to support the implementation of the military tasks required. The risks of the military are reduced through solid and comprehensive coordination between ANSP and military authorities. Delegation agreement includes the clarity of KPI's regarding the coordination between civilian and military. Delegation agreement will always be needed to set the service rights of the delegating state to withdraw its delegation at any time, which is preceded by the indication that the implementation of air navigation potentially threatens the national security.26

Eventually, CANSO recommends several things, namely, first, admitting that a state can choose to delegate its obligation to carry out the air traffic services without removing or degrading the state sovereignty; second, things need to be done by the state to carry out its airspace sovereignty proactively by delegating obligation of a more effective air traffic service arrangements, collaborative cross-border arrangements as a result from the improvisation in air navigation management, and third, requesting the states to collaborate with all aviation industry stakeholders to actively promote the sovereignty comprehension at political level.

Chrystel Erotokritou stated that airspace sovereignty associated with air navigation services is set out in Article 28 (a) the 1944 Chicago Convention “each contracting State undertakes, so far as it may find practicable, to provide, in its territory, airports, radio services, meteorological services, and other air navigation facilities to facilitate the international air navigation, in accordance with the standards and practices recommended or established from time to time, pursuant to this Convention”. Article 28 sets the state sovereignty in the air that derived as the state obligation in the air navigation services. Moreover, Article 28 requires the state to perform its obligation directly or to delegate it to a private entity established in the state or neighboring states. The delegation of air navigation service is possible and can be done in cooperation with other states through the supervising agency. A delegation of airspace management to a private entity or other state does not eliminate or diminish the airspace sovereignty.27

The opinion was reinforced by Jacques Naveau who states that delegates of the air navigation implementation have no impact on the loss of sovereignty or loss of profits from a sovereign state. The argument is based

on that Chicago Convention 1944 recognized the concept of airspace sovereignty, at the same time based on the basis, the sovereignty delegation is carried out through policies issued by the International Civil Aviation Authority working up through the uniformity of rules and norms governing the international civil aviation throughout the world which then limits the freedom of states to establish laws relating to the airspace management. Although the airspace sovereignty is both complete and exclusive, then is degraded because of the policy of the authority delegation to other nations, the state is still given the authority to enforce its airspace sovereignty for national security reason. The reason of national security in the operation of air navigation is a base for the state to enforce its sovereignty even though the state has delegated its sovereignty to another state. It is also recognized in Article 9 of Chicago Convention 1944 which authorizes the state to regulate regarding limiting or banning other states airlines from flying over its prohibit areas for military and public safety reasons.


The author cites a study conducted by ICAO in 2002 on privatization in the provision of airports and air navigation services and concludes several principles of state obligation in the implementation of air navigation in international air law.

1. The principle of non-discrimination Law and Regulation of Air Navigation

The principle of non-discrimination laws and regulations of air navigation is explicitly stated in Article 11 of the Chicago Convention of 1944. Learn Article 11 of the Chicago Convention determines:

“Subject to the provisions of this Convention, the laws and regulations of a Contracting State relating to the admission to or departure from its territory of aircraft engaged in international air navigation, or to the operation and navigation of such aircraft while within its territory, shall be applied to the aircraft of all contracting States without distinction as to nationality, and shall be complied with by such aircraft upon entering or departing from or while within the territory of that State.”

An important principle in the implementation of air navigation in Article

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11 of Chicago Convention 1944 attaches that laws and regulations are made by state members of ICAO relating to the implementation of international air navigation or the operational and navigation of the state's territory must be carried out on all aircrafts from all states members without distinguishing their nationality, Besides, Article 11 puts the principle of obligation of the states parties to apply the laws and regulations concerning the air navigation on the principle of non-discrimination in the implementation of air navigation and puts the obligations of the states parties in other hand which conducts the air navigation to abide by the laws and regulations issued by the state parties. The implied meaning in Article 11 of Chicago Convention is related to the principles of national legislation in implementing the legal policy of air navigation that requires legislation (laws) and administrative regulatory issued by states member which does not result in discrimination against all aircraft types of the states member. The point is that the national legislative policy concerning the operation of air navigation should apply the principle of the most favored nation\textsuperscript{31} which has been established by ICAO.

2. Principles of Freedom of Access and non-Discrimination

The principle of the implementation of air navigation stipulated by Article 15 of Chicago Convention 1944 stated that, first, the principle of freedom of access for air navigation facilities and non-discrimination, the complete elaboration stated in Article 15 is as follows:

“Every airport in a Contracting State which is open to public use by its national aircraft shall likewise, subject to the provisions of Article 68, be open under uniform conditions to the aircraft of all the other contracting States. The like uniform conditions shall apply to the use, by aircraft of every contracting State, of all air navigation facilities, including radio and meteorological services, which may be provided for public use for the safety and expedition of air navigation.

Any charges that may be imposed or permitted to be imposed by a Contracting State for the use of such airports and air navigation facilities by the aircraft of any other Contracting State shall not be higher,

a) As to aircraft is not engaged in scheduled international air services, then those that would be paid by its national aircraft of the same class engaged in similar operations

b) As the aircraft is engaged in scheduled international air services, then

\textsuperscript{31}According to Han Van Houtte in Huala Adolf, Huala Adolf, \textit{Hukum Perdagangan Internasional - Prinsip-prinsip dan Konsepsi Dasar}, Bandung, 2004, p. 7 that the Most-Favoured Nation (MFN) is a clause requiring non-discriminatory treatment of one state against another. This treatment is given for each country bound by an international treaty. Based on this clause one of the countries that provide special treatment or preference to a country, then this treatment should also be given to other countries joined in an agreement.
those that would be paid by its national aircraft engaged in similar international air services.

All such charges shall be published and communicated to the International Civil Aviation Organization: provided that, upon representation by an interested contracting State, the charges imposed for the use of airports and other facilities shall be subjected to be reviewed by the Council, which shall report and made recommendations thereon for the consideration of the State or States concerned. Any Contracting State shall impose no fees, dues or other charges in respect solely of the right of transit over or entry into or exit from its territory of any aircraft of a contracting State or persons or property thereon. The principle of freedom of access requires that all ICAO states member can use air navigation facilities without any obstruction for aviation safety. The principle of non-discrimination requires that the implementation of the state policy of the international aviation navigation is conducted equally between national aircraft, with other states aircraft. It also includes equal treatment in using the aviation facilities.

The principle set down in Article 15 of Chicago Convention 1944 is the withdrawal of air navigation service charges. Article 15 stipulates that any withdrawal of the air navigation services charges can be applied or allowed to other states’ aircrafts to be taken by ICAO states member with the principle of non-discrimination, which is divided into two principles of services: first, air navigation services charges which can be applied to international aviation should be not more than that would be paid by national aircraft, which has the same service class, second, air navigation services charges applied to international aviation should not be more than that would be paid by international aircrafts with the same service class. Both service classes shall consider the principles of transparency. Article 15 of the Chicago Convention emphasizes that all service charges should be publicized and communicated to ICAO to be known by all states member. The services charges shall then be reviewed by ICAO Council who will then give recommendations for the consideration of the state in determining the service charges. The Convention regulates that ICAO states member shall not be allowed to set the service charges when others ICAO states member with their rights pass over the airspace or enter to/exit from the territory of states member for purposes besides the air traffic, such as refueling, as stipulated in the international air transit services agreement.\(^\text{32}\)

3. The Principle of Providing Air Navigation Facility and Standard

Chicago Convention 1944 put the basic principle of air navigation organization, i.e., the state’s obligation to provide air navigation facilities

\(^{32}\)Erotokritou, Chrystel, \textit{Op. Cit.}, p. 3
and standards. The existence of the above principle can be attributed to the goals to be achieved in Chicago Convention 1944 as stated in the preamble of the Convention which states that the purpose of Chicago Convention 1944 is no other than setting down the principles and agreements in organizing a safe and orderly civil aviation. "... principles and arrangements so that international civil aviation may be developed in a safe and orderly manner ..." The development of global transportation demands the safety and efficiency in aviation by obligating a comprehensive and consistent system in supporting the air navigation operations worldwide. Article 28 of Chicago Convention 1944 requires the commitments taken by the states parties in establishing air navigation facilities and standard systems.

The above principles are then set out in Article 28 of Chicago Convention which specifies that: “Each contracting State undertakes, so far as it may find practicable, to:

i. Provide, in its territory, airports, radio services, meteorological services and other air navigation facilities to facilitate international air navigation, by the standards and practices recommended or established from time to time, under this Convention;

ii. Adopt and put into operation the appropriate standard systems of communications procedure, codes, markings, signals, lighting and other operational practices and rules which may be recommended or established from time to time, under this Convention;

iii. Collaborate in international measures to secure the publication of aeronautical maps and charts by standards which may be recommended or established from time to time, under this Convention.”

According to Francis Schubert\textsuperscript{33} Article, 28 must be interpreted from a systematic perspective; it means that the air navigation facilities become the obligation of states parties to be provided. It contains two services meanings, namely the services provided to users of the air navigation and technical infrastructures associated with those services. Parts of the air navigation facilities to be provided by the states parties are air traffic management, communication, navigation and surveillance systems, meteorological services for air navigation, search and rescue and aeronautical information services.

Technically, the aircrafts conducting the international flight requires air navigation infrastructure for aviation safety. Sufficient aviation facilities, technically, can reduce the risk of aviation accidents (like collisions between aircraft in the air), avoid flight delays. These conditions can be avoided to be

assured if the air traffic can be predicted through the air navigation. Also, the air navigation can support to enhance the efficient flight operations by assuring that the air navigation guides the pilot. To be effective, the air navigation infrastructures and services must have the dimensions to be able to meet the adequate capacity in responding to air traffic needs and can be operationalized without unobstructed and in the same time in a single geographic location.34

Air navigation facilities should be established in order so that international aircraft traffic can access the states member territories, such as the provision of airports that can accommodate the types of aircraft serving for international aviation and the establishment of the airway that is likely to be passed by the aircraft to the airport. The states parties also oblige to support the aviation over their airspace in performing transit services at other states airports. Finally, the implementation of the global air navigation system requires the fulfillment of technical requirements and operational procedures is an issue that should also be harmonized.35 The main objective of the regulation of air navigation facilities and standards in Article 28 of Chicago Convention 1944 is to ensure the availability of air navigation facilities that meet the worldwide criteria. Francis Schubert stated that Article 28 of Chicago Convention 1944 contains the commitment of two states. First, it is the states obligation to take measures in providing international air navigation facilities. Second, it is the states obligation to ensure that its air navigation facilities have met the standards and practical recommendations specified by ICAO.

According to Francis Schubert, ICAO does not provide a formal definition of the term "air navigation facility" as stipulated in Article 28 of the Chicago Convention, as well as the concept of air navigation services. Article 28 only presents a list of facilities, services, and products covered by this provision in the form of air navigation services in the specific context of ANS like "air traffic management, communication, navigation and surveillance systems, meteorological services for air navigation, search and rescue and aeronautical information services."

Another definition of aviation facilities can be found particularly in the regulations applied to regional and national scopes. Various definitions are not consistent with the definition given in ICAO documents. For examples, the definition of ANS in European Single European Sky Regulations is that ANS is air traffic services; communication, navigation and surveillance services; meteorological services for air navigation; and aeronautical information services that are completely different from air navigation

34Ibid.
35Ibid.
services that include search and rescue services as part of its air navigation service. The requirements mentioned in Article 28 of Chicago Convention 1944 are closely associated with the facilities provided by the government to support international air navigation. It is certainly also a part of the unseparated requirements of the needs of the national air navigation services which is mainly related to the compliance with the standards issued by ICAO (ICAO's SARPs) as the infrastructure regulations applied for international air transportation. Practically, the air navigation services facilities are usually shared between the national and international air traffics.

Furthermore, regarding the state's liability in the air navigation implementation, Ruwantissa Abeyratne argued that the state's liability could be divided into two, namely liability under the administrative law and liability under the public international law.36

What an important focus of this article discusses the implementation of air navigation principles in the laws and regulations of Indonesia. This discussion is important to study the capability of the Indonesia legislation with the international legal instruments ratified by Indonesia. Indonesia had become a state party of Chicago Convention 1944 through adherence process (submission)37. The adherence instrument is addressed to the government of the United States and become effective in 30 days since the instrument of ratification is received and also notified to all members. Since the notice of Indonesia on 27 April 1950 became effective on 27 May 195038. The binding legal consequence of Chicago Convention 1944 is that Indonesia has to comply with the international air law and implements it in the national legislation (implementing legislation). In this section, the author discusses some important parts of the international air law norms primarily related to the state sovereignty and state liability in the implementation of Indonesia’s air navigation and its regulatory legislation.

The implementation of state sovereignty principles in Indonesia is still intact with required in NRI Constitution, which contains three dimensions that reflect the archipelago insight. Related to air navigation, the

37Article 92 of the 1944 Chicago Convention states that "all member states of the United Nations or members of the organization under the United Nations environment and neutral countries Second World War can subdue themselves (adhere). Act No. 24 of 2000 on the International Agreement stated that "the Government of the Republic of Indonesia bound by a treaty through the following means: a. The signing, ratification, document exchange agreement / memorandum of diplomatic, d. The other ways as agreed upon by the parties to the treaty."
38Data obtained from the list prepared by the ICAO secretariat based on the information storage received from the Government United States, downloaded from http://www.icao.int/secretariat/legal/List of Parties.
The Delegation of State Sovereignty over Air Space in The Implementation

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The implementation of state sovereignty can be found in Article 262 of Law No. 1 on 2009 of aviation, which regulates the serviced airspace. In Article 262 of the Law, it is determined that the serviced airspace by the air navigation services operator organized by the government of Indonesia including:

i. the airspace of the Republic of Indonesia, in addition to the airspace which its air navigation services is delegated to other states under the agreement;

ii. the airspace of other states that the air navigation services are delegated to the Republic of Indonesia; and

iii. the airspace which its air navigation services is delegated by the International Civil Aviation Organization to the Republic of Indonesia.

The division of airspace in which the government of Indonesia with its four types of airspaces shows that the government of Indonesian adopts the principle of complete and exclusive airspace sovereignty as stipulated in Chicago Convention 1944 along with its development. First, the air navigation held in the airspace of the Republic of Indonesia shows Indonesia implement the air navigation based on the principle of complete and exclusive airspace sovereignty in Chicago Convention 1944. Second, the airspace which its air navigation services are delegated to other states under the agreement by the Government of Indonesia. In this airspace, the Government follows the development of the airspace sovereignty meaning sets out in Annex 11 of Chicago Convention 1944, which allows the state provides the airspace management to another state for aviation safety. The government of Indonesia has done it by undertaking the FIR management agreement in Riau and Natuna archipelago waters to Singapore and Malaysia in 1996. Third, other states’ airspace that the air navigation services are delegated to the Republic of Indonesia. Indonesia has managed Australia’s airspace over Christmas Islands and Timor Leste. Fourth, the airspace that the air navigation services are delegated by the International Civil Aviation Organization to the Republic of Indonesia39. In this point, the author has not seen that ICAO has delegated the other state’s airspace to Indonesia. The considerations are stipulated in the Law Number 1 of 2009 on Aviation, which may be translated as part of the policy if it happens in the future so that the regulation has already covered it.

The policy in the air navigation services delegation to other states has an impact on the degradation of a complete and exclusive airspace sovereignty meaning, which is followed by the provisions that must be considered by the government in the form of the consideration of three (3)

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main air navigation components, namely the airway structure, smooth air traffic flow, and aircraft movement efficiency. The regulation that states the airspace sovereignty in aviation legislation is the establishment of dangerous airspace stated by the air navigation service providers in its serving airspace. In the dangerous airspace, the state has the authority to limit a non-fixed and non-thorough aviation activities by the natural conditions. As stated in the annex of Article 7 paragraph (1) of Law No. 1 of 2009 on Aviation, which can be read as follows:

What is meant by "prohibited airspace (prohibited area)" is the airspace with permanent and comprehensive restrictions for all aircraft. Restrictions can only be set in Indonesia’s airspace, for example, nuclear installations or the presidential palace. What is meant by "restricted airspace (restricted area)" is the airspace with non-fixed restriction and can only be used for specific flight operations (military aircraft)? If it is not used (inactive), this area can be used for civil aviation. The restriction includes height restriction and can only be set within Indonesia’s airspace, for example, installations or military area.

2. The Concept of Acquisition of the National Airspace Delegated to Singapore: Pairing the State Sovereignty and the Aviation Safety.

The issue of airspace acquisition over Natuna water, which other states have served its air navigation services, has become the national polemic. But unfortunately, the polemic only leads to the sector A which is seen to have economic value, while for sector B and sector C which are the sovereign territory of the Republic of Indonesia is not much being disputed. National aviation analysts expect that the government manages the Singapore FIR by Indonesia for the sake of the airspace sovereignty, but many people assume that the acquisition is not an urgent thing as Indonesia is not ready for the acquisition. The important issue is the establishment of aviation safety although Singapore manages Indonesia FIR. The governance of President Joko Widodo and vice president Jusuf Kalla gives special attention to FIR acquisition so that the government forms a particular team for the acquisition under the coordination of the National Aviation Council.

The acquisition of the national airspace delegated to other states has become a part of air navigation implementation that has been set out in Article 458 of Law No. 1 of 2009 on Aviation, which instructs that the Republic of Indonesia’s airspace, which the air navigation services is delegated to other countries under the agreement had to be evaluated and served by the air navigation services provider no later than 15 (fifteen) years since the Law applies.

According to the authors, the regulation construction of the air navigation implementation in Article 458 of the Law No. 1 of 2009 on
Aviation contains several key points, first, it is the legal aims to be realized by the government in the future (ius constitutendum) within a period of fifteen years of the air navigation services. Second, Indonesia confirms and admits that the state has the airspace sovereignty against the FIR, or Indonesia is the owner of the real airspace sovereignty, Singapore only received a delegation from Indonesia. Third, the operational measure is carried out through the evaluation which is then realized by the acquisition of Singapore air navigation services in 2024. In 2016, the Minister of Transportation Regulation No. 55 of 2016 on the Navigation Order sets the working programs on the acquisition of air navigation services. Based on annex (e), some measures have been prepared to acquisition the sectors ABC, which set with the preparational stage, technically operational stage, the initial implementation phase, and the final implementation phase.

As the above discussion, according to the author, the enactment of the Minister of Transportation Regulation No. 55 of 2016 on the Navigation Order is not yet systematically as the ministerial regulation on air navigation order that has not been enacted first before the Minister of Transportation Regulation Number 55 on 2016 on the National Air Navigation Order. The author offers an acquisition concept of national airspace delegated to Singapore: by pairing the concept of state sovereignty and aviation safety. The ideas to pair the airspace sovereignty and aviation safety in the acquisition of national airspace delegated to Singapore is based on the direction of the regulation sets in the Article 458 of Law No. 1 on 2009 on Aviation. According to the authors, the article 458 of Law No. 1 in 2009 on Aviation has a conceptual and operational dimension in the acquisition of national airspace delegated to other states. The conceptual dimension is then supported by operational measures in the form of government programs to evaluate and acquisition.

a. Acquisition of air navigation services from Singapore: the coordination of the civil and military authorities.

The recognition of airspace sovereignty is observed from the initial sentence of Article 458 which stipulates that the airspace of the Republic of Indonesia as the airspace in which the Indonesian state has complete and exclusive sovereignty. Besides, it implies that the original owner of the airspace currently managed by Singapore is the Republic of Indonesia. In this context, the acquisition attempt of the airspace sovereignty in which the air navigation service served other state is a very basic issue. According to K Martono, the foundation of Indonesia's airspace sovereignty so that Indonesia can acquisition is based on Article 1, Section 2, Article 28 of

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As explained above, the airspace sovereignty in air navigation services juxtaposes with the state liability in providing the air navigation services to establish the aviation safety. Therefore, according to K. Martono\textsuperscript{41}, if Indonesia will acquisition the air navigation services over Natuna island from Singapore, then Indonesia has to give the air navigation services including the needed facilities as airport facility, air navigation including the air traffic, telecommunication, radio telephony, aviation meteorology, aviation information, and communication manner according to ICAO standards.\textsuperscript{42}

To unite the above concepts, it would have to be accompanied by some measures between the responsible institutions in the field of defense and security of the state and the responsible institution in the field of safety. Although Chicago Convention sets that the international civil aviation regulation does not apply to the state’s aircraft (aircrafts used in military, customs, and police), but the state’s aircraft and CNS/ATM system\textsuperscript{43} in military and services is an integral part of the aviation communication. Comprehensive and integral cooperations between civil and military organizations will contribute in the process the air navigation services acquisition. It is in line with the vision sets in the preamble of Chicago Convention 1944, which leads to the optimum use of the airspace and balance the state requirements for both civil and military aviation.

Some things to be considered in order to implement the united concept of the airspace sovereignty in the air navigation services which juxtaposes with the state's liability in providing the air navigation services, namely first, the policies, second, the legal frameworks, third, the cooperation relationship, and fourth, the management at all working levels. The purpose of such cooperation should aim to achieve optimal use of airspace to increase the airspace capacity, operational flexibility, and time efficiency, fuel, and air environmental protection. The cooperation between civil and military authorities by the regulations and guidelines is essential, according to Ruwantissa Abeyratne, the considerations underlying the civil aviation with 15,000 aircraft at a certain time to bring 2.2 billion passengers per year, should not be under any circumstances compromised. This

\textsuperscript{41} Ibid., p. 8.
\textsuperscript{42} Ibid., p. 8.
\textsuperscript{43} Document 4444, ICAO, continuation of CNS ATM is Communication Navigation Surveillance/Air Traffic Management. CNS ATM is a system that includes the activities of communication, navigation, and surveillance. In operation using digital technology such as satellites.
condition is based on the premise that although Article 1 of Chicago Convention and legal theory states that every state is sovereign and equal, but in fact with the phenomenal growth in communication and awareness of global competition can have a deep result in the system as a whole in which every state should consider the other states in making the decisions. 

In this regard, the writer suggests that these important substances are necessary to be incorporated in the civil and military cooperation. They are as follows:

a. Institutional and legal frameworks are covering the considerations of the global policy for civil/military cooperation, the documentation stipulated by ICAO on civil/military cooperation, the possibility of excluded legal agreement problem.

b. Airspace organization and management covering the general principles of the airspace usage and management, the principle of airspace flexible usage, the possibility to have a collaborative decision making, the model of air navigation services providing, ATM security.

c. Aircraft operation is covering a complete and compatible operation of the ICAO regulation, a partial compatible operation of the ICAO regulation, the system of non-passenger aircraft.

d. Civil aviation interoperationable system (air and land) covering the interoperationable strategic purpose, the possibility of collaboration in the standard, design, system, and architecture, the interoperationable on the CNS/ATM working and standard basis.

Thus, the Minister of Transportation and the Minister of Defense may coordinate to regulate the above issues in the government regulation on National Air Navigation Order as the implementation of the Law Number 1 of 2009 on Aviation, and the Law Number 43 of 2008 on State Region. The foundation of the Civil-Military Coordination (CMAC) in the implementation of air navigation is Article 50 of the Minister of Transportation Regulation Number PM. 55 of 2016 on National Air Navigation Order, and Article 40 Paragraphs (7) on the Establishment of National Collaborative Decision Making Committee (KOMNAS CDM). According to the author, the institution of the Civil-Military Coordination in the air navigation implementation needs to be considered to be regulated in higher regulation, i.e., Government Regulation on National Airspace Order in which it is set the authority, task, and liability, as well as the operational components. The civil and military coordination may be carried out through these methods: 

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45 Obe, Field Arnold, International Air Traffic Control: Management of The World’s
a. Total Integration Method, in which the integrated and solely services on the air traffic service for all aircraft are separated from the related aircraft operational authority;

b. Partial integration Method, in which the organization consists of the staff from both of the civil and military services, and the air traffic service provided by the authorities together;

c. Procedural Coordination Method, in which the air traffic service is provided separately by the civil and military authorities and the cooperation is completely through procedural coordination;


The meaning of the article 415 is indeed the acquisition stage, i.e. evaluation. Moreover, those stages are implemented in the form of working program defined in Annex (e) of the Minister of Transportation Regulation Number 55 of 2016 on Air Navigation Program, in which currently, is no longer relevant to its development in other states, particularly the South East Asia. The evaluation stage of the air navigation services, in the author’s opinion, is part of the aviation safety aspect, and the author suggests the working program by the following the process:

1. Reformulation of the LPPNPI Institution

   The reformulation of the LPPNPI institution is by the legal substance of the air navigation implementation, by proposing the independent institution comply with its principles.

2. Evaluation of the Agreement between Indonesia and Singapore.

   Concrete measures that can be done by the Government of Indonesia to acquisition the air navigation services from Singapore is by conducting the legal approach of an international agreement. The delegation of the air navigation services in Batam and Natuna by Singapore is based on the agreement between Indonesia and Singapore in 1995. Therefore, the acquisition has to be based on the legal approach of the international agreement. Based on the Vienna Convention 1969, there are two main principles of international agreement, i.e., free consent principle and the good faith principle. The free consent principle means that every state has the freedom to start and end an international agreement with other states. This principle is an implementation of state sovereignty in international law. The good faith principle instructs the states to carry out the international agreement with good intention by the agreement’s content.

   Regarding both principles above, Indonesia may request Singapore

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to make renegotiation of the agreement, which had been agreed by both states, to change it. Indonesia as the initiator of the agreement alteration may propose a proposal for alteration to Singapore to renegotiate it. It can be done with agreement evaluation steps, which can be done step by step, namely by delivering a notification to Singapore that Indonesia can provide an initial step in air navigation services, i.e., providing approach landing from an altitude of below 24,000 feet. Moreover, simultaneous evaluation of agreement alteration with Singapore should be carried out, particularly in air navigation services charges, in which Indonesia can conduct an audit process to an independent auditor with the funding from Singapore.

3. The service provider of the air navigation of the transition period in the Natuna Islands with:
   i. Human Resource Recruitment and Placement. The placement should be planned since the education and training recruitment for the ATC staffs. By making the best class especially for the ATS technical skills and English skills above the average, for example, to accomplish level 6 to be placed in the transition phase of the airspace acquisition above Natuna. Moreover, an addition of the curriculum of soft skills ability in good judgment and good decision making in aviation is needed. The skills have two main principles: first, the perception. The development of accurate perception has to be supported by four skills, namely care/consciousness, observation, detection, and understanding. Second, distinguish, that is the skill to recognize the difference between the true and untrue alternative solutions.
   ii. Placement of the air navigation instruments that is compatible with the air navigation technology belongs to Singapore and Australia;
   iii. Notification delivery to Singapore to inform that Indonesia will serve the initial air navigation phase, i.e., the landing approach from an altitude of below 24,000 feet;
   iv. The agreement amendment with Singapore particularly regarding the agenda of the changes of air navigation services charges that can be carried out by the audit process requested by the Government of Indonesia to an independent auditor with funding from Singapore.

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46 Since 2003, enforce ICAO language proficiency level by dividing into 6 levels, namely pre-elementary, elementary, pre-operational, operational, extended, and expert. Meets a minimum level 4 as a professional in the field of aviation to be retested every 3 years, 5 years for level 5, and did not retest to level 6.
v. The submission to ICAO regarding the improvements services charges if there is a change of charges declared by ICAO as contained in ICAO Doc 7100.

vi. Indonesia shall hold a meeting with ICAO states member in Asia Pacific Air Navigation Planning and Implementation Regional Group to conduct discussion regarding the acquisition of the airspace above Natuna Island through the diplomatic way. The meeting is attended by ICAO states member and other stakeholders in the Asia Pacific region.

c. **The Complete Acquisition of the Air Navigation Services by Indonesia from Singapore.**

The ultimate goal of the acquisition of the air navigation service in Article 458 of Law No. 1 of 2009 on Aviation is the air navigation services over Natuna island served by Indonesia as the original owner of the airspace sovereignty. According to the author, the acquisition concept is conducted phase by phase. The first phase, Singapore only provides air navigation services while Indonesia only monitors. The second phase, Indonesia provides air navigation services while Singapore only monitors, and the third phase, the final implementation in which Indonesia provides complete air navigation services. This phasing concept is in line with the phasing concept in Annex (e) of the Minister of Transportation Regulation No. 55 of 2016 on National Air Navigation Order.

C. **Conclusion**

The principles of air navigation implementation in international air law are based on two main principles, i.e., the principle of state sovereignty and the principle of state liability. The principle of airspace sovereignty in the air navigation implementation experiences the dynamics of meaning and a complete and exclusive state sovereignty implementation as the full property of a state becomes a slight change because ICAO coordinates the state owner of the sovereignty to delegate to another state through international agreement. The state liability principle in the air navigation implementation sources from the state's liability is derived from Article 28 of Convention Chicago which requires the states to implement international law in providing air navigation services to establish the aviation safety. The state liability principle is established through several state liability principle in implementing the air navigation are called as the principle of non-discrimination laws and regulation of air navigation, the principle of freedom of access and non-discrimination, and the principle of providing the air navigation facilities and standard.

The airspace acquisition in which the air navigation services managed by Singapore, currently, is based on the regulation stipulated in Article 458 of
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the Law Number 1 of 2009 on Aviation. It regulates three main issues, i.e.,
first, the conformity of the airspace sovereignty over Natuna Island which is
managed by Singapore is in fact, the Indonesia airspace sovereignty
delegated to Singapore. To ensure the strengthening of the airspace
sovereignty, it is carried out by forming Civil Military Aviation
Coordination (CMAC) as outlined in government regulation on national
airspace order. Second, it is necessary to conduct the evaluation step of the
air navigation implementation using reformulation LPPNPI institutional,
evaluation of the cooperation agreement between Indonesia and Singapore,
and the provision of air navigation services in the transitional period Natuna
island. Third, the acquisition concept is conducted in phases: first, Singapore
just gives air navigation services, while Indonesia only monitors, second,
Indonesia provide air navigation services, while Singapore only monitors,
the third, the final implementation, Indonesia provides a complete air
navigation services. The recommendation of the principle of the air
navigation implementation in the international air law has a very rapid
dynamic, therefore the Ministry of Transportation and the House of
Representatives of the Republic of Indonesia in stating the Law on aviation
of the Ministry of Transportation in enacting the operational regulation
should conduct a depth study on the development of the legal principles in
order to be able to implement those principles into the air navigation
implementation policy in Indonesia. Furthermore, regarding the
implementing agencies (operators) in this case, Perum LPPNPI has to carry
out an in-depth examination of the development of legal principles of the air
navigation implementation that applies under ICAO.

The evaluation and airspace acquisition steps in implementing air
navigation services delegated to Singapore as listed in Annex (e) of the
Minister of Transportation Regulation No. 55 of 2016 on the National Air
Navigation Order, the Ministry of Transportation, should immediate form a
particular team consisted from various ministries such as the Ministry of
Defense, Ministry of Transportation, Ministry of Foreign Affairs, the Air
Force, and Perum LPPNPI, for immediate implementation of the working
program in accordance with the stages set under the Minister of
Transportation regulations.

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