Indonesia-Singapore Realignment Agreement 2022: Quo Vadis Indonesia's Air Sovereignty, Defense and Security?

Yaries Mahardika Putro * 🝺

Faculty of Law, University of Surabaya, Indonesia

Felix Alexander Kurniawan 💿

Faculty of Law, University of Surabaya, Indonesia

Britney Nathania Lielien Putrajaya 向

Faculty of Law, University of Surabaya, Indonesia

Sherren Laurencia 向

Faculty of Law, University of Surabaya, Indonesia

(*) corresponding author, email: yariesmp@staff.ubaya.ac.id

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Abstract

In 2022, after a 76-year wait, Indonesia finally witnessed the fruition of the Agreement on the Realignment of the Jakarta Flight Information Region and the Singapore Flight Information Region. However, President Jokowi's statements created ambiguity, leading to widespread misconceptions that Indonesia's airspace sovereignty over the Riau Islands and Natuna was only established during his tenure through the FIR agreement in 2022. This research aims to evaluate the impact of the airspace adjustment agreement ratified in 2022 between Indonesia and Singapore on Indonesia's air sovereignty and explore potential legal remedies. The research methodology encompasses normative legal analysis, including statutory, conceptual, and historical approaches. From a sovereignty standpoint, the FIR agreement in 2022 has implications for violating Indonesia's airspace sovereignty. Past sovereignty violations resulting from the 1995 FIR agreement could resurface post-2022. Civil-military cooperation in air traffic management is needed to restore Indonesia's compromised airspace sovereignty fully. Moreover, the agreement's 25-year duration conflicts with Law Number 1 of 2009 on Aviation. To rectify this, a crucial legal step involves establishing a takeover agreement, rather than a mere realignment, of the FIR from Singapore, followed by ratification through legislation. The public can engage in a judicial review of Presidential Regulation No. 109 of 2022 at the Supreme Court. Additionally, it is imperative to advocate for creating an Airspace Management Bill to address these complex airspace sovereignty concerns.

Keywords: Air sovereignty, flight information region, Airspace management bill.



INTRODUCTION

For 76 years, Indonesia has delegated the Flight Information Region (FIR) management in the Riau Islands and Natuna airspace to Singapore. In the Riau Islands, all aircraft flying to or from Batam, Tanjung Pinang, Matak, or Natuna are guided by the air navigation service unit operated by the State of Singapore.¹ Aircraft transiting through the airspace of the Riau Islands and Natuna are required to seek permission from Singapore's Air Traffic Control (ATC) before proceeding. Also, the Indonesian Armed Forces aircraft on patrol or training must report to the Singapore ATC. Indonesia must also pay Singapore fees if its military aircraft passes through the area.² From a political perspective, this affects Indonesia's credibility in civil aviation.³ These are the implications of the delegation of FIR management in the airspace of the Riau Islands and Natuna, which pertains to Indonesia's sovereignty being delegated to Singapore.

Annex 2, Chapter 1 of the Chicago Convention of 1944 defines FIR as "an airspace of defined dimensions within which flight information service and alerting service are provided." Conceptually, FIR is intended to convey flight information and provide surveillance of aircraft passing through specific regions in the airspace under the FIR's jurisdiction.⁴ To fulfill this function, FIR are divided into segments based on considerations of aviation safety and security. Ideally, the country managing the FIR should have sovereignty over that airspace and be known as the "controlling state." ⁵

¹Lenny Husna and Agus Riyanto, "Peran Pemerintah Dalam Upaya Pengambilalihan Flight Information Region (FIR) Singapura Atas Wilayah Udara Kepulauan Riau," *Jurnal Cahaya Keadilan* 7, no. 2 (October 31, 2019): 395–410, https://doi.org/10.33884/jck.v7i2.1418.

² Alwafi Ridho Subarkah, "Kepentingan Indonesia Dalam Mengambil Alih Flight Information Region (Fir) Dari Singapura," *Jurnal Asia Pacific Studies* 3, no. 2 (January 15, 2020): 145–55, https://doi.org/10.33541/japs.v3i2.1317.

³ Eco Silalahi, "Implikasi Hukum Internasional Pada Flight Information Region (FIR) Singapura Atas Wilayah Udara Indonesia Terhadap Kedaulatan Negara Kesatuan Republik Indonesia," *Jurnal Online Mahasiswa Fakultas Hukum Universitas Riau* 2, no. 1 (February 2015): 1–14.

⁴ Adhy Riadhy Arafah et al., "FIR Agreement Indonesia – Singapore: What Are The Legal Implications?," *Heliyon* 10, no. 8 (April 2024): 1–9, https://doi.org/10.1016/j.heliyon.2024.e29708.

⁵ International Civil Aviation Organization (ICAO), ANNEX 11 to the Convention on International Civil Aviation - Air Traffic Services: Air Traffic Control Service, Flight Information Service, Alerting Service, 15th ed. (Canada: International Civil Aviation Organization (ICAO), 2018), https://ffac.ch/wp-content/uploads/2020/10/ICAO-Annex-11-Air-Traffic-Services.pdf.

However, through agreements, a controlling state may delegate the management of the FIR to another state.⁶

Indonesia has the right to delegate FIR management to another country.⁷ In 1946, Indonesia delegated the management of the FIR over the airspace of the Riau Islands and Natuna to the United Kingdom. This decision was not initiated by the Indonesian government but was decided at a meeting with the International Civil Aviation Organization (ICAO) in Dublin, Ireland, in March 1946.⁸ Air traffic regulations are not based on sovereignty but on aviation capacity. ⁹ ICAO argued that Indonesia, as a newly independent country, needed more capacity to regulate air traffic and navigation in the Riau Islands and Natuna. ¹⁰ Additionally, the airspace over the Riau Islands and Natuna was not part of the territorial waters of Indonesia in 1946.¹¹

Over time, the arguments that legitimized Singapore's management of the Flight Information Region (FIR) over the Riau Islands and Natuna have started to lose their relevance. During the delegation of the FIR to Singapore, there have been violations of sovereignty known as 'aerial intrusions' in the airspace of the Riau Islands and Natuna.¹² Aerial intrusion occurs when a civilian or military aircraft of one state enters the airspace of another state without prior authorization from the host state.¹³

⁶ Andika Immanuel Simatupang, "State Responsibility over Safety and Security on Air Navigation of Civil Aviation in International Law," *Indonesian Journal of International Law* 13, no. 2 (January 31, 2016): 275–95, https://doi.org/10.17304/ijil.vol13.2.649.

⁷ Fatona Mithalina, Muh Risnain, and Zunnuraeni, "Analisis Perjanjian Pengelolaan Ruang Udara (Flight Information Region) Antara Indonesia Dan Singapura Berdasarkan Hukum Internasional," *Mataram Journal of International Law (Majil)* 1, no. 1 (June 2023): 61–78, https://doi.org/10.29303/majil.

⁸ Mithalina, Risnain, and Zunnuraeni.

⁹ Sefriani, Hukum Internasional - Suatu Pengantar, 2nd ed. (Jakarta: Rajawali Press, 2016).

¹⁰ Ramadhita Lestari and Den Yealta, "Diplomasi Indonesia Dalam Menyelesaikan Sengketa FIR (Flight Information Region) Di Atas Kepulauan Natuna Dengan Singapura," *Jurnal Online Mahasiswa Fakultas Ilmu Sosial Dan Ilmu Politik Universitas Riau* 3, no. 1 (February 2016): 1–16.

¹¹ Chappy Hakim, Berdaulat Di Udara: Membangun Citra Penerbangan Nasional (Jakarta: Penerbit Buku Kompas, 2010).

¹² Pramono Benyamin, "The Practices of Republic Indonesia's Diplomacy to Taking Over the Management of Flight Information Region (FIR) above Natuna Island from the Republic of Singapore," in *Proceedings of the International Conference on Media and Communication Studies (ICOMACS 2018)* (International Conference on Media and Communication Studies(ICOMACS 2018), Bandung, Indonesia: Atlantis Press, 2018), 228–29, https://doi.org/10.2991/icomacs-18.2018.56.

¹³ Yasidi Hambali, Hukum Dan Politik Kedirgantaraan, 1st ed. (Jakarta: West Publishing, 1994).

Loss of control over airspace within the state's sovereignty has political, defense, and security dimensions.¹⁴

Consequently, Indonesia tried to reclaim the FIR at the Regional Air Navigation Meeting (RAN Meeting) I in 1973, RAN Meeting II in 1983, and RAN Meeting III in 1993. Subsequently, on September 21, 1995, the governments of Indonesia and Singapore formed an agreement to realign the boundaries of the Jakarta and Singapore FIRs. This agreement is the "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" (1995 FIR Agreement).¹⁵

On January 25, 2022, the Indonesian government announced it had successfully signed an FIR realignment agreement between Indonesia and Singapore. According to Novie Riyanto Rahardjo, the Secretary General of the Ministry of Transportation, Indonesia, the FIR negotiations were challenging and lengthy, requiring 40 meetings with the Singaporean government before both countries finally reached an agreement.¹⁶ President Jokowi stated, "The airspace over the Riau Islands and Natuna, which Singapore has long managed, now returns to the Republic of Indonesia. This expands the Flight Information Region (FIR) Jakarta to 249,575 km2." Policy analyst Agus Pambagio observed that this statement led to a public misconception¹⁷that Indonesia had successfully taken complete control of the FIR from Singapore. It was implied that it was during President Jokowi's tenure that the FIR management was reclaimed from Singapore.

¹⁴ Kelvin Rivaldi and Dwi Astuti Palupi, "Juridical Review of the Flight Information Region (FIR) Agreement between Indonesia and Singapore in an International Legal Perspective," *Kumpulan Executive Summary Wisudawan Fakultas Hukum Periode Ke 80* 14, no. 2 (August 26, 2023): 1–8.

¹⁵ Nanda Indrawati, "Peluang Dan Tantangan Penandatanganan Perjanjian Penyesuaian Flight Information Region (FIR) Antara Indonesia Dengan Singapura," *Jurnal Paradigma Hukum Pembangunan* 7, no. 2 (August 21, 2022): 18–36, https://doi.org/10.25170/paradigma.v7i2.3541.

¹⁶ Alif Nurfakri Muhammad, Suharto Abdul Majid, and Martono K, "FIR Di Atas Pulau Natuna: Perjanjian Extradisi, Kooperasi Pertahanan Dan Flight Information Region (FIR)," in *Kapita Selekta: Hukum Transnasional Penerbangan, Dua Bahasa Indonesia & Inggris*, 1st ed. (Purbalingga: Eureka Media Aksara, 2022), 1–28, http://repository.untar.ac.id/38711/1/Book%20Chapter%20Kapsel%20Penerbangan%20(Ind%20-%20Eng).pdf.

¹⁷ Agus Pambagio, "Pengaturan Ulang Dibungkus Penguasaan Kontrol Ruang Udara," detikNews, January 31, 2022, https://news-detik-com.translate.goog/kolom/d-5921967/pengaturan-ulang-dibungkus-penguasaan-kontrol-ruang-udara?_x_tr_sl=id&_x_tr_hl=en&_x_tr_hl=en&_x_tr_pto=sc.

According to Article 7 of the 2022 FIR agreement, the FIR is valid for 25 years and can be extended., However, Article 458 of Law Number 1 of 2009 on Aviation (Aviation Law) stipulates that "the airspace of the Republic of Indonesia, where flight navigation services are delegated to another country based on an agreement, must be evaluated and served by the flight navigation service provider no later than 15 years from the enactment of this Law." Hence, Indonesia must take over the management of the FIR from Singapore by 2024.

Based on these considerations, this article analyzes the impact on the Republic of Indonesia's sovereignty in the airspace following the ratification of the 2022 FIR agreement and the legal steps that need to be taken to strengthen sovereignty in the airspace. The research draws upon several previous studies about the FIR between Indonesia and Singapore.

This study distinguishes itself from previous research by addressing the specific legal measures that should be implemented following the 2022 FIR agreement, aligned with Indonesian law. In particular, it investigates violations of air sovereignty by Singapore in the airspace over the Riau Islands and Natuna post-agreement. It critically analyzes how the 2022 FIR agreement aligns with Indonesia's Aviation Law and explores the Civil and Military ATM Cooperation (CMAC) agreement between Indonesia and Singapore.¹⁸ This research focuses on the public misconceptions surrounding the FIR takeover and the Indonesian government's approach to regaining control from Singapore.¹⁹ Moreover, this study examines the sovereignty implications of FIR management after the 2022 agreement. It outlines the legal steps Indonesia must take to fully reclaim control of the FIR over the Riau Islands and Natuna.²⁰

¹⁸ Nandang Sutrisno and Rafi Nasrullah Muhammad Romdoni, "Ratifikasi Perjanjian Penyesuaian Wilayah Informasi Penerbangan Antara Indonesia Dan Singapura: Pilihan Rasional Atau Status Quo?," *Undang: Jurnal Hukum* 5, no. 2 (December 30, 2022): 393–417, https://doi.org/10.22437/ujh.5.2.393-417.

¹⁹ Ridha Aditya Nugraha, "Flight Information Region Above Riau and Natuna Islands: The Indonesian Efforts to Regain Control from Singapore," *Zeitschrift Fur Luft Und Weltraumrecht - German Journal of Air and Space Law* 67, no. 2 (2018): 236–53.

²⁰ Mahfud Fahrazi, "Pengelolaan Flight Information Region Di Wilayah Kepulauan Riau Dan Natuna," Jurnal Hukum Ius Quia Iustum 26, no. 2 (August 22, 2019): 391–409, https://doi.org/10.20885/iustum.vol26.iss2.art9.

METHODOLOGY

This article will focus on two key issues: What are the implications for sovereignty within the airspace of the Republic of Indonesia following the ratification of the Realignment Flight Information Region agreement between Indonesia and Singapore in 2022? What legal measures can be taken to strengthen the sovereignty of the airspace within the Republic of Indonesia following the ratification of the Realignment Flight Information Region agreement between Indonesia and Singapore in 2022?

In answering the problem formulation above, this research employs a juridicalnormative research method employing three approaches: the statutory approach, the conceptual approach, and the historical approach. The statutory approach is employed by critically examining the relevant legal provisions that govern the management of the 2022 FIR agreement. This involves an analysis of Aviation Law No. 1 of 2009 and international agreements, including the Chicago Convention and the United Nations Convention on the Law of the Sea (UNCLOS). The conceptual approach explores two distinct paradigms: one that prioritizes aviation safety and security and another that emphasizes national sovereignty. The study argues for s a sovereignty-based approach to managing Indonesia's airspace. The historical approach traces the evolution of Indonesia's efforts to regain control over its FIR from Singapore, beginning with the delegation of FIR management in 1946, up to the most recent FIR in 2022.

The study adopts a qualitative approach, relying on primary and secondary data sources, including legislation and legal texts from books, journals, research findings, internet sources, legal principles, legal facts, and other relevant legal sources pertaining to the legal issues addressed in the research. The author's data collection technique is a literature review conducted using a deductive method.

DISCUSSION AND RESULTS

History of Flight Information Region

In 1946, the ICAO allowed Singapore to control air traffic in Indonesia, especially the Natuna Islands. Indonesia did not attend the meeting due to its ongoing struggle for independence. In 1973, the ICAO organized the first Regional Aviation Navigation (RAN) Meeting in the Asia Pacific region. At that meeting, Singapore proposed continuing to manage the Flight Information Region (FIR) in the Natuna Islands region. Indonesia and the ICAO organization accepted the proposal, as Singapore was considered more feasible in managing airspace in the region.

At the second RAN meeting organized by ICAO in Singapore in 1983, Indonesia attempted to reclaim the airspace management over the Natuna Islands from Singapore. Unfortunately, the proposal was rejected because Indonesia needed more technological capability and human resources to manage its airspace.²¹ At the third RAN Meeting in Bangkok in 1993, Indonesia tried again to reclaim the FIR. However, only operational officials were sent, while Singapore sent an Attorney General, the Ministry of Transport Secretary General, and an International Law of the Sea Advisor.²²

The RAN agreed that Indonesia and Singapore should resolve the dispute bilaterally. RAN meeting IV was originally to be implemented in 2003 but was never reconvened. A 2009 meeting was held in Bali led by Foreign Minister Hassan Wirajuda, but all efforts to reclaim sovereignty failed.²³

The Consequences for Indonesian Airspace Sovereignty After the Ratification of the 2022 Agreement on the Realignment Flight Information Region between Indonesia and Singapore

The fundamental principle of Roman law, "*Cujus est solum, ejus est usque ad coelum et usque ad inferos*," is that land ownership extends to controlling the airspace above that

²¹ Antonius Tri Novianto, "Strategi Pengambilalihan Flight Information Region Kepulauan Natuna," *Journal of Social Research* 1, no. 9 (August 31, 2022): 939–48, https://doi.org/10.55324/josr.v1i9.212.

²² A.A. Supriyadi et al., "Strategy for the Alignment of Singapore Flight Information Region Over Indonesian Airspace," *The Open Transportation Journal* 14, no. 1 (December 21, 2020): 204–13, https://doi.org/10.2174/1874447802014010204.

²³ Kresno Buntoro, Lintas Navigasi Di Nusantara Indonesia, 1st ed. (Jakarta: Rajawali Pers, 2014).

land. Moreover, Abeyratne (2014) states, "Even the 1919 Paris Convention merely recognized the sovereignty of every State over the airspace above its territory," ²⁴ reinforcing the 1919 Paris Convention, acknowledging a nation's sovereignty over the airspace above its territory. Article 1 of the 1944 Chicago Convention states, "The sovereignty of a State over its territorial airspace is complete and exclusive." According to Wiradipradja (2014), the principle of airspace sovereignty is a legal principle with a universal nature that is accepted by all state members and approved in all international agreements outlined before the Chicago Convention (Paris Convention 1999 and Havana Convention 1928) and also bilateral conventions.²⁵

Sovereignty over a nation's territorial airspace must be absolute and comprehensive, as stipulated in Article 1 of the 1944 Chicago Convention on International Civil Aviation.²⁶ The complete and exclusive sovereignty over airspace is distinct from sovereignty over maritime areas. ²⁷ Suhartono (2019) quotes Supri Abu in "Realignment Flight Information Region Singapore in the Context of Enforcing National Sovereignty in Airspace," asserting that a nation's sovereignty over its airspace is complete (comprehensive) and exclusive. This is determined by three indicators that must be met: control of airspace, utilization of airspace, and law enforcement.²⁸

According to Kolossov (1991), one of the principles of international air law is recognizing each country's entire and exclusive sovereignty over the airspace above its territory.²⁹ This grants the coastal state the authority to permit or deny clearance

²⁴ Ruwantissa Abeyratne, *Convention on International Civil Aviation: A Commentary* (Cham Switzerland: Springer International Publishing, 2014), https://doi.org/10.1007/978-3-319-00068-8.

²⁵ Saefullah Wiradipradja, Pengantar Hukum Udara Dan Ruang Angkasa: Buku I Hukum Udara, 1st ed. (Bandung: PT. Alumni, 2014).

²⁶ Agus Pramono, "Air Sovereignty and No-Fly Zones," *Diponegoro Law Review* 1, no. 1 (October 7, 2016): 99–112, https://doi.org/10.14710/dilrev.1.1.2016.99-112.

²⁷ Yanyan Mochamad Yani, Ian Montratama, and Ikrardhi Putera, *Langit Indonesia Milik Siapa? - Makna Strategis Wilayah Pengendalian Udara (FIR) Indonesia-Singapura* (Jakarta: PT Elex Media Komputindo : Kompas Gramedia, 2016).

²⁸ Suhartono, D. Herly Dwiyanto, and Deni D.A.R., "Realign Ment Flight Information Region Singapura Dalam Rangka Penegakan Kedaulatan Negara Di Wilayah Udara Nasional," *Jurnal Strategi Pertahanan Udara* 5, no. 1 (March 13, 2019): 95–128, https://doi.org/10.33172/jspu.v5i1.372.

²⁹ Diederiks Verschoor, Persamaan Dan Perbedaan Antara Hukum Udara Dan Hukum Ruang Angkasa, 1st ed. (Jakarta: Sinar Grafika, 1991).

to aircraft crossing its airspace.³⁰ Clearance from the coastal state is closely related to managing Flight Information Regions (FIR). Therefore, ideally, the state that holds sovereignty over its airspace also manages the FIR. If a coastal state delegates the management of FIR to another state, it no longer has the authority to grant clearance to aircraft, including its national aircraft. This contradicts the concept of complete and exclusive national sovereignty in airspace.

a. The Republic of Indonesia's Sovereignty Position on the Airspace of the Riau Islands and Natuna

Indonesia exercised sovereignty over the airspace of the Riau Islands and Natuna archipelago before forming the 2022 FIR agreement. Indonesia ratified UNCLOS in 1985, and it came into force in 1994. An international theory known as *Pacta Sunt Servanda* states that "once an agreement is ratified, it cannot be said that they do not conform to states' interest"³¹ By recognizing the concept of an archipelagic state, UNCLOS transformed the high seas around the Riau Islands and Natuna archipelago into archipelagic waters. Article 49, Paragraphs (1) and (2) of UNCLOS affirms that sovereignty extends to the airspace above archipelagic waters. Following the implementation of UNCLOS, Indonesia was recognized as an archipelagic state, meaning that under Article 49, Indonesia has held complete and exclusive sovereignty over its airspace since 1982.

The legitimacy of Indonesia's sovereignty in the airspace of the Riau Islands and Natuna archipelago consistently appears in the considerations of the 1995 FIR agreement, which was ratified by all parties in compliance with UNCLOS. This implies that Singapore acknowledges Indonesia's sovereignty over the Riau Islands and Natuna archipelago airspace. Therefore, the government's assertion that Indonesia only gained sovereignty over the airspace of the Riau Islands and Natuna in 2022 is incorrect because Indonesia has had complete and exclusive sovereignty over this airspace since 1982.

³⁰ Supriyadi et al., "Strategy for the Alignment of Singapore Flight Information Region Over Indonesian Airspace."

³¹ Sukanda Husin, "Compliance and Dispute Settlement under the Transboundary Atmospheric Pollution Regimes," *Unpad Journal of International Law* 3, no. 1 (April 2004): 30–46.

The opposing claim that Indonesia lost sovereignty over the airspace of the Riau Islands and Natuna after the 2022 FIR agreement is an exaggeration. Although the 2022 FIR agreement delegated the management of FIR from the surface to the limit of controlled airspace to Singapore, this does not imply that Indonesia forfeited its sovereignty. This aligns with Annex 11 to The Convention on International Civil Aviation Chapter 2, 2.1.1, which states, "If one State delegates to another State the responsibility for the provision of air traffic services over its territory, it does so without derogation of its national sovereignty." Therefore, it must be understood that the delegation of FIR control to Singapore does not automatically strip Indonesia of its sovereignty.

b. The Paradigm Employed by the Indonesian Government in Forming the FIR Agreement in 2022 with Singapore.

In aviation law, there are two contrasting viewpoints regarding FIR. The first views FIR as an aviation safety and security management tool, while the second views FIR from a sovereignty perspective. Those who hold the first view base their arguments on Annex 11 to The Convention on International Civil Aviation Chapter 2, 2.1.1, which states that a nation can delegate the management of FIR to another country without diminishing the sovereignty of the delegating nation.³² From its inception, FIR was intended to create an environment conducive to aviation safety and security. Therefore, conceptually, FIR management is limited to air traffic services, such as flight information and alerting services.³³

According to Mochtar Kusumaatmadja, former Minister of Justice and Foreign Minister, even though the boundaries of FIR depart from a nation's sovereignty, it does not compel the coastal state to become the controller of the airspace above it. The coastal state has the authority to delegate the control of FIR to another state.³⁴

³² International Civil Aviation Organization (ICAO), ANNEX 11 to the Convention on International Civil Aviation - Air Traffic Services: Air Traffic Control Service, Flight Information Service, Alerting Service.

³³ Zailani Mohd Zaid et al., "An Evaluation of Airspace Congestion: A Case of Peninsular Malaysia," in *Proceedings on Transportation and Logistics*, vol. 2 (Global Research on Sustainable Transport & Logistics (GROSTLOG 2019), Jakarta: Advances in Transportation and Logistics Research, 2019), 595–611, https://doi.org/10.25292/atlr.v2i0.

³⁴ Silalahi, "Implikasi Hukum Internasional Pada Flight Information Region (FIR) Singapura Atas Wilayah Udara Indonesia Terhadap Kedaulatan Negara Kesatuan Republik Indonesia."

Agusman (2019) also subscribes to this perspective, considering that Indonesia cannot interpret Singapore's FIR control over the airspace of the Riau Islands and Natuna as an erosion of Indonesian sovereignty.³⁵ One crucial point of contention is the Resolution of the Assembly ICAO No. 14/24 of 1962 regarding delineating air traffic areas extending over national boundaries, which emphasizes that the delegation of FIR does not reduce national sovereignty.³⁶ Delegation is limited to the authority to provide air traffic information and services.

Conversely, proponents of the sovereignty viewpoint believe that FIR is connected to the sovereignty of a coastal state. Martono (2019) explains that discussions of airspace sovereignty cannot be separated from regulating airspace above the territorial area referred to as FIR. Therefore, the delegation of FIR to another nation can undermine the sovereignty of the delegating nation. This aligns with the statement by Latipulhayat (2021), who asserts that FIR is a technical issue, but not all aspects of it are purely technical; some involve elements of sovereignty.³⁷ While FIR is related to providing flight information services, FIR management grants authority to grant clearance to aircraft entering airspace.

The Indonesian government has chosen to prioritize aviation safety and security over sovereignty. This is reflected in the actions and statements of President Jokowi in a press conference where he stated that "this agreement represents a step forward in international recognition of Indonesia's airspace and enhances aviation safety and security, which can increase Non-Tax State Revenue (PNBP) and serve as a modernization momentum for navigation equipment development and Indonesian human resources."³⁸ This indicates that the government bases its arguments on

³⁵ H.K. Martono and Amad Sudiro, *Hukum Udara Nasional Dan Internasional Publik (Public International and National Air Law)*, 3rd ed. (Depok: Rajawali Pers, 2019).

³⁶ Dumitra Popescu, "Bilateral Air Agreements of Socialist Countries and International Law: A Comparative Study" (Montreal, Canada, McGill University, 1970), https://escholarship.mcgill.ca/concern/theses/mp48sf18m.

³⁷ Perspektif Pertahanan Negara Dlm Negoisasi Pengelolaan Flight Information Region Indonesia & Singapura, Live Streaming, Guest Lecture (Ilmu Politik Universitas Bakrie, 2021), https://www.youtube.com/watch?app=desktop&v=kLr8ho-6B1Y.

³⁸ Humas Sekretariat Kabinet Republik Indonesia, "Pernyataan Presiden RI tentang Kesepakatan Penyesuaian Flight Information Region, 8 September 2022," Press Release, Sekretariat Kabinet Republik Indonesia, September 8, 2022, https://setkab.go.id/pernyataan-presiden-ri-tentang-kesepakatan-penyesuaian-flight-information-region-8-september-2022/.

something other than sovereignty in the FIR negotiations with Singapore but on technical, economic, and technological considerations.³⁹

The Indonesian government's position is manifested through the ratification of the 2022 FIR agreement via Presidential Regulation No. 109 of 2022 concerning the Ratification of the Agreement between the Government of the Republic of Indonesia and the Government of the Republic of Singapore concerning the Adjustment of Boundaries between the Jakarta FIR and the Singapore FIR.⁴⁰ Article 10, paragraphs a and c, of Law No. 24 of 2000 concerning International Agreements state that "the ratification of international agreements is carried out by law if it relates to: political issues, peace, national defense, and state security; sovereignty or the sovereign right of the state." Article 11 of the same law states that "the ratification of international agreements whose subject matter does not include matters as referred to in Article 10 is carried out by presidential decision." Based on the ratification process through a Presidential Regulation, it can be inferred that the Indonesian government does not consider FIR a matter of political, peace, defense, or sovereignty. Using *a contrario* interpretation, if the Indonesian government placed FIR in the context of sovereignty, it would have ratified it through a legal instrument.

Unfortunately, this stance contradicts the government's position in 2015. According to Desker (2015), "While the Indonesians argue that this is their sovereign right as it is part of their territorial airspace, Singapore has managed the FIR as a public good focusing on operational efficiency and the safety of navigation in increasingly crowded skies." Desker perceives that in 2015, the Indonesian government placed FIR as part of its territory in the context of sovereignty, while the Singaporean government did not view it through a sovereignty lens. ⁴¹ The Singaporean

³⁹ Rita Margaretha et al., "Identification of Stakeholders on the Impact of Management of the Flight Information Region (FIR) Kepulauan Riau - Natuna," in *Proceedings of the International Conference of Public Administration and Governance (ICoPAG 2022)*, ed. Firda Hidayati et al., vol. 761, Advances in Social Science, Education and Humanities Research (International Conference of Public Administration and Governance (ICoPAG 2022), Paris: Atlantis Press SARL, 2023), 341–48, https://doi.org/10.2991/978-2-38476-082-4_31.

⁴⁰ Sutrisno and Romdoni, "Ratifikasi Perjanjian Penyesuaian Wilayah Informasi Penerbangan Antara Indonesia Dan Singapura: Pilihan Rasional Atau Status Quo?"

⁴¹ Barry Desker, "Challenging Times in Singapore-Indonesia Relations," S. Rajaratnam School of International Studies (RSIS) Commentary | Singapore: Nanyang Technological University, no. 216 (October 14, 2015): 1–3.

government argued that FIR was for operational efficiency and navigation safety (aviation safety).⁴²

Indonesia has shifted its perspective regarding FIR since 2015. Sovereignty was the basis for attempting to take over FIR management from Singapore.⁴³ Singapore did not negotiate the FIR in the context of sovereignty. It is understandable that in 2015, Indonesia used a sovereignty perspective due to Singaporean aircraft violating Indonesian airspace. The absence of current threats to Indonesia's sovereignty has led to a decline in Indonesia's ambition to take over FIR, leaving challenges in strategic negotiations with Singapore.⁴⁴

Indonesia's paradigm shift, considering FIR primarily as an aviation safety and security issue, has political-legal implications in its efforts to take over Singapore's FIR management.⁴⁵ The formation of the FIR agreement with Singapore is not 'beneficial' regarding national sovereignty in its airspace. The negotiations prioritize maintaining 'harmonious relations' and mutual benefits, especially with neighboring countries.⁴⁶ The absence of a sovereignty-based legal policy demonstrates that the 2022 FIR agreement contradicts the concept of complete and exclusive national sovereignty in airspace (Article 1 of the 1944 Chicago Convention and Article 5 of the Indonesian Aviation Law).

President Jokowi, in his press release, stated that "Singapore has long managed Indonesia's airspace above the Riau Islands and Natuna. Thanks to all parties' cooperation, the airspace management above the Riau Islands and Natuna has

⁴² Yulio Iqbal Cahyo Arsetyo, "Pengelolaan Kedaulatan Wilayah Udara Indonesia di Natuna berdasarkan Konvensi Chicago 1944 dalam Perspektif Hukum Internasional," *Jurnal Defendonesia* 5, no. 1 (April 30, 2021): 46–55, https://doi.org/10.54755/defendonesia.v5i1.102.

⁴³ Dudi Wahyudin et al., "Indonesian Diplomacy Against Singapore in Acquisition of Flight Information Region (FIR)," *Journal of Legal, Ethical and Regulatory Issues* 25, no. 2 (2022): 1–10.

⁴⁴ Muhammad Daris Tantowi Ikram, Agus Sudarya, and Iman Anton Santosa, "Asesmen Kinerja Pengambilalihan Flight Information Region Ruang Udara Kepulauan Riau Dan Natuna Untuk Mendukung Kedaulatan Udara Indonesia," *Manajemen Pertahanan: Jurnal Pemikiran Dan Penelitian Manajemen Pertahanan* 8, no. 2 (December 2022), https://jurnalprodi.idu.ac.id/index.php/MP/article/view/1552.

⁴⁵ Canris Bahri P.S, "Politik Hukum Pengambilalihan Flight Information Region (FIR) dari Singapura," Dharmasisya: Jurnal Program Magister Hukum Fakultas Hukum Universitas Indonesia 2, no. 1 (March 2022): 87–98.

⁴⁶ Khairi Rahmi and Rizky Octa Putri Charin, "The Return of Indonesia's Political Will: Implications of Takeover the Flight Information Region (FIR) Natuna's Airspace from Singapore," in *Proceedings of the International Conference Social - Humanities in Maritime and Border Area (SHIMBA 2023)*, ed. Azhari Setiawan et al., vol. 799, Advances in Social Science, Education and Humanities Research (International Conference Social - Humanities in Maritime and Border Area (SHIMBA 2023), Paris: Atlantis Press SARL, 2023), 124–28, https://doi.org/10.2991/978-2-38476-150-0_25.

returned to the Republic of Indonesia. This expands the Flight Information Region (FIR) Jakarta to 249,575 km2."⁴⁷ The impression conveyed by this statement is that the Indonesian government has successfully taken over the management of FIR from Singapore. Furthermore, it gives the impression that Indonesia only achieved sovereignty in the airspace above the Riau Islands and Natuna during President Jokowi's term of office.

According to public policy observer Agus Pambagio in Sinatriagung Mintojati, the statement needs to be made better and more accurate in public communication. The government employs the phrase 'returned to NKRI' (*Negara Kesatuan Republik Indonesia*), which implies that Indonesia has taken over the management of FIR when it is not a takeover but rather a realignment and delegation.⁴⁸ The Indonesian government has delegated FIR management up to an altitude of 37,000 feet. The ambiguity in President Jokowi's statement was misinterpreted by the media, leading to public misconceptions.

c. The Impact on the Sovereignty of the Airspace of the Republic of Indonesia Following the Ratification of the Realignment Agreement between the Republic of Indonesia and the Republic of Singapore 2022.

Although Indonesia possesses sovereignty over the airspace of the Riau Islands and Natuna, its sovereignty is not free from issues. Empirical evidence demonstrates that during the FIR management, Singapore has repeatedly engaged in violations that infringe upon the sovereignty of Indonesia's airspace. Indonesia has sovereignty on paper but not necessarily in practice. Indonesia's delegation of FIR management to Singapore for altitudes ranging from 0 (surface) to the limit of controlled airspace in sectors A and B of the Riau Islands and Natuna allows Singapore to abuse the FIR for its national interests. The consequence of the 1995 FIR agreement is that Indonesia has no authority whatsoever to manage the airspace over the Riau Islands and Natuna, which are, in fact, Indonesia territories.

⁴⁷ Humas Sekretariat Kabinet Republik Indonesia, "Pernyataan Presiden RI tentang Kesepakatan Penyesuaian Flight Information Region, 8 September 2022."

⁴⁸ Sinatriagung Mintojati, "Effect of the Re-Alignment Flight Information Region Above Natuna and Riau Islands to Indonesia's Sovereignty," *International Journal of Law, Tourism, and Culture* 1, no. 1 (2022): 1–17.

The 2022 FIR agreement clarified the sovereignty issues. Economically, the FIR 2022 will add income to Indonesia⁴⁹. From a sovereignty perspective, there has been progress because Indonesia has gained control over FIR management from an altitude of 37,000 feet to the limit of controlled airspace. In that altitude range, Singapore will need more room to misuse FIR management to degrade Indonesia's sovereignty. However, from the surface to 37,000 feet, Singapore still has the possibility of sovereignty violations.

Statistically, the altitude range from 0 to 37,000 feet constitutes heavy air traffic, so it is more likely that sovereignty violations may occur at these altitudes rather than above 37,000 feet. Additionally, the Riau Islands and Natuna serve as critical borders and a central point for air traffic from various parts of the world.⁵⁰ The vital nature of the Riau Islands and Natuna as border areas makes Singapore highly susceptible to violating sovereignty. This justification is not without data.⁵¹ There were sovereignty violations in the airspace of the Riau Islands and Natuna in 2023 after ratifying the 2022 FIR agreement.

Violating Indonesian sovereign territory means entering the territory without permission. Both military and civil aircraft can violate Indonesia's sovereign territory.⁵² According to the Commander of the Indonesian National Defense Forces, Admiral Yudo Margono, there were 13 recorded violations in the airspace of the Riau Islands and Natuna under Singapore's FIR and one violation in the airspace of Kostrad 1 Medan. The data shows that these violations were committed by eight military aircraft and three civilian aircraft from the United States, one civilian aircraft from the Czech Republic, and two military aircraft from India.⁵³ The data shows that sovereignty violations are more significant under the FIR managed by Singapore, while the FIR managed by Indonesia shows fewer sovereignty violations.

⁴⁹ Indrawati, "Peluang Dan Tantangan Penandatanganan Perjanjian Penyesuaian Flight Information Region (FIR) Antara Indonesia Dengan Singapura."

⁵⁰ Agus Pramono, Jason H Middleton, and Carlo Caponecchia, "Civil Aviation Occurrences in Indonesia," *Journal of Advanced Transportation* 2020 (May 29, 2020): 1–17, https://doi.org/10.1155/2020/3240764.

⁵¹ Hakim, Berdaulat Di Udara: Membangun Citra Penerbangan Nasional.

⁵² Sefriani, Hukum Internasional - Suatu Pengantar.

⁵³ Ashish Dangwal, "Indonesia Blames Indian & US Military Planes For Violating Their Airspace Multiple Times Since January," The EurAsian Times, July 12, 2023, https://www.eurasiantimes.com/indonesia-blames-india-us-military-planes-for-violating-their/.

To illustrate the impact of sovereignty following the 2022 FIR agreement, an examination of previous sovereignty violations is necessary. If sovereignty violations have increased since the 2022 FIR agreement, the FIR will not be effective. Conversely, the FIR agreement is effective if the same violation scenarios are reconstructed but successfully resolved under 2022.⁵⁴ There are at least two types of sovereignty violations that occur under Singapore's FIR management:

i. The Singaporean authority allows foreign aircraft to pass through the airspace of the Riau Islands and Natuna without clearance.

An example of this violation is the case of Ethiopian Airlines ET 3728, which entered Indonesian sovereign airspace over Batam without flight clearance from Singapore's ATC. On January 14, 2019, the aircraft, a non-scheduled flight from Addis Ababa to Hong Kong, was intercepted and forced to land at Hang Nadim Batam Airport by two Indonesian Air Force F-16 fighter jets.⁵⁵ The forced landing took approximately 20 minutes.

Singapore's ATC did not alert the Indonesian authorities. Had Singapore acted in good faith, ATC Singapore would have contacted the Indonesian government so that the Indonesian Air Force could promptly enforce the law. Singapore's passive response to violations effectively degrades Indonesia's sovereignty in its airspace.

If a similar case arose after the 2022 FIR, where an aircraft enters Indonesian airspace without permission at an altitude above 37,000 feet, Jakarta ATC could easily coordinate with the Indonesian Air Force for law enforcement. However, if an aircraft entered Indonesian airspace below 37,000 feet without clearance by Singapore ATC, the Indonesian government would still need help enforcing the law. Indonesia only has sovereignty regarding FIR in terms of territorial extent but not altitude.

⁵⁴ Eva Johan, "Pengaturan Mengenai Pesawat Udara Militer Menurut Hukum Udara Internasional," *Perspektif: Kajian Masalah Hukum Dan Pembangunan* 15, no. 3 (July 27, 2010): 263–78, https://doi.org/10.30742/perspektif.v15i3.55.

⁵⁵ Ridha Aditya Nugraha, Konrardus Elias Liat Tedemaking, and Vicia Sacharissa, "Penguatan Kedaulatan Negara Di Udara Dan Urgensi Sinkronisasi Hukum," *Jurnal Kertha Patrika* 43, no. 1 (April 27, 2021): 65–81, https://doi.org/10.24843/KP.2021.v43.i01.p05.

This ultimately proves counterproductive to Indonesia's sovereignty in its airspace.

Recognizing this, the Indonesian government has made efforts to minimize sovereignty violations through Civil-Military Cooperation in Air Traffic Management (CMAC).⁵⁶ Article 7 of the 2022 FIR agreement provides for placing Indonesian personnel at ATC Singapore. The Minister of Transportation, Budi Karya Sumadi, stated that CMAC is intended to defend and secure the interests of the country, flight safety, and airspace optimization.⁵⁷ Koloay (2022) quotes Smith, one of the figures in the field of security and defense, who explains that civil-military cooperation is essential in strengthening the national airspace security system.⁵⁸

This shows some progress since the 1995 FIR agreement. Indonesian personnel stationed at ATC Singapore would reduce Singapore's opportunity to misuse FIR management.

However, Indonesian personnel in ATC Singapore do not automatically resolve sovereignty issues. as their authority is limited to obtaining flight data, flight plans, and schedules, acquiring flight authorization data to coordinate CAAS interests, and coordinating the activity plans of Indonesian state aircraft with ATC Changi to obtain priority status.⁵⁹ Indonesian personnel cannot grant clearances to aircraft. Aircraft clearance can only be given by ATC Singapore. If Indonesian aviation,

⁵⁶ Endang Puji Lestari, "The Delegation of State Sovereignty over Air Space in the Implementation of Air Navigation: The Analysis of the Agreement between Indonesia and Singapore on Management of the Batam and Natuna Flight Information Region," *Fiat Justisia: Jurnal Ilmu Hukum* 11, no. 2 (January 4, 2018): 173–99, https://doi.org/10.25041/fiatjustisia.v11no2.813.

⁵⁷ Humas Sekretariat Kabinet Republik Indonesia, "Lima Elemen Penting Kesepakatan Penyesuaian FIR Indonesia - Singapura," Berita, Sekretariat Kabinet Republik Indonesia, January 27, 2022, https://setkab.go.id/lima-elemen-penting-kesepakatan-penyesuaian-fir-indonesia-singapura/.

⁵⁸ Jorry Soleman Koloay, "Civil-Military Cooperation in Strengthening the National Airspace Security System," *IIJSE: Indonesian Interdisciplinary Journal of Sharia Economics* 5, no. 2 (2022): 965–77, https://doi.org/10.31538/iijse.v5i2.4256.

⁵⁹ Novyan Samyoga, "Implementasi Civil-Military Cooperation in Air Traffic Management (CMAC) Pasca Perjanjian Realignment FIR Indonesia-Singapura," in *Prosiding Seminar Nasional SEKKAU A-111* (Seminar Nasional SEKKAU A-111, Jakarta: Sekolah Komando Kesatuan TNI Angkatan Udara, 2022), 1–56, https://fliphtml5.com/grdsh/lpiq/basic/51-72.

including the President, is in transit, Indonesian personnel will only remit if Singaporean ATC grants clearance.

While CMAC was established to accommodate Indonesia's interests, it does not address the potential for sovereignty violations. In the event of a sovereignty violation, the Indonesian government can coordinate with Singapore to prioritize flights for military aircraft for law enforcement. This is reaffirmed in the Letter of Operational Coordination Agreement (LOCA) of CMAC, which states that "Singapore shall give highest priority for any military flight activities, law enforcement, air defense, and/or Indonesia state aircraft operations, including aircraft carrying the VIPs of the Republic of Indonesia within delegated airspace, such actions shall avoid hazards to civil aircraft."60 Singapore must prioritize flights for law enforcement missions in cases of sovereignty violations in the Riau Islands and Natuna airspace. To achieve this, coordination between CMAC and National Air Operation Command (Komando Operasi Udara *Nasional/Koopsudnas*) is required, and ultimately, decision-making remains in the hands of ATC Singapore to grant clearance for Indonesian fighter aircraft for law enforcement.

By agreement, Indonesia (specifically, FIR Jakarta) cannot independently or autonomously grant priority clearance to law enforcement. Various processes and coordination must be undertaken for TNI AU to obtain flight priority from ATC Singapore for law enforcement.⁶¹

In essence, a nation's sovereignty in complete and exclusive airspace entails three aspects: control of the air, use of airspace, and law enforcement. However, obstacles in enforcing the law clearly illustrate that Indonesia only possesses sovereignty on paper rather than in practice. Hypothetically, if a Singaporean aircraft violated the sovereign

⁶⁰ Samyoga, "Implementasi Civil-Military Cooperation in Air Traffic Management (CMAC) Pasca Perjanjian Realignment FIR Indonesia-Singapura," 2022.

⁶¹ Samyoga, "Implementasi Civil-Military Cooperation in Air Traffic Management (CMAC) Pasca Perjanjian Realignment FIR Indonesia-Singapura," 2022.

airspace, it is worth questioning whether ATC Singapore would grant flight priority to the Indonesian Air Force for enforcement.

ii. The Singaporean Authority grants clearance to aircraft that have yet to receive security clearance from Indonesia.

In 2014, the National Air Defense Operations Center (Pusat Operasi Udara *Nasional/Popunas*) received information Pertahanan that а Singaporean civil aircraft, a Beechcraft-9L, was conducting flight exercises at an altitude of 26,000 feet under the control of Singapore ATC⁶² without security clearance from the Indonesian government. In response, the Commander of the National Air Defense Sector (Komando Sektor Pertahanan Udara Nasional/Kosekhanudnas) ordered two Indonesian Air Force Sukhoi aircraft to intercept the plane. However, the interception order was canceled when the aircraft entered Malaysian airspace. Then, the Beechcraft-9L was detected north of Pontianak, heading south towards Singapore. The Commander of Kosekhanudnas ordered the Sukhoi Klewang flight at Batam to resume the interception operation. When the Indonesian Air Force attempted a forced landing, Pontianak, the pilot, refused to comply. Pontianak argued that he was flying along an international flight path with permission from Singapore ATC and was not violating Indonesian airspace.63

This indicates that if a Singaporean aircraft violates sovereignty, the government will turn a blind eye. The Beechcraft-9L took off without obtaining flight approval from the Indonesian government but was still granted clearance by Singapore to take off. Therefore, CMAC loses its authority when it is a Singaporean aircraft that violates sovereignty. If a similar case were to occur after the 2022 FIR agreement, the same problem could occur. The violation occurred at 26,000 feet, part of Singapore's FIR.

⁶² Samyoga.

⁶³ Danang Risdiarto, "Penyidik TNI Angkatan Udara Dalam Kasus Pelanggaran Wilayah Udara Yurisdiksi Indonesia Oleh Pesawat Terbang Asing Tidak Terjadwal," *Jurnal Legislasi Indonesia* 14, no. 1 (May 3, 2018): 77–89, https://doi.org/10.54629/jli.v14i1.73.

CMAC aims to minimize sovereignty violations in airspace. Article 3 of the 2022 FIR agreement explicitly states that its purpose is to facilitate Indonesian State Aircraft flights in conducting activities in Sector A and Sector B. CMAC is just a tool for the Singaporean government to maintain its control over the FIR in the Riau Islands and Natuna. Article 7 of the 2022 FIR agreement stipulates that the agreement will be in effect for 25 years and can be extended by mutual consent. Hence, Indonesia must refrain from taking over the management of Singapore's FIR for the next 25 years. Suppose the presence of CMAC effectively minimizes sovereignty violations in the airspace of the Riau Islands and Natuna when the current agreement expires. In that case, Singapore will likely request an extension, and Indonesia will have no choice but to agree to extend the 2022 FIR agreement.

Article 458 of the Civil Aviation Act 2009 states that "the air territory of the Republic of Indonesia, whose air navigation services are delegated to another country based on an agreement, must be evaluated and served by the air navigation service provider no later than 15 years after this law comes into force."

Under Article 458, Indonesia should have taken full sovereignty over its entire airspace, including the Riau Islands and Natuna airspace, within 15 years of the law's enactment in 2009. Unfortunately, the government has failed to fulfill this provision. In 2024, Indonesia should have achieved full sovereignty over its airspace, but it must wait another 25 years. This proves that Article 7 of the 2022 FIR agreement overrides Indonesian Aviation Law. Curiously, in 2015, President Jokowi was very ambitious about taking over FIR from Singapore in response to sovereignty violations by Singaporean aircraft in 2014. The White Paper on the Defense of the Republic of Indonesia 2015 showed that the Indonesian government wanted to reorganize FIR to achieve exclusive control of national airspace sovereignty. Minister of Defense Decree Number: KEP/1255/M/XII/2015 regarding Indonesia's Defense Policy for 2016 encouraged relevant ministries and agencies to expedite preparations for taking over the FIR managed by Singapore. President Jokowi's actions in 2015 contradict his signing of the 2022 FIR agreement and lead to questions about his changing ambitions.

The delegation of FIR management to Singapore indirectly threatens the country's defense and security.⁶⁴ Alan Tan (2022) stated that "the consent for Singapore to provide air navigation services for parts of the airspace within the realigned Jakarta FIR will ensure continued safety and efficiency of air traffic control in the skies above and around Singapore for the next quarter of a century, and hopefully beyond."65 This shows that the raison d'etre for the 2022 FIR agreement is aviation safety, potentially sacrificing aviation security. Essentially, to uphold national sovereignty, national aviation security is needed. Article 1 Paragraph 1 of Law No. 3 of 2002 concerning National Defense stipulates that national defense encompasses all efforts to defend the nation's sovereignty, territorial integrity, and safety from threats and disturbances to the nation's integrity and sovereignty. This means that national defense (aviation security) is a conditio sine qua non for realizing national sovereignty in complete and exclusive airspace. Indonesia and Singapore could engage in military and non-military activities, potentially leading to conflicts between the two nations.66

Under Article 30 Paragraph (3) of the 1945 Constitution of the Republic of Indonesia, the air force, as part of TNI, must defend Indonesia's sovereignty. In reality, the Indonesian Air Force can only carry out its duties to defend, protect, and preserve the integrity and sovereignty of

⁶⁴ Desker, "Challenging Times in Singapore-Indonesia Relations."

⁶⁵ Tham Yuen-C, "S'pore-Indonesia Agreement on Airspace Can Smooth Bilateral Relations, Say Analysts," News, The Straits Times Singapore, January 26, 2022, https://www.straitstimes.com/singapore/politics/spore-indonesia-agreement-on-airspace-can-smooth-bilateral-relations-say-analysts.

⁶⁶ Ludiro Madu, Mengelola Perbatasan Indonesia Di Dunia Tanpa Batas: Isu, Permasalahan, Dan Pilihan Kebijakan, 1st ed. (Yogyakarta: Graha Ilmu, 2010).

the nation if it has clearance from Singapore ATC. According to Yanyan Mochamad Yani, the FIR managed by Singapore is a cause of concern for the Indonesian Air Force because Singapore can easily monitor the presence of aircraft in the FIR zone.⁶⁷

The cases mentioned above represent the initial steps of Singapore's defiance in managing the FIR. Singapore is a small country with limited airspace. So, it seeks to utilize the airspace of other nations. Consequently, Singapore strives to extend its control over the FIR. There is concern that Singapore may regard the airspace in sectors A and B of the Riau Islands and Natuna as its sovereignty. While the delegation of FIR management cannot be construed as surrendering national sovereignty, Singapore can act as if it has sovereignty by limiting the movement of Indonesian aircraft. This situation occurred during the Aegean Crisis between Greece and Turkey.

The Aegean Crisis originated from Greece's misuse of FIR control over Turkey's international airspace in the Aegean. Greece maintained that military aircraft entering the Athens FIR and flying in international airspace should submit flight plans and operate under Greek FIR control. This action constituted a misuse of FIR.⁶⁸ According to Article 3, Section A of the ICAO Convention, military aircraft must not submit flight plans for military exercises in international airspace. Greece deliberately misinterpreted and misuse of FIR responsibilities by Greece was another manifestation of its claim to 'de facto sovereignty' over the entire Aegean airspace⁶⁹

⁶⁷ Yani, Montratama, and Putera, Langit Indonesia Milik Siapa? - Makna Strategis Wilayah Pengendalian Udara (FIR) Indonesia-Singapura.

⁶⁸ Anastasia Strati, "Postscript: Tension in the Aegean – The 'Imia' Incident," *Leiden Journal of International Law* 9, no. 1 (March 1996): 122–29, https://doi.org/10.1017/S0922156596000076.

⁶⁹ Ruwantissa Abeyratne, Law and Regulation of Aerodromes (Cham Heidelberg: Springer, 2014).

These violations show that the FIR realignment agreement 2022 could result in violations of national sovereignty in the airspace of the Riau Islands and Natuna. There is also concern that future violations of sovereignty may occur due to activities such as intelligence gathering, aerial reconnaissance, and military exercises.⁷⁰

Legal Measures to Strengthen the Sovereignty of the Indonesian Airspace Following the Ratification of the Agreement on the Realignment of Flight Information Region between the Republic of Indonesia and the Republic of Singapore in 2022.

The government needs to take steps to rectify the public misconceptions arising from its statements following the FIR agreement of 2022. Indonesia needs to reaffirm its commitment to the sovereignty paradigm, which includes reclaiming the FIR managed by Singapore.

In this regard, Indonesia can learn from Cambodia, which successfully took over FIR from Thailand using the sovereignty paradigm. Cambodia had previously delegated FIR management to Thailand because, at that time, Cambodia was considered incapable of managing its FIR in terms of human resources and technology. However, Cambodia established its international navigation services in 2000 and 2001 submitted a plan to ICAO to reclaim its FIR. Despite opposition from many countries and aviation organizations, Cambodia's commitment to sovereignty allowed it to regain control of its airspace from Thailand in 2002.⁷¹

Cambodia demonstrated its serious intent to reclaim the FIR, viewing it as a matter of sovereignty. In contrast, Indonesia initially viewed its FIR from a sovereignty⁷² perspective but then shifted its perspective to flight safety. Based on the ICAO audit results 2017, Indonesia has proven its capability to manage FIR independently.

⁷⁰ Nabyla Humaira, Adwani Adwani, and M. Yakub Aiyub Kadir, "Whether Sovereignty?: The Failure of Indonesia in Taking Over Flight Information Region from Singapore 2015-2019," *Udayana Journal of Law and Culture* 5, no. 2 (July 31, 2021): 185–200, https://doi.org/10.24843/UJLC.2021.v05.i02.p06.

⁷¹ Zaid et al., "An Evaluation of Airspace Congestion: A Case of Peninsular Malaysia."

⁷² Harwita Sari, "Pengambilalihan Flight Information Region (FIR) Singapura Atas Kepulauan Riau Dan Natuna Dalam Perspektif Teori Kedaulatan," *Innovative: Journal Of Social Science Research* 4, no. 1 (February 12, 2024): 9804–17, https://doi.org/10.31004/innovative.v4i1.8973.

Therefore, the takeover of FIR from Singapore is not a matter of Indonesia's incapacity but rather a lack of willingness on the part of the Indonesian government. The government should commit to sovereignty and establish a legal policy to reclaim the FIR.

Appropriate strategic steps must support Indonesia's readiness to reclaim the FIR.⁷³ in his writings, Jean Bodin emphasized the importance of sovereignty for the functioning of governance. Since then, sovereignty has become a central discourse in modern states and international law theory.⁷⁴ The legal steps that can be taken to strengthen the sovereignty of Indonesian airspace following the ratification of the FIR 2022 are:

a. Ratification of the latest FIR agreement through legislation or public participation by filing a judicial review.

Indonesia must assume complete control over the FIR rather than merely readjusting altitude delegation to Singapore to prevent potential recurrences of sovereignty infringements in Indonesian airspace. The government must instigate a new FIR agreement to assume full managerial authority over the FIR in sectors A and B, from ground level to the edge of space. This should be done through legislation. This approach can be substantiated by Article 10, subparagraph c of Law No. 24 of 2000 on International Agreements, stipulating that "Ratification of international agreements shall be executed through legislation if it pertains to matters of sovereignty or sovereign rights of the state." A new FIR agreement concerning sovereignty matters should be executed through legislation rather than Presidential Regulation.

. In 2022, a judicial review of Presidential Regulation No. 109 of 2022 was conducted by the Petitioners, in which the Petitioners also argued that the delegation of the FIR from an altitude of 0 to 37,000 feet to Singapore would impact the sovereignty of

⁷³ Hanifati Nur Amalina, Muhammad Gholib Ramdani, and Satria Arif Darmawan, "Pemecahan Permasalahan Flight Information Region (FiR) Di Wilayah Kedaulatan Indonesia," *Lontar Merah: Media Riset Hukum* 2, no. 2 (December 17, 2019): 195–203.

⁷⁴ James Leslie Brierly, *The Law of Nations: An Introduction to the International Law of Peace*, 6th ed. (Oxford: Clarendon Press, 1991).

Indonesia. The Supreme Court Decision Number 71/P/HUM/2022 rejected the Petitioners' arguments that the FIR is a flight navigation service to realize flight safety. It upheld the view that the FIR delegation is temporary and unrelated to sovereignty over Indonesian airspace. The Supreme Court also believes that the FIR is basically a service agreement and there is no delegation of airspace, so it does not conflict with Article 458 of the Aviation Law. Thus, Indonesia retains complete and exclusive sovereignty over the airspace in the Riau and Natuna Islands because the Presidential Regulation does not override state sovereignty.

The Supreme Court's view that delegating the FIR for altitudes of 0 to 37,000 feet to Singapore means there is no delegation of airspace, and it is not related to state sovereignty is erroneous. This is because the FIR issue is indirectly related to air sovereignty. As demonstrated, there have been violations of sovereignty under Singapore's FIR control. Singapore could limit the airspace for the TNI-AU in maintaining Indonesia's defense over the Riau Islands and Natuna for altitudes up to 37,000 feet. The Supreme Court's decision did not account for conditions in the field.

Thus, the Petitioners should be allowed to re-submit a judicial review of the Presidential Regulation in light of any future impacts on sovereignty.

b. The Establishment of Airspace Management Bill

In addition to enacting legislation to reclaim the FIR over the airspace of the Riau Islands and Natuna, there is an urgent need to establish draft legislation on Airspace Management (hereinafter referred to as the Airspace Management Bill or AMB).⁷⁵ This is essential to reinforce and safeguard the nation's sovereignty in Indonesian airspace. Within the current body of positive law (ius constitutum), there needs to be more legislation that encompasses matters related to aviation national security. Aviation Law is a legal framework that focuses on aviation safety and security. This is reflected in the recitals of consideration in the Aviation Law, particularly in recital c, which states, "...and require optimal safety and security assurances...". The recitals

⁷⁵ Ridha Aditya Nugraha and Yaries Mahardika Putro, "Urgensi Pembentukan Regulasi Pengelolaan Ruang Udara Nasional," Berita, hukumonline.com, July 13, 2023, https://www.hukumonline.com/berita/a/urgensi-pembentukan-regulasi-pengelolaan-ruang-udara-nasional-lt64af5efe1ab42#!/.

in the Aviation Law do consider the defense and security of the state in the airspace. Consequently, the Indonesian National Armed Forces (TNI), as the frontline defenders of the nation's sovereignty,⁷⁶ often face constraints in their operational scope and legal certainty while upholding national sovereignty.

The Aviation Law only covers part of the scope of Indonesian airspace as Indonesia has delegated its flight navigation services to other countries. The Airspace Management Bill should include Indonesian airspace delegated for flight navigation services to other countries. This inclusion is intended to prevent the recurrence of sovereignty violations in the airspace of the Riau Islands and Natuna, which have arisen due to the delegation of FIR to Singapore. The Airspace Management Bill should incorporate criminal provisions that can be applied to sovereignty violators. However, the provisions in the Airspace Management Bill should be adjusted to align with the existing FIR agreements to avoid any conflicts between FIR agreements and the Airspace Management Bill. This implies that when an FIR agreement expires after 25 years, the provisions in the Airspace Management Bill will take precedence.

According to Agus Riyanto, the e minimal fines imposed, specifically the Rp 60 million penalty for foreign aircraft violating Indonesian airspace, do not seter aerial intrusions. Article 414 of the Aviation Law prescribes significant criminal penalties, with a maximum prison sentence of five years or a fine of up to Rp 2,000,000,000.00 (two billion Indonesian Rupiah). Although this fine is substantial, Indonesian law enforcement must consistently enforce it. This is evident in the case of a Singaporean civil aircraft, a Beechcraft-9L, which violated Indonesian airspace. It was subsequently released to Singapore, and a fine of only Rp 60 million was incurred. In contrast, operating a Sukhoi fighter aircraft used by the TNI-AU costs a minimum of Rp 100 million per hour of flight. In some cases, the TNI-AU incurs expenses of approximately US\$ 20,000 or approximately Rp 240 million per hour of operation for

⁷⁶ Rohannisa Naja Rachma Savitri and Adya Paramita Prabandari, "TNI Angkatan Udara Dan Keamanan Wilayah Udara Indonesia," *Jurnal Pembangunan Hukum Indonesia* 2, no. 2 (May 10, 2020): 236–45, https://doi.org/10.14710/jphi.v2i2.236-245.

foreign aircraft interceptions. The cost of conducting a forced landing operation exceeds the imposed fine.⁷⁷

Addressing this cost disparity necessitates increasing the maximum penalty for criminal sanctions in the Airspace Management Bill. Specifically, the current maximum prison sentence of five years should be extended to ten years, and the maximum fine, set initially at Rp 2,000,000,000.00 (two billion Indonesian Rupiah), should be increased to Rp 7,000,000,000.00 (seven billion Indonesian Rupiah). These provisions should apply to both scheduled and non-scheduled foreign civil and government aircraft, whether for military or non-military purposes.

The investigation process (opsporen) is under the Ministry of Transportation rather than the TNI-AU. Investigations are carried out by the Aviation Civil Service Investigator (PPNS), a unit under the Directorate General of Civil Aviation at the Ministry of Transportation. The authority of the PPNS is rooted in Article 399 of the Aviation Law, which states that "specific civil servants within institutions responsible for aviation, within the scope of their tasks and responsibilities in aviation, are granted special authority as investigators for criminal acts as stipulated in the Aviation Law." This dualistic approach to handling violations may lead to potential inconsistencies between the TNI-AU and the Ministry of Transportation. Violations of aircraft permissions within Indonesian airspace are also sovereignty violations, so investigations should involve the TNI-AU.⁷⁸ Therefore, it is essential to allow the TNI-AU to investigate sovereignty violations in airspace in the Airspace Management Bill.

⁷⁷ Baiq Setiani, "Konsep Kedaulatan Negara Di Ruang Udara Dan Upaya Penegakan Pelanggaran Kedaulatan Oleh Pesawat Udara Asing," *Jurnal Konstitusi* 14, no. 3 (January 9, 2018): 489–510, https://doi.org/10.31078/jk1432.

⁷⁸ Lusia Sulastri, "Analisis Kewenangan Penyidikan Dalam Pelanggaran Wilayah Udara Indonesia: Tinjauan Peran Penyidik PNS dari Kementerian Perhubungan dan TNI AU," *Krtha Bhayangkara* 16, no. 2 (December 2022): 267–86, https://doi.org/10.31599/krtha.v16i2.1411.

CONCLUSION

In shaping the 2022 FIR realignment agreement, Indonesia and Singapore prioritized aviation safety over security. The absence of sovereignty as a legal-political principle led to ambiguity in President Jokowi's statements, creating public misconceptions. Despite public perception that Indonesia reclaimed airspace sovereignty during President Jokowi's tenure, Indonesia has had sovereignty over the Riau Islands and Natuna airspace since the 1982 UNCLOS. Indonesia has delegated FIR management to Singapore since 1946, resulting in sovereignty violations and degrading Indonesia's sovereignty.

From a sovereignty standpoint, the 2022 FIR agreement still violates Indonesia's airspace sovereignty. Compared to the 1995 FIR agreement, the 2022 agreement strengthens airspace sovereignty progress by limiting Singapore's FIR management to 37,000 feet rather than uncontrolled airspace. Sovereignty violations, such as aircraft crossing Riau Islands and Natuna airspace without clearance and Singapore granting permission to aircraft without Indonesian security clearance, will persist post-2022. The FIR agreement's 25-year validity contradicts aviation laws, sacrificing national defense and security for aviation safety. To address these issues, legal actions involve taking complete FIR control from Singapore through a takeover agreement, ratified by legislative means and judicial review of Presidential Regulation No. 109 of 2022. The DPR and the President must develop an Airspace Management Bill based on aviation security principles, covering flight information regions, sanctions for airspace violations, and changes to the Indonesian Air Force's authority in investigating sovereignty violations in Indonesian airspace.

REFERENCES

- Abdurrasyid, Priyatna. *Pertumbuhan Tanggung Jawab Hukum Pengangkut Udara*. Jakarta: Fikahati Aneska, 2013.
- Abeyratne, Ruwantissa. *Convention on International Civil Aviation: A Commentary*. Cham Switzerland: Springer International Publishing, 2014. https://doi.org/10.1007/978-3-319-00068-8.

^{---.} Law and Regulation of Aerodromes. Cham Heidelberg: Springer, 2014.

- Amalina, Hanifati Nur, Muhammad Gholib Ramdani, and Satria Arif Darmawan. "Pemecahan Permasalahan Flight Information Region (FiR) Di Wilayah Kedaulatan Indonesia." *Lontar Merah: Media Riset Hukum* 2, no. 2 (December 17, 2019): 195–203.
- Arafah, Adhy Riadhy, Aktieva Tri Tjitrawati, Alifia Nuril Bais, and Firnida Hanan Nurkhalisha. "FIR Agreement Indonesia – Singapore: What Are The Legal Implications?" *Heliyon* 10, no. 8 (April 2024): 1–9. https://doi.org/10.1016/j.heliyon.2024.e29708.
- Benyamin, Pramono. "The Practices of Republic Indonesia's Diplomacy to Taking Over the Management of Flight Information Region (FIR) above Natuna Island from the Republic of Singapore." In Proceedings of the International Conference on Media and Communication Studies (ICOMACS 2018), 228–29. Bandung, Indonesia: Atlantis Press, 2018. https://doi.org/10.2991/icomacs-18.2018.56.
- Brierly, James Leslie. *The Law of Nations: An Introduction to the International Law of Peace*. 6th ed. Oxford: Clarendon Press, 1991.
- Buntoro, Kresno. Lintas Navigasi Di Nusantara Indonesia. 1st ed. Jakarta: Rajawali Pers, 2014.
- Dangwal, Ashish. "Indonesia Blames Indian & US Military Planes For Violating Their Airspace Multiple Times Since January." The EurAsian Times, July 12, 2023. https://www.eurasiantimes.com/indonesia-blames-india-us-militaryplanes-for-violating-their/.
- Desker, Barry. "Challenging Times in Singapore-Indonesia Relations." S. Rajaratnam School of International Studies (RSIS) Commentary | Singapore: Nanyang Technological University, no. 216 (October 14, 2015): 1–3.
- Fahrazi, Mahfud. "Pengelolaan Flight Information Region Di Wilayah Kepulauan Riau Dan Natuna." Jurnal Hukum Ius Quia Iustum 26, no. 2 (August 22, 2019): 391-409. https://doi.org/10.20885/iustum.vol26.iss2.art9.
- Hakim, Chappy. Berdaulat Di Udara: Membangun Citra Penerbangan Nasional. Jakarta: Penerbit Buku Kompas, 2010.
- Hambali, Yasidi. *Hukum Dan Politik Kedirgantaraan*. 1st ed. Jakarta: West Publishing, 1994.
- Humaira, Nabyla, Adwani Adwani, and M. Yakub Aiyub Kadir. "Whether Sovereignty?: The Failure of Indonesia in Taking Over Flight Information Region from Singapore 2015-2019." Udayana Journal of Law and Culture 5, no. 2 (July 31, 2021): 185–200. https://doi.org/10.24843/UJLC.2021.v05.i02.p06.
- Humas Sekretariat Kabinet Republik Indonesia. "Lima Elemen Penting Kesepakatan Penyesuaian FIR Indonesia - Singapura." Berita. Sekretariat Kabinet Republik Indonesia, January 27, 2022. https://setkab.go.id/lima-elemen-pentingkesepakatan-penyesuaian-fir-indonesia-singapura/.
- ---. "Pernyataan Presiden RI tentang Kesepakatan Penyesuaian Flight Information Region, 8 September 2022." Press Release. Sekretariat Kabinet

Republik Indonesia, September 8, 2022. https://setkab.go.id/pernyataanpresiden-ri-tentang-kesepakatan-penyesuaian-flight-information-region-8september-2022/.

- Husin, Sukanda. "Compliance and Dispute Settlement under the Transboundary Atmospheric Pollution Regimes." *Unpad Journal of International Law* 3, no. 1 (April 2004): 30–46.
- Husna, Lenny, and Agus Riyanto. "Peran Pemerintah Dalam Upaya Pengambilalihan Flight Information Region (FIR) Singapura Atas Wilayah Udara Kepulauan Riau." *Jurnal Cahaya Keadilan* 7, no. 2 (October 31, 2019): 395–410. https://doi.org/10.33884/jck.v7i2.1418.
- Ikram, Muhammad Daris Tantowi, Agus Sudarya, and Iman Anton Santosa.
 "Asesmen Kinerja Pengambilalihan Flight Information Region Ruang Udara Kepulauan Riau Dan Natuna Untuk Mendukung Kedaulatan Udara Indonesia." Manajemen Pertahanan: Jurnal Pemikiran Dan Penelitian Manajemen Pertahanan 8, no. 2 (December 2022). https://jurnalprodi.idu.ac.id/index.php/MP/article/view/1552.
- Indrawati, Nanda. "Peluang Dan Tantangan Penandatanganan Perjanjian Penyesuaian Flight Information Region (FIR) Antara Indonesia Dengan Singapura." Jurnal Paradigma Hukum Pembangunan 7, no. 2 (August 21, 2022): 18–36. https://doi.org/10.25170/paradigma.v7i2.3541.
- International Civil Aviation Organization (ICAO). ANNEX 11 to the Convention on International Civil Aviation - Air Traffic Services: Air Traffic Control Service, Flight Information Service, Alerting Service. 15th ed. Canada: International Civil Aviation Organization (ICAO), 2018. https://ffac.ch/wpcontent/uploads/2020/10/ICAO-Annex-11-Air-Traffic-Services.pdf.
- Johan, Eva. "Pengaturan Mengenai Pesawat Udara Militer Menurut Hukum Udara Internasional." *Perspektif: Kajian Masalah Hukum Dan Pembangunan* 15, no. 3 (July 27, 2010): 263–78. https://doi.org/10.30742/perspektif.v15i3.55.
- Koloay, Jorry Soleman. "Civil-Military Cooperation in Strengthening the National Airspace Security System." *IIJSE: Indonesian Interdisciplinary Journal of Sharia Economics* 5, no. 2 (2022): 965–77. https://doi.org/10.31538/iijse.v5i2.4256.
- Lestari, Endang Puji. "The Delegation of State Sovereignty over Air Space in the Implementation of Air Navigation: The Analysis of the Agreement between Indonesia and Singapore on Management of the Batam and Natuna Flight Information Region." *Fiat Justisia: Jurnal Ilmu Hukum* 11, no. 2 (January 4, 2018): 173–99. https://doi.org/10.25041/fiatjustisia.v11no2.813.
- Lestari, Ramadhita, and Den Yealta. "Diplomasi Indonesia Dalam Menyelesaikan Sengketa FIR (Flight Information Region) Di Atas Kepulauan Natuna Dengan Singapura." Jurnal Online Mahasiswa Fakultas Ilmu Sosial Dan Ilmu Politik Universitas Riau 3, no. 1 (February 2016): 1–16.
- Madu, Ludiro. *Mengelola Perbatasan Indonesia Di Dunia Tanpa Batas: Isu, Permasalahan, Dan Pilihan Kebijakan.* 1st ed. Yogyakarta: Graha Ilmu, 2010.

- Margaretha, Rita, Abdul Juli Andi Gani, Sarwono Sarwono, and Mohammad Nuh. "Identification of Stakeholders on the Impact of Management of the Flight Information Region (FIR) Kepulauan Riau - Natuna." In Proceedings of the International Conference of Public Administration and Governance (ICoPAG 2022), edited by Firda Hidayati, Niken Lastiti Veri Anggaini, Fadillah Putra, and Muhammad Chazienul Ulum, 761:341–48. Advances in Social Science, Education and Humanities Research. Paris: Atlantis Press SARL, 2023. https://doi.org/10.2991/978-2-38476-082-4_31.
- Martono, H.K., and Amad Sudiro. *Hukum Udara Nasional Dan Internasional Publik* (*Public International and National Air Law*). 3rd ed. Depok: Rajawali Pers, 2019.
- Mintojati, Sinatriagung. "Effect of the Re-Alignment Flight Information Region Above Natuna and Riau Islands to Indonesia's Sovereignty." *International Journal of Law, Tourism, and Culture* 1, no. 1 (2022): 1–17.
- Mithalina, Fatona, Muh Risnain, and Zunnuraeni. "Analisis Perjanjian Pengelolaan Ruang Udara (Flight Information Region) Antara Indonesia Dan Singapura Berdasarkan Hukum Internasional." *Mataram Journal of International Law* (*Majil*) 1, no. 1 (June 2023): 61–78. https://doi.org/10.29303/majil.
- Muhammad, Alif Nurfakri, Suharto Abdul Majid, and Martono K. "FIR Di Atas Pulau Natuna: Perjanjian Extradisi, Kooperasi Pertahanan Dan Flight Information Region (FIR)." In Kapita Selekta: Hukum Transnasional Penerbangan, Dua Bahasa Indonesia & Inggris, 1st ed., 1–28. Purbalingga: Eureka Media Aksara, 2022. http://repository.untar.ac.id/38711/1/Book%20Chapter%20Kapsel%20Pener bangan%20(Ind%20-%20Eng).pdf.
- Muhammad, Naufal, Atip Latipulhayat, and Garry Pratama. "Realignment of Flight Information Region Agreement Between Indonesia and Singapore 2022: Unraveling Sovereignty and Ratification Issues for Indonesia." *Padjajaran: Jurnal Ilmu Hukum (Journal of Law)* 11, no. 1 (2024): 1–25. https://doi.org/10.22304/pjih.v11n1.a1.
- Nugraha, Ridha Aditya. "Flight Information Region Above Riau and Natuna Islands: The Indonesian Efforts to Regain Control from Singapore." Zeitschrift Fur Luft Und Weltraumrecht - German Journal of Air and Space Law 67, no. 2 (2018): 236–53.
- Nugraha, Ridha Aditya, and Yaries Mahardika Putro. "Urgensi Pembentukan Regulasi Pengelolaan Ruang Udara Nasional." Berita. hukumonline.com, July 13, 2023. https://www.hukumonline.com/berita/a/urgensi-pembentukanregulasi-pengelolaan-ruang-udara-nasional-lt64af5efe1ab42#!/.
- Nugraha, Ridha Aditya, Konrardus Elias Liat Tedemaking, and Vicia Sacharissa. "Penguatan Kedaulatan Negara Di Udara Dan Urgensi Sinkronisasi Hukum." *Jurnal Kertha Patrika* 43, no. 1 (April 27, 2021): 65–81. https://doi.org/10.24843/KP.2021.v43.i01.p05.
- Pambagio, Agus. "Pengaturan Ulang Dibungkus Penguasaan Kontrol Ruang Udara." detikNews, January 31, 2022. https://news-detik-

com.translate.goog/kolom/d-5921967/pengaturan-ulang-dibungkuspenguasaan-kontrol-ruangudara?_x_tr_sl=id&_x_tr_tl=en&_x_tr_hl=en&_x_tr_pto=sc.

- Perspektif Pertahanan Negara Dlm Negoisasi Pengelolaan Flight Information Region Indonesia & Singapura. Live Streaming. Guest Lecture. Ilmu Politik Universitas Bakrie, 2021. https://www.youtube.com/watch?app=desktop&v=kLr8ho-6B1Y.
- Popescu, Dumitra. "Bilateral Air Agreements of Socialist Countries and International Law: A Comparative Study." McGill University, 1970. https://escholarship.mcgill.ca/concern/theses/mp48sf18m.
- Pramono, Agus. "Air Sovereignty and No-Fly Zones." *Diponegoro Law Review* 1, no. 1 (October 7, 2016): 99–112. https://doi.org/10.14710/dilrev.1.1.2016.99-112.
- Pramono, Agus, Jason H Middleton, and Carlo Caponecchia. "Civil Aviation Occurrences in Indonesia." *Journal of Advanced Transportation* 2020 (May 29, 2020): 1–17. https://doi.org/10.1155/2020/3240764.
- P.S, Canris Bahri. "Politik Hukum Pengambilalihan Flight Information Region (FIR) dari Singapura." Dharmasisya: Jurnal Program Magister Hukum Fakultas Hukum Universitas Indonesia 2, no. 1 (March 2022): 87–98.
- Rahmi, Khairi, and Rizky Octa Putri Charin. "The Return of Indonesia's Political Will: Implications of Takeover the Flight Information Region (FIR) Natuna's Airspace from Singapore." In Proceedings of the International Conference Social -Humanities in Maritime and Border Area (SHIMBA 2023), edited by Azhari Setiawan, Rizky Octa Putri Chairin, Rizqi Apriani Putri, Agung Dhamar Syakti, Hilfi Pardi, ONanong Thippimol, Ziaul Haque Munim, Jalaluddin Abdul Malek, and Andi Misbahul Pratiwi, 799:124–28. Advances in Social Science, Education and Humanities Research. Paris: Atlantis Press SARL, 2023. https://doi.org/10.2991/978-2-38476-150-0_25.
- Risdiarto, Danang. "Penyidik TNI Angkatan Udara Dalam Kasus Pelanggaran Wilayah Udara Yurisdiksi Indonesia Oleh Pesawat Terbang Asing Tidak Terjadwal." Jurnal Legislasi Indonesia 14, no. 1 (May 3, 2018): 77–89. https://doi.org/10.54629/jli.v14i1.73.
- Rivaldi, Kelvin, and Dwi Astuti Palupi. "Juridical Review of the Flight Information Region (FIR) Agreement between Indonesia and Singapore in an International Legal Perspective." *Kumpulan Executive Summary Wisudawan Fakultas Hukum Periode Ke 80* 14, no. 2 (August 26, 2023): 1–8.
- Samyoga, Novyan. "Implementasi Civil-Military Cooperation in Air Traffic Management (CMAC) Pasca Perjanjian Realignment FIR Indonesia-Singapura." In Prosiding Seminar Nasional SEKKAU A-111, 1–56. Jakarta: Sekolah Komando Kesatuan TNI Angkatan Udara, 2022. https://fliphtml5.com/grdsh/lpiq/basic/51-72.
- Sari, Harwita. "Pengambilalihan Flight Information Region (FIR) Singapura Atas Kepulauan Riau Dan Natuna Dalam Perspektif Teori Kedaulatan." *Innovative:*

Journal Of Social Science Research 4, no. 1 (February 12, 2024): 9804–17. https://doi.org/10.31004/innovative.v4i1.8973.

Savitri, Rohannisa Naja Rachma, and Adya Paramita Prabandari. "TNI Angkatan Udara Dan Keamanan Wilayah Udara Indonesia." *Jurnal Pembangunan Hukum Indonesia* 2, no. 2 (May 10, 2020): 236–45. https://doi.org/10.14710/jphi.v2i2.236-245.

Sefriani. Hukum Internasional - Suatu Pengantar. 2nd ed. Jakarta: Rajawali Press, 2016.

- Setiani, Baiq. "Konsep Kedaulatan Negara Di Ruang Udara Dan Upaya Penegakan Pelanggaran Kedaulatan Oleh Pesawat Udara Asing." Jurnal Konstitusi 14, no. 3 (January 9, 2018): 489–510. https://doi.org/10.31078/jk1432.
- Silalahi, Eco. "Implikasi Hukum Internasional Pada Flight Information Region (FIR) Singapura Atas Wilayah Udara Indonesia Terhadap Kedaulatan Negara Kesatuan Republik Indonesia." Jurnal Online Mahasiswa Fakultas Hukum Universitas Riau 2, no. 1 (February 2015): 1–14.
- Simanjuntak, Mangisi. "Pengambilalihan Flight Information Region (FIR) Indonesia Dari Singapura." To-Ra Jurnal Hukum: Hukum Untuk Mengatur Dan Melindungi Masyarakat 6, no. 2 (August 28, 2020): 170–84. https://doi.org/10.33541/JtVol5Iss2pp102.
- Simatupang, Andika Immanuel. "State Responsibility over Safety and Security on Air Navigation of Civil Aviation in International Law." Indonesian Journal of International Law 13, no. 2 (January 31, 2016): 275–95. https://doi.org/10.17304/ijil.vol13.2.649.
- Strati, Anastasia. "Postscript: Tension in the Aegean The 'Imia' Incident." Leiden Journal of International Law 9, no. 1 (March 1996): 122–29. https://doi.org/10.1017/S0922156596000076.
- Subarkah, Alwafi Ridho. "Kepentingan Indonesia Dalam Mengambil Alih Flight Information Region (Fir) Dari Singapura." *Jurnal Asia Pacific Studies* 3, no. 2 (January 15, 2020): 145–55. https://doi.org/10.33541/japs.v3i2.1317.
- Suhartono, D. Herly Dwiyanto, and Deni D.A.R. "Realign Ment Flight Information Region Singapura Dalam Rangka Penegakan Kedaulatan Negara Di Wilayah Udara Nasional." Jurnal Strategi Pertahanan Udara 5, no. 1 (March 13, 2019): 95– 128. https://doi.org/10.33172/jspu.v5i1.372.
- Sulastri, Lusia. "Analisis Kewenangan Penyidikan Dalam Pelanggaran Wilayah Udara Indonesia: Tinjauan Peran Penyidik PNS dari Kementerian Perhubungan dan TNI AU." Krtha Bhayangkara 16, no. 2 (December 2022): 267–86. https://doi.org/10.31599/krtha.v16i2.1411.
- Supriyadi, A.A., Rag. Gultom, Mdm. Manessa, and A. Setyanto. "Strategy for the Alignment of Singapore Flight Information Region Over Indonesian Airspace." *The Open Transportation Journal* 14, no. 1 (December 21, 2020): 204– 13. https://doi.org/10.2174/1874447802014010204.

Sutrisno, Nandang, and Rafi Nasrullah Muhammad Romdoni. "Ratifikasi Perjanjian

Penyesuaian Wilayah Informasi Penerbangan Antara Indonesia Dan Singapura: Pilihan Rasional Atau Status Quo?" *Undang: Jurnal Hukum* 5, no. 2 (December 30, 2022): 393–417. https://doi.org/10.22437/ujh.5.2.393-417.

- Tri Novianto, Antonius. "Strategi Pengambilalihan Flight Information Region Kepulauan Natuna." Journal of Social Research 1, no. 9 (August 31, 2022): 939– 48. https://doi.org/10.55324/josr.v1i9.212.
- "Urgensi Pembentukan Regulasi Pengelolaan Ruang Udara Nasional." Accessed October 22, 2024. https://www.hukumonline.com/berita/a/urgensipembentukan-regulasi-pengelolaan-ruang-udara-nasional-lt64af5efe1ab42#!
- Verschoor, Diederiks. Persamaan Dan Perbedaan Antara Hukum Udara Dan Hukum Ruang Angkasa. 1st ed. Jakarta: Sinar Grafika, 1991.
- Wahyudin, Dudi, Arry Bainus, Widya Setiabudi Sumadinata R., and Arfin Sudirman. "Indonesian Diplomacy Against Singapore in Acquisition of Flight Information Region (FIR)." *Journal of Legal, Ethical and Regulatory Issues* 25, no. 2 (2022): 1–10.
- Wiradipradja, Saefullah. *Pengantar Hukum Udara Dan Ruang Angkasa: Buku I Hukum Udara*. 1st ed. Bandung: PT. Alumni, 2014.
- Yani, Yanyan Mochamad, Ian Montratama, and Ikrardhi Putera. Langit Indonesia Milik Siapa? - Makna Strategis Wilayah Pengendalian Udara (FIR) Indonesia-Singapura. Jakarta: PT Elex Media Komputindo : Kompas Gramedia, 2016.
- Yuen-C, Tham. "S'pore-Indonesia Agreement on Airspace Can Smooth Bilateral Relations, Say Analysts." News. The Straits Times Singapore, January 26, 2022. https://www.straitstimes.com/singapore/politics/spore-indonesiaagreement-on-airspace-can-smooth-bilateral-relations-say-analysts.
- Yulio Iqbal Cahyo Arsetyo. "Pengelolaan Kedaulatan Wilayah Udara Indonesia di Natuna berdasarkan Konvensi Chicago 1944 dalam Perspektif Hukum Internasional." Jurnal Defendonesia 5, no. 1 (April 30, 2021): 46–55. https://doi.org/10.54755/defendonesia.v5i1.102.
- Zaid, Zailani Mohd, Nurullaila Najihah Amran, Tajul Anuwar Ismail, and Nurhayati Mohd Nur. "An Evaluation of Airspace Congestion: A Case of Peninsular Malaysia." In Proceedings on Transportation and Logistics, 2:595–611. Jakarta: Advances in Transportation and Logistics Research, 2019. https://doi.org/10.25292/atlr.v2i0.